



**US Army Corps  
of Engineers**  
Portland District

**REQUEST FOR PROPOSAL  
W9127N-15-R-0003**

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MOUTH OF COLUMBIA RIVER, PACIFIC COUNTY  
WASHINGTON

**MOUTH OF THE COLUMBIA RIVER  
JETTY A REHABILITATION**

PROJECT MANUAL



<b>SOLICITATION, OFFER, AND AWARD</b> <i>(Construction, Alteration, or Repair)</i>	1. SOLICITATION NO. W9127N-15-R-0003	2. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED 04-Aug-2015	PAGE OF PAGES 1 OF 78
	<b>IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.</b>			

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO. W66QKZ51215710	6. PROJECT NO.
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7. ISSUED BY US ARMY CORPS OF ENGINEERS JEFFREY RENNER PO BOX 2946 PORTLAND OR 97208-2946  TEL: 503-808-4630 FAX: 503-808-4605	CODE W9127N	8. ADDRESS OFFER TO <i>(If Other Than Item 7)</i> CODE  <b>See Item 7</b>  TEL: FAX:
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9. FOR INFORMATION CALL:	A. NAME JEFF S RENNER	B. TELEPHONE NO. <i>(Include area code) (NO COLLECT CALLS)</i> 503-808-4630
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**SOLICITATION**

**NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".**

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS <i>(Title, identifying no., date):</i>  NAME: Mouth of the Columbia River Jetty A Rehabilitation LOCATION: Mouth of the Columbia River, Pacific County, Washington MAGNITUDE OF CONSTRUCTION: \$5,000,000.00 to \$10,000,000.00 SOCIO-ECONOMIC: Unrestricted Procurement
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11. The Contractor shall begin performance within <u>10</u> calendar days and complete it within _____ calendar days after receiving <input type="checkbox"/> award, <input checked="" type="checkbox"/> notice to proceed. This performance period is <input checked="" type="checkbox"/> mandatory, <input type="checkbox"/> negotiable. <i>(See 52.211-10alt)</i>
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12 A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? <i>(If "YES," indicate within how many calendar days after award in Item 12B.)</i> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	12B. CALENDAR DAYS 10
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13. ADDITIONAL SOLICITATION REQUIREMENTS: A. Sealed offers in original and <u>3</u> copies to perform the work required are due at the place specified in Item 8 by <u>01:00 PM</u> (hour) local time <u>04 Sep 2015</u> (date). If this is a sealed bid solicitation, offers must be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due. B. An offer guarantee <input checked="" type="checkbox"/> is, <input type="checkbox"/> is not required. C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference. D. Offers providing less than <u>30</u> calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.
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**SOLICITATION, OFFER, AND AWARD (Continued)***(Construction, Alteration, or Repair)***OFFER (Must be fully completed by offeror)**14. NAME AND ADDRESS OF OFFEROR *(Include ZIP Code)*15. TELEPHONE NO. *(Include area code)*16. REMITTANCE ADDRESS *(Include only if different than Item 14)***See Item 14**

CODE

FACILITY CODE

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within \_\_\_\_\_ calendar days after the date offers are due. *(Insert any number equal to or greater than the minimum requirements stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)*

AMOUNTS

SEE SCHEDULE OF PRICES

18. The offeror agrees to furnish any required performance and payment bonds.

**19. ACKNOWLEDGMENT OF AMENDMENTS***(The offeror acknowledges receipt of amendments to the solicitation -- give number and date of each)*

AMENDMENT NO.

DATE

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER *(Type or print)*

20B. SIGNATURE

20C. OFFER DATE

**AWARD (To be completed by Government)**

21. ITEMS ACCEPTED:

22. AMOUNT

23. ACCOUNTING AND APPROPRIATION DATA

24. SUBMIT INVOICES TO ADDRESS SHOWN IN *(4 copies unless otherwise specified)***ITEM**

25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO

 10 U.S.C. 2304(c) 41 U.S.C. 253(c)

26. ADMINISTERED BY

CODE

27. PAYMENT WILL BE MADE BY:

CODE

**CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE**

28. NEGOTIATED AGREEMENT *(Contractor is required to sign this document and return \_\_\_\_\_ copies to issuing office.)* Contractor agrees to furnish and deliver all items or perform all work, requisitions identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications or incorporated by reference in or attached to this contract.

29. AWARD *(Contractor is not required to sign this document.)*

Your offer on this solicitation, is hereby accepted as to the items listed. This award commutes the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.

30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN *(Type or print)*31A. NAME OF CONTRACTING OFFICER *(Type or print)*

30B. SIGNATURE

30C. DATE

TEL:

EMAIL:

31B. UNITED STATES OF AMERICA  
BY

31C. AWARD DATE

Section 00010 - Solicitation Contract Form

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0001	MOBILIZATION AND DEMOBILIZATION	1	Job		
				Funded:	

0002	A-STONE PROCUREMENT AND DELIVERY				NSP
				Funded:	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0002AA	FIRST 25,000 CY	25,000	Cubic Yard		EST
				Funded:	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0002AB	OVER 25,000 CY	4,000	Cubic Yard		EST
				Funded:	

0003	A-SELECT PROCUREMENT AND DELIVERY				NSP
				Funded:	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0003AA	FIRST 3,900 CY	3,900	Cubic Yard		EST
				Funded:	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0003AB	OVER 3,900 CY	600	Cubic Yard		EST
				Funded:	

0004	A-STONE IN PLACE				NSP
				Funded:	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0004AA	FIRST 25,000 CY	25,000	Cubic Yard		EST
				Funded:	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0004AB	OVER 25,000 CY	4,000	Cubic Yard		EST
				Funded:	

0005	A-SELECT IN PLACE				
				Funded:	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0005AA	FIRST 3,900 CY	3,900	Cubic Yard		EST
				Funded:	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0005AB	OVER 3,900 CY	600	Cubic Yard		EST
				Funded:	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0006	JETTY CREST HAUL ROAD	1	Job		
				Funded:	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0007	SITE RESTORATION	1	Job		
				Funded:	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0008	SITE MITIGATION	1	Job		
OPTION	OPTIONAL ITEMS: Notice of intent to exercise optional items will be issued by 31 DECEMBER 2015. Options will be formally exercised within 120 days of issuing the notice of intent.			Funded:	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0009	REPAIR OF ACCESS ROAD	5,000	Square Yard		EST
OPTION	DIGOUT REPAIR METHOD; OPTIONAL ITEMS: Notice of intent to exercise optional items will be issued by 31 DECEMBER 2015. Options will be formally exercised within 120 days of issuing the notice of intent.			Funded:	

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0010	REPAIR OF ACCESS ROAD	5,000	Square Yard		EST
OPTION	RUBBLEIZE/PULVERIZE REPAIR METHOD; OPTIONAL ITEMS: Notice of intent to exercise optional items will be issued by 31 DECEMBER 2015. Options will be formally exercised within 120 days of issuing the notice of intent.			Funded:	



ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
0011	REPAIR OF ACCESS ROAD	5,000	Square Yard		EST
OPTION	ASPHALT OVERLAY REPAIR METHOD; OPTIONAL ITEMS: Notice of intent to exercise optional items will be issued by 31 DECEMBER 2015. Options will be formally exercised within 120 days of issuing the notice of intent.			Funded:	

INSTRUCTION AND BASIS OF AWARD

**A. General.**

(1) This solicitation is an unrestricted procurement and is open to all offerors. The Government intends to award a single, firm-fixed price construction contract to the responsible offeror whose proposal represents the best value after evaluation in accordance with the factors and sub-factors in the solicitation. Offerors shall submit a technical proposal (including a Small Business Participation Plan), and a price proposal. The evaluation results of the non-price and price proposals will determine an awardee. All evaluation factors other than price are approximately equal in importance to one another. All evaluation factors other than price, when combined, are more important than price.

(2) The Government intends to make an award without discussions, but reserves the right to conduct discussions should discussions prove to be necessary or advantageous to the Government. Because the Government does not intend to hold discussions offerors are encouraged to include their best pricing in their initial proposal.

(3) In the context of this proposal, “offeror” refers to the proposed prime contractor. A major subcontractor is defined as one who will be providing critical elements (i.e. quarry, delivery, placement activities (major features of work)) and/or whose subcontract is for more than 25% of the total proposed price.

(4) Information submitted about any company other than the offeror, whether an affiliated company, major subcontractor, or other associated business, may not be given much weight unless the proposal contains evidence that the offeror has obtained a written commitment from this other business entity to perform a portion of the work.

(5) All proposals received will stand alone and be considered complete and final. The evaluation board will not consider any information or data incorporated by reference or otherwise referred to. The successful offeror will be selected solely on the basis of the evaluation factors set forth below. Accordingly, proposals submitted in response to this solicitation should provide clear, complete, concise, and straightforward responses to the evaluation factors. Elaborate proposals, color brochures, and other excesses are discouraged.

**B. Evaluation Ratings.**

All non-price factors other than past performance shall be rated using the combined technical/risk rating as follows:

<b>COLOR</b>	<b>RATING</b>	<b>DESCRIPTION</b>
	Outstanding	<b>Proposal meets requirements and indicates an exceptional approach and understanding of the</b>

<b>Blue</b>		<b>requirements. Strengths far outweigh any weaknesses. Risk of unsuccessful performance is very low.</b>
<b>Purple</b>	Good	<b>Proposal meets requirements and indicates a thorough approach and understanding of the requirements. Proposal contains strengths which outweigh any weaknesses. Risk of unsuccessful performance is low.</b>
<b>Green</b>	Acceptable	<b>Proposal meets requirements and indicates an adequate approach and understanding of the requirements. Strengths and weaknesses are offsetting or will have little or no impact on contract performance. Risk of unsuccessful performance is no worse than moderate.</b>
<b>Yellow</b>	Marginal	<b>Proposal does not clearly meet requirements and has not demonstrated an adequate approach and understanding of the requirements. The proposal has one or more weaknesses which are not offset by the strengths. Risk of unsuccessful performance is high.</b>
<b>Red</b>	Unacceptable	<b>Proposal does not meet the requirements and contains one or more deficiencies. Proposal is unacceptable and unawardable.</b>

Past performance shall be rated using the following ratings:

<b>Past Performance Relevancy Ratings</b>	
<b>RATING</b>	<b>DEFINITION</b>
Very Relevant	Present/past performance effort involved essentially the same scope and magnitude of effort and complexities this solicitation requires.
Relevant	Present/past performance effort involved similar scope and magnitude of effort and complexities this solicitation requires.
Somewhat	Present/past performance effort involved some of the scope and magnitude Relevant of effort and complexities this solicitation requires.
Not Relevant	Present/past performance effort involved little or none of the scope and magnitude of effort and complexities this solicitation requires.

<b>Performance Confidence Assessments</b>	
<b>RATING</b>	<b>DESCRIPTION</b>
Substantial	Based on the offeror's recent/relevant performance record, the

Confidence	Government has a high expectation that the offeror will successfully perform the required effort.
Satisfactory Confidence	Based on the offeror's recent/relevant performance record, the Government has a reasonable expectation that the offeror will successfully perform the required effort.
Limited Confidence	Based on the offeror's recent/relevant performance record, the Government has a low expectation that the offeror will successfully perform the required effort.
No Confidence	Based on the offeror's recent/relevant performance record, the Government has no expectation that the offeror will be able to successfully perform the required effort.
Unknown Confidence (Neutral)	No recent/relevant performance record is available or the offeror's performance record is so sparse that no meaningful confidence assessment rating can be reasonably assigned.

### C. Definitions.

**Deficiency** A material failure of a proposal to meet a Government requirement or a combination of weaknesses in a proposal that increases the risk of unsuccessful contract performance to an unacceptable level. See FAR 15.001.

**Strength** An aspect of an offerors' proposal that has merit or exceeds specified performance or capability requirements in a way that will be advantageous to the Government during contract performance.

**Significant Strength** An aspect of an offeror's proposal that has appreciable merit or appreciably exceeds specified performance or capability requirements in a way that will be appreciably advantageous to the Government during contract performance.

**Weakness** A flaw in the proposal that increases the risk of unsuccessful contract performance. See FAR 15.001.

**Significant Weakness** in the proposal is a flaw that appreciably increases the risk of unsuccessful contract performance. See FAR 15.001.

**Uncertainty** is any aspect of a non-cost/price factor proposal for which the intent of the offer is unclear (e.g. more than one way to interpret the offer or inconsistencies in the proposal indicating that there may have been an error, omission, or mistake).

## 5. SUBMISSION OF PROPOSALS AND EVALUATION

**A. Administrative Details and General Instructions:** Proposals are due no later than the time and date specified in Block 13 of Standard Form 1442.

**(1) General Proposal Format.** Submit each copy of the proposal in tabbed, 3-ring binders with a “D” ring or locking closures.

**Title Page.** Each copy must include the Offeror’s name and address, phone number and email address, title of the solicitation, solicitation number and date of submittal clearly identified on the front cover of the binder.

**Table of Contents.** Each binder of the proposal shall contain a detailed table of contents. The complete table of contents shall be included in each binder.

**Printed Matter Submissions.** Pages containing text are expected to be 8 ½ x 11 inches with at least one-inch margins at the top, bottom, and both sides. Paragraphs should be separated by at least one blank line. A standard 11-point font in either Arial or Times New Roman is preferred.

**Organization charts or schedules.** A folded 11” x 17” format may be used. Larger format drawings or tables may be added by folding them to fit within the binder.

All information must be confined to the appropriate volume. If the materials do not fit within a single volume, they should be separated in additional binders, but clearly identified as such. Each volume of the proposal is expected to contain a table of contents, summary section with a brief abstract of the volume, and the narrative discussion.

**(2) Proposal Content Limitations.**

The Offeror must confine the proposal to relevant information and documentation sufficient to provide an adequate basis for evaluation. Offerors are responsible for including sufficient details, in a concise manner, to permit a complete and accurate evaluation of the proposal. The page count is at the discretion of the offeror, however the proposal may not be more than 100 pages total.

The evaluation panel for the Government is instructed to evaluate the non-price proposal factors on the basis of the information provided. Extraneous information provided in the proposals will not be considered in the evaluations; therefore, the offeror should only provide information that satisfies the solicitation requirements. Merely restating the specifications without sufficient elaboration demonstrates a lack of understanding of the requirement.

**DO NOT** cross reference past performance information. It is acceptable to repeat data, project information or experience in more than one non-price area as long as it satisfies the requirements of the factor.

**Proprietary information must be clearly marked.**

**B. Content of Proposals:** All proposals must be prepared in two volumes: A technical proposal (Volume I), a price proposal (Volume II). Each of the volumes shall be separate and complete in itself so that evaluation of one may be accomplished independently from evaluation of the other. The technical proposal (Volume I) must not contain reference to price. Offerors who fail to submit a complete proposal may be excluded and thus receive no further consideration for award.

**(1) Technical Proposal, Volume I: Provide one (1) original and three (3) copies and one (1) pdf. file on a CD-ROM.** Volume I shall consist of information for the six (6) factors, and the associated sub-factors, listed in tabular form, as noted below.

<b>VOLUME I – TECHNICAL (NON-PRICE FACTORS)</b>		
<b>TAB</b>	<b>EVALUATION FACTOR</b>	<b>SUBFACTOR</b>
1	Past Experience (Factor 1)	
2	Past Performance (Factor 2)	
3	Management Plan (Factor 3)	Prime Contractor Personnel (Sub-factor 1)
4	Management Plan (Factor 3)	Subcontractor (Sub-factor 2)
5	Procurement (Factor 4)	Quarry Production (Sub-factor 1)
6	Procurement (Factor 4)	Jetty Stone Delivery Plan (Sub-factor 2)
7	Project Execution (Factor 5)	Jetty Stone Placement (Sub-factor 1)
8	Project Execution (Factor 5)	Schedule (Sub-factor 2)
9	Project Execution (Factor 5)	Safety (Sub-factor 3)
10	Small Business Participation (Factor 6)	

**Volume I – Technical (Non-Price) Factors and Sub-factors:**

**Factor 1: Past Experience**

**Factor 2: Past Performance**

**Factor 3: Management Plan**

Sub-factor 1: Prime Contractor Personnel  
Sub-factor 2: Subcontractor

**Factor 4: Procurement**

Sub-factor 1: Quarry Production  
Sub-factor 2: Jetty Stone Delivery Plan

**Factor 5: Project Execution**

Sub-factor 1: Jetty Stone Placement  
Sub-factor 2: Schedule  
Sub-factor 3: Safety

## **Factor 6: Small Business Participation Plan**

### **Volume I – Technical (Non-Price) Submission Requirements and Evaluation Method:**

#### **FACTOR 1 (TAB 1) – Past Experience**

##### Submission Requirements:

The offeror shall provide project information for a minimum of 1 project for the prime, and a minimum of 1 projects of each of the proposed major subcontractor(s)\*, completed or substantially completed\*\* in the past 5 years that are comparable in size, scope, and complexity with the project required by this solicitation.

Project information shall contain:

- A description of the project and the contractor's involvement in the project;
- Project location;
- Brief summary of the challenges and solutions;
- Information on significant problems encountered, customer dissatisfaction, and corrective actions.
- Name, address, telephone number and email address of a current representative of the contact customer representative;
- Contract awarded amount;
- Project start date
- Project completion date (If not complete, provide % currently complete)
- Site map identifying location of work (i.e. root, trunk, or head of jetty).
- Representative cross section view of repair area in addition to range and quantity of stone sizes utilized.

\*Indicate if the offeror will not be having any major subcontractors perform a portion of the work. An offeror will not be treated unfavorably for failing to utilize a major subcontractor.

\*\* Substantially completed is defined as having completed more than 75% of the project work at the time of proposal submission.

##### Evaluation Method:

More favorable ratings will be assigned to more recent projects, and projects similar in size, scope and complexity to the requirement in this solicitation. Less recent and smaller dollar value projects may be given less consideration.

Projects demonstrating that the prime and major subcontractor(s) have a history and are capable of completing the following major features of work will be more highly rated:

Working in a marine environment including atop of jetties along the Pacific Ocean, successful experience working with > 15 ton stones.

Note: The Government may consider past experience information regarding predecessor companies, key personnel who have relevant experience or subcontractors that will perform major or critical aspects of the requirement.

## **FACTOR 2 (TAB 2) – Past Performance**

### Submission Requirements:

The offeror shall provide past performance information for each project listed by the offeror under Factor 1: Past Experience.

Submit completed Contractor Performance Assessment Reporting System (CPARS) evaluation if available, with the proposal. When a completed CPARS evaluation is not available, respond and submit the standard Past Performance Questionnaire (PPQ) for USACE (Form PPQ-0 (9/30/11)) provided as an attachment to the solicitation. PPQ-0 is provided for the offeror or its team members to submit to the client for each project the offeror includes in its proposal under Factor 1, Past Experience, and for which a completed CPARS evaluation is not available. (Ensure correct phone numbers and email addresses are provided for the client point of contact.) **Do not submit a PPQ when a completed CPARS is available.**

Completed PPQs should be submitted with your proposal. If the offeror is unable to obtain a completed PPQ from a client for a project(s) before proposal closing date, the offeror should complete and submit with the proposal the first page of the PPQ, which will provide contract and client information for the respective project(s). Offerors should follow-up with clients/references to ensure timely submittal of questionnaires. If the client requests, questionnaires may be submitted directly to the Government's point of contact, **Jeffrey S. Renner**, via email at [Jeffery.s.renner@usace.army.mil](mailto:Jeffery.s.renner@usace.army.mil) prior to proposal closing date. Offerors shall not incorporate by reference into their proposal PPQs or CPARS previously submitted for other RFPs. However, this does not preclude the Government from utilizing previously submitted PPQ information in the past performance evaluation.

Also include performance recognition documents received within the **last five (5) years** such as awards, award fee determinations, customer letters of commendation, and any other forms of performance recognition.

In addition to the above, the Government may review any other sources of information for evaluating past performance. Other sources may include, but are not limited to, past performance information retrieved through the PPIRS, including CPARS, using all CAGE/DUNS numbers of team members (partnership, joint venture, teaming arrangement, or parent company/subsidiary/affiliate) identified in the offeror's proposal, inquiries of owner representative(s), FAPIIS, Electronic Subcontract Reporting System



(eSRS), telephone interviews with organizations familiar with the offeror's performance, Government personnel with personal knowledge of the offeror's performance capability, and any other known sources not provided by the offeror.

While the Government may elect to consider data from other sources, the burden of providing detailed, current, accurate and complete past performance information rests with the Offeror.

Evaluation Method:

The Government seeks a contractor who maintains a strong commitment to customer satisfaction and superior performance. It is the offeror's responsibility to affirmatively document these qualities in its technical proposal. In doing so, be mindful that "*past performance*" and "*past experience*" are not identical. Past *experience* measures what you have done and how many times, or for how long, you have done it. Past *performance*, however, measures how well you have performed.

Past Performance on projects that are similar in size and scope to this project may be considered to be more advantageous to the Government. Thus, the Government will take into consideration the age and relevance of past performance information and the offeror's overall performance record. If any performance issues are identified, the Government will consider the number, type and severity of the problems and effectiveness of corrective actions taken.

There are two aspects to the past performance evaluation. The first is to evaluate the offeror's past performance to determine how relevant a recent effort accomplished by the offeror is to the effort to be acquired. With respect to relevancy, more relevant past performance will typically be a stronger predictor of future success and have more influence on the past performance confidence assessment than past performance of lesser relevance. Common aspects of relevancy include similarity of service/support, complexity, dollar value, contract type, and degree of subcontract/teaming.

The second aspect of the past performance evaluation is to determine how well the contractor performed on the contracts. The past performance evaluation performed in support of a current source selection does not establish, create, or change the existing record and history of the offeror's past performance on past contracts; rather, the past performance evaluation process gathers information from customers on how well the offeror performed those past contracts.

Past performance questionnaires and/or ratings in Contractor Performance Assessment Reporting System (CPARS), indicating high levels of customer satisfaction, or completing in advance of original contract schedule, or finding innovative ways to cut costs, or increase value to the customer, will receive a better rating.

In the case of an offeror without a record of relevant past performance or for whom information on past performance is not available, the offeror may not be evaluated favorably or unfavorably on past performance.

Note: The Government may consider past performance information regarding predecessor companies, key personnel who have relevant experience or subcontractors that will perform major or critical aspects of the requirement.

### **FACTOR 3 –Management Plan**

This factor will be rated on the offerors' ability to demonstrate their project team has the expertise, qualifications, and experience to be able to complete the work and complete the work safely.

#### **Sub-factor 1 (TAB 3): Prime contractor personnel.**

##### Submission Requirements:

Provide the prime contractor's **organization chart** indicating key construction personnel. At a minimum, the chart must include the positions of project manager, project superintendent, contractor quality control (CQC) system manager, Site Safety and Health Officer (SSHO), and Stone Placement Equipment Operator (SPEO) that will be assigned to this project. **Current resumes** for these positions shall be provided. The resumes shall include the duties and responsibilities of the individuals and examples of project experience. In addition, **current certifications** for the SSHO, CQC, and SPEO should be provided. Examples of project experience shall include capacity the individual served on each project, dates employed on each project, and monetary size of each project.

##### Evaluation Method:

Firms will be evaluated to ensure key positions are properly certified, in addition, more favorable evaluations may be given to personnel who have been working in the field longer than those with less experience. Emphasis will be given to resumes with more recent experience and experience similar in size, scope, and complexity to the project called for under this solicitation.

#### **Sub-factor 2 (TAB 4): Subcontractor.**

##### Submission Requirements:

Provide current resumes of major subcontractors proposed to complete all work associated with this project. Each resume shall consist of a brief description of the company, services to be provided for this contract, number of years in business, and number of contracts between the prime contractor and subcontractor.

##### Evaluation Method:

More favorable evaluations may be given to subcontractors who have been in business longer, and have had more past business relationships with the prime contractor and who have provided written commitments of the subcontractors.

## **FACTOR 4 – Procurement**

### **Sub-factor 1 (TAB 5): Quarry Production.**

#### Submission Requirements:

Provide detailed project work plan describing the methodology of procurement of stone for the jetty.

Project work plan shall contain:

- Primary and Contingency sources of stone. Provide written evidence that commitments have been secured from the quarries to supply stones for this job. List the quarries, locations, contacts, and phone numbers;
- Written statements from the Primary and Contingency quarries that they can produce the specified quantity and sizes of job-required stones to complete this job within the specified time of performance. If multiple quarries are expected to be utilized, the combined total of stones produced must equal or exceed the required amount. Indicate the following:
  1. The quantity and sizes of suitable stone that has already been quarried and is “on the ground” and dedicated to this job.
  2. The volume of unmined stone (reserves) in the quarry(s), as well as the amount anticipated minable for this job.
  3. The expected yield(s) for the various sizes of job-required stones expressed as a percentage of all mined stones. Include information on assumptions, calculations, drill records (logs), geologic reports, and any other information that verify that adequate stone reserves meeting the requirements of this contract exist at the quarry(s).
- Documentation that all necessary permits to operate the quarry have been obtained and are currently active;
- Overall and historical production records of jetty-sized-stone quarry service records and include stone quality test results for each proposed quarry;
- Information from the quarry on the anticipated stone production rate.
- Any quarry related challenges and proposed solutions

**Note:** The Government reserves the right to conduct visual inspections of the quarries and collect and test stone samples to verify information presented in the proposal.

#### Evaluation Method:

A highly rated proposal for this factor will demonstrate that the offeror's methodology for procurement of jetty stone will be effective and the offeror is prepared with solutions to any challenges. A detailed and specific work plan will be rated higher than a vague and general work plan.

**Sub-factor 2 (TAB 6) : Delivery Plan.**

Submission Requirements:

Provide detailed description for the methodology for delivery of stone to the jetty.

Project information shall contain:

- Methodology for stone hauling, delivery, and stockpiling;
- An outline of the jetty stone delivery plan to include the transportation equipment to be used to deliver stone to the jetty (barges or trucks or a combination of each), and the anticipated transportation routes. Provide evidence that the stone transportation equipment will be available during the performance period of this contract and note whether the prime contractor owns, leases or intends to subcontract the transport equipment. Identify any highway restrictions (weight and/or length) along transportation routes and/or dredging requirements for delivery;
- If the Contractor plans to barge rather than deliver by truck the plan shall include dredging requirements and mitigation to include eelgrass planting and monitoring and the experience of the firm that will perform and monitor the environmental mitigation.
- Information on the anticipated stone delivery rate and the calculations and assumptions to determine the delivery rate to include site and weather related constraints.
- Identification of all storage areas for the stones both at the quarry and at the job site.
- Address contingencies that may arise and a plan to deal with each.

Evaluation Method:

This sub-factor will be evaluated by the source selection team against the criteria addressed above. A highly rated plan will demonstrate that the offeror thoroughly describes the proposed methodology and conveys a thorough understanding of the required work, contingencies that may arise and plans to deal with them, and the site and weather related constraints. A detailed and specific work plan will be rated higher than a vague and general work plan.

**FACTOR 5 – Project Execution**

**Sub-factor 1 (TAB 7): Jetty Stone Placement.**

### Submission Requirements:

Provide detailed description for the methodology of stone placement on the jetty.

The detailed description shall contain:

- A description of stone placement equipment. Provide crane and/or excavator rating load charts for the equipment, and the reach and swing of the equipment for anticipated stone weights and sizes. List attachments, grapples, power tag lines and other accessories proposed to be mounted on the placing equipment. Indicate the current location of the equipment and provide evidence that it will be available during the performance period of this contract. Proposals will be rated on the adequacy of the equipment to perform the necessary work;
- A description of how placement efforts will be controlled both above and below water and along the different reaches of the jetty (i.e. transition sections, main body, head) based on design changes or exposures to ensure stone is placed according to the design template within the specified tolerances and how individual stone placement will be controlled to achieve an interlocked mass with the maximum surface contact and interlock with stones making contact on all faces;
- Information on the General Plan of Operations to include how haul road construction on the jetty crest will be conducted to prevent or minimize damage to the jetty. Indicate the amount of stone proposed to be placed with the placing equipment stationed on the crest (top) of the jetty and the amount of stone proposed to be placed with the equipment benched on the slopes of the jetty. If stone is proposed to be placed with the equipment benched on the slopes of the jetty, describe: how the existing intact jetty stones will be protected and preserved at their present location and condition; how base material on which equipment operates will be excluded from the final jetty stone matrix; and how the benching operations will be conducted, including diagrams that the proposed placement technique is feasible, describe how placement effort will reflect safe operating condition as a function of waves and tides, evacuation measures;
- Information on the anticipated stone placement rate to complete the project by dates specified in the contract, and the calculations and assumptions used to determine the production rate;
- A description of how environmental requirements will be met, including water quality monitoring and management practices.

### Evaluation Method:

This sub-factor will be evaluated by the source selection team against the criteria addressed above. A highly rated plan will demonstrate that the offeror understands the required work, contingencies that may arise and how to deal with them, the site and weather related constraints,

the equipment to be used, and the importance of proper placement technique. A detailed and specific work plan will be rated higher than a vague and general work plan.

## **Sub-factor 2 (TAB 8) – Schedule**

### Submission Requirements:

**Gantt Chart.** The offeror shall submit a Gantt chart (MS Project or Primavera software) showing a planned schedule to complete the project. The schedule shall identify stations of work with any specific details noted that have the potential to impact the manner in which work will be conducted or the schedule. Information on potentially restrictive tide and wave windows should be addressed. The schedule shall also include mobilization, demobilization, scheduling of any equipment maintenance (main or auxiliary), quarry operations and all items listed on the bid schedule, critical submittals, interim milestones, and contract completion date.

**Narrative.** The Gantt chart shall be accompanied with a narrative addressing how the offeror will maintain and accomplish the project schedule. Examples of narrative topics include critical path, production rates, weather days, assumptions used (i.e. size of crew, hrs/day, days/wk), anticipated problem areas or delaying factors and their impact, proposed corrective actions and contingency plans to meet project milestones and other factors that demonstrate the ability to accomplish the schedule.

### Evaluation Method:

This sub-factor will be evaluated by the source selection team against the criteria addressed above. A highly rated schedule will demonstrate that the offeror fully understands the required work, contingencies that may arise and how to deal with them, the site constraints, process related to schedule, and has a realistic plan to complete the work on time.

## **Sub-factor 3 (TAB 9): Safety Record.**

### Submission Requirements:

Offerors shall include the Prime and major subcontractors' safety record and evidence of their ability to safely conduct construction operations. Information on the prime and major subcontractors' safety record must include the following:

- Experience Modification Rate (EMR) for Workers' Compensation Insurance issued by an accredited bureau, state, or council. Contractors or subcontractors with a rating over 1.0 EMR must provide explanation as to their rating and what steps have been taken to reduce their rating.
- OSHA Incident Rates for the last 3 years– OSHA Form 300
- Awards or recognition for safety within the last 3 years, if any.

Evaluation Method:

Evaluation will be based on the safety record submitted for the prime and major subcontractors. Offerors with a lower Experience Modification rates (EMRs) will result in a higher evaluation rating. EMRs above 1.0 will result in a lower evaluation rating. Higher evaluation ratings will also be given to offerors that demonstrate continual compliance with OSHA, and have received recognition for safety in the last 3 years.

**FACTOR 6 (TAB 10) -- Small Business Participation Plan**

Submission Requirements:

The purpose of this criterion is to evaluate the amount of work to be performed by Small Businesses as prime or subcontractors in relation to the total value of the project. This criteria is evaluated for all offerors and is not to be confused with the submission of a Small and Small Disadvantaged Business Subcontracting Plan which is only required of Large Business offerors. All offerors (both large and small businesses) shall submit the Small Business Participation Plan (SBPP) template found at Attachment SBPP. A mandatory minimum Total Small Business Participation goal of 20% of the total contract value (through small business participation from small-, small disadvantaged-, HUBZone-, Service Disabled Vet-, Vet-, or Woman-owned businesses) is required based on the nature of the work for this project. The offeror should articulate how small businesses will participate through performance as either a small business prime or as a subcontractor offeror as well as demonstrating the past performance of the offeror in complying with requirements of the clauses at FAR 52.219-8, Utilization of Small Business Concerns and 52.219-9, Small Business Subcontracting Plan. Offerors are required to submit information that can be verified on **at least three projects** that demonstrate the degree (both by dollar and by percent of total contract value) to which the contractor utilized small business firms in performing the project. For small business offerors, consideration will be given to self performance if a small business for that project, as well as for providing subcontracting opportunities to small businesses - as is the policy of the government. For large business offerors, in addition to the information for the three required projects, consideration may also include review of Individual Subcontracting Reports (ISR's) and Summary Subcontracting Reports (SSR's) from the electronic Subcontracting Reporting System (eSRS). The project information submitted for the small business participation plan evaluation does not have to be the same as those listed for Past Performance factor.

Evaluation Method:

Using Attachment SBPP to this solicitation, the government will evaluate offerors on the extent of the planned participation of U.S. small businesses in the performance of this acquisition as follows:

The total level of participation of small business prime offerors and small business subcontractors in terms of the percentage of the value of the total acquisition vs. the large business participation percentage.

The extent, to which, the offeror meets or exceeds the suggested socioeconomic category goals. These goals are a percentage of the value of the total acquisition. A mandatory minimum Total Small Business Participation goal of 20% of the total contract value is assigned to this acquisition.

In addition to the mandatory Small Business goal of 20% of the TOTAL contract value, the following goals are suggested for the individual socioeconomic categories and determined to be reasonable based on market research for this requirement. Goals are based on % of TOTAL contract value:

- {5% } Small Disadvantaged Business
- {3% } Woman-Owned Small Business (WOSB)
- {2% } Historically Underutilized Business Zone (HUB Zone) Small Business
- {5% } Veteran Owned Small Business (VOSB)
- {2% } Service Disabled Veteran Owned Small Business (SDVOSB)

The extent (i.e. length of and formality considerations) of demonstrated commitment to use such firms (enforceable commitments (JV, MP or written teaming agreements)) will be considered more favorably than non-enforceable ones;

Verifiable past performance of the offerors in complying with requirements of the clauses at FAR 52.219-8, Utilization of Small Business Concerns, (both small and Large businesses) and FAR 52.219-9, Small Business Subcontracting Plan (Large Business primes only).

## **Volume II – Price Proposal:**

**Price Proposal, Volume II:** The Price Proposal shall be complete, detailed and submitted on forms provided in the Request for Proposal (RFP) (**one (1) original and one (1) pdf. file on a CD-ROM**). Contractors shall provide pricing and complete all line items on Standard Form 1442 (SF 1442).

The Price Proposal will be evaluated to determine reasonableness. Price will be evaluated based on the total for all line items, to include option items. Evaluation of price may also include price realism analysis, if such analysis is determined necessary. If determined necessary, price realism will be evaluated on the basis of whether pricing information reflects a clear understanding of the costs and risks associated with the project. It may also include verification of an offeror's price, and exchanges with the offeror to determine whether it has an acceptable understanding of the difficulties that may be encountered in performing the contract. The results of a price realism analysis may impact the evaluation of non-cost factors and the resulting award decision.

**Volume II - Price.** Your price proposal must be prepared in accordance with below paragraphs and must include:

**Tab 1 - SF1442, Solicitation, Offer, and Award.**



The SF1442 shall be filled out completely by the offeror and signed by an official that is authorized to bind the company. The offeror shall also acknowledge all amendments to the solicitation in accordance with the instructions on the Standard Form 30 or Block 19 of SF1442.

**Tab 2 – Section 00010, Proposal Price / Bid Schedule.**

The offeror shall fully complete this section.

**Tab 3 - Representations, Certifications and other Statements of Offerors.**

The offeror shall complete all representations and certifications in Section 00600 and also ensure current registration and completed/updated Annual Representations and Certifications on the System for Award Management (SAM) website, [www.sam.gov](http://www.sam.gov).

**Tab 4 - Bid/Offer Guarantee.**

**Tab 5 - Small Business Subcontracting Plan. (Large Businesses Only)**

Separate from the Small Business Participation Plan, which is included in Volume I, other than U.S. Small Business Offerors (e.g. Large Businesses) must also submit a small business subcontracting plan meeting the requirements of FAR 52.219-9 and DFARS 252.219-7003 (or DFARS 252.219-7004 if the offeror has a comprehensive subcontracting plan) contained in Section 00700, Contract Clauses. Large businesses must submit acceptable subcontracting plans to be eligible for award. Subcontracting plans shall reflect and be consistent with the commitments offered in the Small Business Participation Plan.

Large Businesses shall provide a completed Subcontracting Plan and most recent annual subcontracting report.

A model subcontracting plan is included as an attachment to this solicitation. For information on the evaluation of subcontracting plans, see Army Federal Acquisition Regulation Supplement (AFARS), Appendix DD.

**Submission of Proposals:** Proposals must arrive at the location designated in the RFP for receipt of such proposals prior to the time and date established in Block 13, SF 1442. There will not be a public proposal opening. In order for the proposal to be considered, it **MUST** be prepared in ENGLISH, and must be submitted as a **hardcopy original (Volume I, and II) and three (3) copies (Volume I only) with the required electronic CD-ROM:**

**BY HAND OR COURIER TO:**

U. S. ARMY CORPS OF ENGINEERS, NWP  
Block 300 (10<sup>th</sup> Floor USACE Security Desk)  
333 SW. First Avenue  
Portland, Oregon 97204  
**Attention: Jeffrey S. Renner – CECT-NWP-C**

**OR SURFACE MAIL ADDRESS:**

U. S. ARMY CORPS OF ENGINEERS, NWP  
P. O. Box 2946  
Portland, OR 97208-2946  
**Attention: Jeffrey S. Renner – CECT-NWP-C**

NOTE: E-MAIL SUBMISSIONS WILL NOT BE CONSIDERED. If the electronic CD-ROM proposal differs from the hard copy, the hard copy will take precedence.

**OFFEROR SHALL MARK THE OUTSIDE ENVELOPE(S) (PURSUANT TO FAR 14.201-5) AS FOLLOWS:**

Envelope(s) shall be plainly marked with the following information:  
Solicitation No. **W9127N-15-R-0003**  
Opening Date:  
Number of each amendment that has been received:

52.211-5000 EVALUATION

52.211-5000 EVALUATION OF SUBDIVIDED ITEMS (MAR 1995)

Item Nos. 0002, 0003, 0004, 0005 are subdivided into two or more estimated quantities and are to be separately priced. The Government will evaluate each of these items on the basis of total price of its subitems.

(End of provision)

IHA PERMIT PROVISION

IHA Permit Provision

This solicitation contains a Draft Incidental Harassment Authorization (IHA) Permit, which should be used to prepare offers under this solicitation. USACE anticipates receiving a Final IHA Permit from the National Marine Fisheries Service on or about 01 September 2015, after receipt of proposals. USACE will incorporate the Final IHA Permit into the solicitation by issuing an amendment to firms submitting timely proposals to the original solicitation. No award will be made until the Final IHA Permit has been amended into the solicitation.

CLAUSES INCORPORATED BY FULL TEXT

INQUIRIES

All inquiries regarding this solicitation are to be submitted via ProjNet-Bid<sup>SM</sup>. Telephone and email inquiries will not be accepted. ProjNet-Bid<sup>SM</sup> is a web-based program that allows bidders to post questions regarding the solicitation and to view all questions by other bidders and answers by USACE. ProjNet-Bid<sup>SM</sup> can be accessed through ProjNet<sup>SM</sup> at <https://www.projnet.org/projnet/>

To access the ProjNet-Bid<sup>SM</sup> website:

1. Click on the Quick Add.

2. Select USACE from the Agency menu.
  3. How to retrieve information:
    - (a) Enter the following information for access:
      - (1) The Bidder Inquiry Key **2IW7H2-X22AWK**
      - (2) Valid business contact information (e.g. Company name, contact person, business address, phone number and email address). Required for first time users.
      - (3) Establish secret question and answer which will be used as a password.
    - (b) For subsequent access use your email address, the Bid Inquiry Key and response to the secret question to access the ProjNet- Bid<sup>SM</sup> Module.
  4. Submit questions or review questions and answers. (A bidder who submits a question will receive an automated email notification that their question has been received. When an answer is posted to a question, the question and answer is then available for all other bidders to review.
  5. For additional step-by-step on how to gain access, please view Bidder\_Inquiry\_Instructions.pdf.
  6. For questions about the ProjNet-Bid<sup>SM</sup>, please contact the Call Center help desk toll free at 1-800-428-HELP, which operates from 8AM to 5PM (Central US time zone). ProjNet-Bid<sup>SM</sup> questions can also be emailed to the helpdesk at [staff@rcesupport.com](mailto:staff@rcesupport.com).
- NOTE: No response will be posted to inquiries after the Close of Business on the third business day preceding the solicitation due date. All bidders will be held to have reviewed the questions and responses in ProjNet-Bid<sup>SM</sup> prior to bid submission. Nothing in the solicitation is changed unless an amendment is sent out.

#### 52.204-6 DATA UNIVERSAL NUMBERING SYSTEM NUMBER (JULY 2013)

(a) Definition. Data Universal Numbering System (DUNS) number, as used in this provision, means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities, which is used as the identification number for Federal Contractors.

(b) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" or "DUNS+4" followed by the DUNS number or "DUNS+4" that identifies the offeror's name and address exactly as stated in the offer. The DUNS number is a nine-digit number assigned by Dun and Bradstreet, Inc. The DUNS+4 is the DUNS number plus a 4-character suffix that may be assigned at the discretion of the offeror to establish additional System for Award Management records for identifying alternative Electronic Funds Transfer (EFT) accounts (see Subpart 32.11) for the same concern.

(c) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

(1) An offeror may obtain a DUNS number--

(i) Via the Internet at <http://fedgov.dnb.com/webform> or if the offeror does not have internet access, it may call Dun and Bradstreet at 1-866-705-5711 if located within the United States; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office. The offeror should indicate that it is an offeror for a U.S. Government contract when contacting the local Dun and Bradstreet office.

(2) The offeror should be prepared to provide the following information:

(i) Company legal business name.

(ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

(iii) Company physical street address, city, state and Zip Code.

(iv) Company mailing address, city, state and Zip Code (if separate from physical).

(v) Company telephone number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(End of provision)

#### 52.204-7 SYSTEM FOR AWARD MANAGEMENT (JULY 2013)

(a) Definitions. As used in this provision--

Data Universal Numbering System (DUNS) number means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities.

Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional System for Award Management records for identifying alternative Electronic Funds Transfer (EFT) accounts (see the FAR at Subpart 32.11) for the same parent concern.

Registered in the System for Award Management SAM database means that--

(1) The offeror has entered all mandatory information, including the DUNS number or the DUNS+4 number, the Contractor and Government Entity (CAGE) code, as well as data required by the Federal Funding Accountability and Transparency Act of 2006 (see Subpart 4.14) into the SAM database;

(2) The offeror has completed the Core, Assertions, and Representations and Certifications, and Points of Contact sections of the registration in the SAM database;

(3) The Government has validated all mandatory data fields, to include validation of the Taxpayer Identification Number (TIN) with the Internal Revenue Service (IRS). The offeror will be required to provide consent for TIN validation to the Government as a part of the SAM registration process; and

(4) The Government has marked the record ``Active".

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the SAM database prior to award, during performance, and through final payment of any contract, basic agreement, basic ordering agreement, or blanket purchasing agreement resulting from this solicitation.

(2) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" or "DUNS +4" followed by the DUNS or DUNS +4 number that identifies the offeror's name and address

exactly as stated in the offer. The DUNS number will be used by the Contracting Officer to verify that the offeror is registered in the SAM database.

(c) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

(1) An offeror may obtain a DUNS number--

(i) Via the Internet at <http://fedgov.dnb.com/webform> or if the offeror does not have internet access, it may call Dun and Bradstreet at 1-866-705-5711 if located within the United States; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office. The offeror should indicate that it is an offeror for a U.S. Government contract when contacting the local Dun and Bradstreet office.

(2) The offeror should be prepared to provide the following information:

(i) Company legal business.

(ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

(iii) Company Physical Street Address, City, State, and Zip Code.

(iv) Company Mailing Address, City, State and Zip Code (if separate from physical).

(v) Company Telephone Number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(d) If the Offeror does not become registered in the SAM database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered Offeror.

(e) Processing time, which normally takes 48 hours, should be taken into consideration when registering. Offerors who are not registered should consider applying for registration immediately upon receipt of this solicitation.

(f) Offerors may obtain information on registration at <https://www.acquisition.gov>.

(End of clause)

## CLAUSES INCORPORATED BY FULL TEXT

52.215-1 INSTRUCTIONS TO OFFERORS--COMPETITIVE ACQUISITION (JAN 2004)

(a) Definitions. As used in this provision--

“Discussions” are negotiations that occur after establishment of the competitive range that may, at the Contracting Officer’s discretion, result in the offeror being allowed to revise its proposal.

“In writing or written” means any worded or numbered expression which can be read, reproduced, and later communicated, and includes electronically transmitted and stored information.

“Proposal modification” is a change made to a proposal before the solicitation’s closing date and time, or made in response to an amendment, or made to correct a mistake at any time before award.

“Proposal revision” is a change to a proposal made after the solicitation closing date, at the request of or as allowed by a Contracting Officer as the result of negotiations.

“Time”, if stated as a number of days, is calculated using calendar days, unless otherwise specified, and will include Saturdays, Sundays, and legal holidays. However, if the last day falls on a Saturday, Sunday, or legal holiday, then the period shall include the next working day.

(b) Amendments to solicitations. If this solicitation is amended, all terms and conditions that are not amended remain unchanged. Offerors shall acknowledge receipt of any amendment to this solicitation by the date and time specified in the amendment(s).

(c) Submission, modification, revision, and withdrawal of proposals. (1) Unless other methods (e.g., electronic commerce or facsimile) are permitted in the solicitation, proposals and modifications to proposals shall be submitted in paper media in sealed envelopes or packages (i) addressed to the office specified in the solicitation, and (ii) showing the time and date specified for receipt, the solicitation number, and the name and address of the offeror. Offerors using commercial carriers should ensure that the proposal is marked on the outermost wrapper with the information in paragraphs (c)(1)(i) and (c)(1)(ii) of this provision.

(2) The first page of the proposal must show--

(i) The solicitation number;

(ii) The name, address, and telephone and facsimile numbers of the offeror (and electronic address if available);

(iii) A statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation and agreement to furnish any or all items upon which prices are offered at the price set opposite each item;

(iv) Names, titles, and telephone and facsimile numbers (and electronic addresses if available) of persons authorized to negotiate on the offeror’s behalf with the Government in connection with this solicitation; and

(v) Name, title, and signature of person authorized to sign the proposal. Proposals signed by an agent shall be accompanied by evidence of that agent’s authority, unless that evidence has been previously furnished to the issuing office.

(3) Submission, modification, or revision, of proposals.

(i) Offerors are responsible for submitting proposals, and any modifications, or revisions, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that proposal or revision is due.

(ii)(A) Any proposal, modification, or revision received at the Government office designated in the solicitation after the exact time specified for receipt of offers is “late” and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and--

(1) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or

(2) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or

(3) It is the only proposal received.

(B) However, a late modification of an otherwise successful proposal that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(iii) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(iv) If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the office designated for receipt of proposals by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(v) Proposals may be withdrawn by written notice received at any time before award. Oral proposals in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile proposals, proposals may be withdrawn via facsimile received at any time before award, subject to the conditions specified in the provision at 52.215-5, Facsimile Proposals. Proposals may be withdrawn in person by an offeror or an authorized representative, if the identity of the person requesting withdrawal is established and the person signs a receipt for the proposal before award.

(4) Unless otherwise specified in the solicitation, the offeror may propose to provide any item or combination of items.

(5) Offerors shall submit proposals in response to this solicitation in English, unless otherwise permitted by the solicitation, and in U.S. dollars, unless the provision at FAR 52.225-17, Evaluation of Foreign Currency Offers, is included in the solicitation.

(6) Offerors may submit modifications to their proposals at any time before the solicitation closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.

(7) Offerors may submit revised proposals only if requested or allowed by the Contracting Officer.

(8) Proposals may be withdrawn at any time before award. Withdrawals are effective upon receipt of notice by the Contracting Officer.

(d) Offer expiration date. Proposals in response to this solicitation will be valid for the number of days specified on the solicitation cover sheet (unless a different period is proposed by the offeror).

(e) Restriction on disclosure and use of data. Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall--

(1) Mark the title page with the following legend: This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed--in whole or in part--for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of--or in connection with-- the

submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets [insert numbers or other identification of sheets]; and

(2) Mark each sheet of data it wishes to restrict with the following legend: Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.

(f) Contract award. (1) The Government intends to award a contract or contracts resulting from this solicitation to the responsible offeror(s) whose proposal(s) represents the best value after evaluation in accordance with the factors and subfactors in the solicitation.

(2) The Government may reject any or all proposals if such action is in the Government's interest.

(3) The Government may waive informalities and minor irregularities in proposals received.

(4) The Government intends to evaluate proposals and award a contract without discussions with offerors (except clarifications as described in FAR 15.306(a)). Therefore, the offeror's initial proposal should contain the offeror's best terms from a cost or price and technical standpoint. The Government reserves the right to conduct discussions if the Contracting Officer later determines them to be necessary. If the Contracting Officer determines that the number of proposals that would otherwise be in the competitive range exceeds the number at which an efficient competition can be conducted, the Contracting Officer may limit the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals.

(5) The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit cost or prices offered, unless the offeror specifies otherwise in the proposal.

(6) The Government reserves the right to make multiple awards if, after considering the additional administrative costs, it is in the Government's best interest to do so.

(7) Exchanges with offerors after receipt of a proposal do not constitute a rejection or counteroffer by the Government.

(8) The Government may determine that a proposal is unacceptable if the prices proposed are materially unbalanced between line items or subline items. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly overstated or understated as indicated by the application of cost or price analysis techniques. A proposal may be rejected if the Contracting Officer determines that the lack of balance poses an unacceptable risk to the Government.

(9) If a cost realism analysis is performed, cost realism may be considered by the source selection authority in evaluating performance or schedule risk.

(10) A written award or acceptance of proposal mailed or otherwise furnished to the successful offeror within the time specified in the proposal shall result in a binding contract without further action by either party.

(11) If a post-award debriefing is given to requesting offerors, the Government shall disclose the following information, if applicable:

(i) The agency's evaluation of the significant weak or deficient factors in the debriefed offeror's offer.

(ii) The overall evaluated cost or price and technical rating of the successful and the debriefed offeror and past performance information on the debriefed offeror.



- (iii) The overall ranking of all offerors, when any ranking was developed by the agency during source selection.
  - (iv) A summary of the rationale for award.
  - (v) For acquisitions of commercial items, the make and model of the item to be delivered by the successful offeror.
  - (vi) Reasonable responses to relevant questions posed by the debriefed offeror as to whether source-selection procedures set forth in the solicitation, applicable regulations, and other applicable authorities were followed by the agency.
- (End of provision)

## CLAUSES INCORPORATED BY FULL TEXT

### 52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a FIRM FIXED PRICE contract resulting from this solicitation.

(End of provision)

## CLAUSES INCORPORATED BY FULL TEXT

### 52.217-5 EVALUATION OF OPTIONS (JUL 1990)

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

(End of provision)

## CLAUSES INCORPORATED BY FULL TEXT

### 52.222-5 CONSTRUCTION WAGE RATE REQUIREMENTS--SECONDARY SITE OF THE WORK (MAY 2014)

(a)(1) The offeror shall notify the Government if the offeror intends to perform work at any secondary site of the work, as defined in paragraph (a)(1)(ii) of the FAR clause at 52.222-6, Construction Wage Rate Requirements , of this solicitation.

(2) If the offeror is unsure if a planned work site satisfies the criteria for a secondary site of the work, the offeror shall request a determination from the Contracting Officer.

(b)(1) If the wage determination provided by the Government for work at the primary site of the work is not applicable to the secondary site of the work, the offeror shall request a wage determination from the Contracting Officer.

(2) The due date for receipt of offers will not be extended as a result of an offeror's request for a wage determination for a secondary site of the work.

(End of provision)

52.222-23 NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY FOR CONSTRUCTION (FEB 1999)

(a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation for each trade	Goals for female participation for each trade
2.9%	6.9%

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the --

- (1) Name, address, and telephone number of the subcontractor;
- (2) Employer's identification number of the subcontractor;
- (3) Estimated dollar amount of the subcontract;

(4) Estimated starting and completion dates of the subcontract; and

(5) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is

#### **PACIFIC COUNTY, WASHINGTON**

(End of provision)

#### 52.228-1 BID GUARANTEE (SEP 1996)

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The bidder shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.-

(c) The amount of the bid guarantee shall be **TWENTY** percent of the bid price not to exceed **\$3,000,000.00**.

(d) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.-

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

(End of provision)

#### **CLAUSES INCORPORATED BY FULL TEXT**

#### 52.233-2 SERVICE OF PROTEST (SEP 2006)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the Government Accountability Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from

CONTRACTING OFFICER  
CECT-NWP-C  
333 SW FIRST AVENUE  
PORTLAND, OR 97204

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of provision)

#### CLAUSES INCORPORATED BY FULL TEXT

##### 52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995) – ALTERNATE I (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

(b) An organized site visit has been scheduled for—

**12 AUGUST 2015, 1000**

(c) Participants will meet at—

**COAST GUARD STATION CAPE DISAPPOINTMENT  
322 COAST GUARD ROAD  
ILLWACO, WA 98624**

(d) Participants shall RSVP by 10 AUGUST 2015, 1300 to [jeff.s.renner@usace.army.mil](mailto:jeff.s.renner@usace.army.mil)

(e) Provide Name, Company Name, Phone Number, Email Address.

(End of provision)

#### CLAUSES INCORPORATED BY FULL TEXT

##### 52.236-28 PREPARATION OF PROPOSALS--CONSTRUCTION (OCT 1997)

(a) Proposals must be (1) submitted on the forms furnished by the Government or on copies of those forms, and (2) manually signed. The person signing a proposal must initial each erasure or change appearing on any proposal form.

(b) The proposal form may require offerors to submit proposed prices for one or more items on various bases, including--

(1) Lump sum price;

(2) Alternate prices;

(3) Units of construction; or

(4) Any combination of paragraphs (b)(1) through (b)(3) of this provision.

(c) If the solicitation requires submission of a proposal on all items, failure to do so may result in the proposal being rejected without further consideration. If a proposal on all items is not required, offerors should insert the words “no proposal” in the space provided for any item on which no price is submitted.

(d) Alternate proposals will not be considered unless this solicitation authorizes their submission.

(End of provision)

#### CLAUSES INCORPORATED BY FULL TEXT

##### 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

<https://www.acquisition.gov/>

(End of provision)

##### 52.252-5 AUTHORIZED DEVIATIONS IN PROVISIONS (APR 1984)

(a) The use in this solicitation of any Federal Acquisition Regulation (48 CFR Chapter 1) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the provision.

(b) The use in this solicitation of any DFARS (48 CFR Chapter 2) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of provision)

#### CLAUSES INCORPORATED BY FULL TEXT

##### 52.300-4001 EVIDENCE OF AUTHORITY (MAY 1995) FAR 4.102

**If the bid is submitted by a corporation or partnership, the applicable form listed below must be completed. In the alternative, other evidence must be submitted to substantiate the authority of the person signing the bid. IF A CORPORATION, THE SAME OFFICER SHALL NOT EXECUTE BOTH THE BID AND THE CERTIFICATE.**

#### CORPORATE CERTIFICATE

I \_\_\_\_\_, certify that I am the \_\_\_\_\_ of the Corporation named as Bidder/Contractor herein; that \_\_\_\_\_ who signed this bid/contract on behalf of the Bidder/Contractor was then \_\_\_\_\_ of said Corporation; that said bid/contract was duly signed for and on behalf of said Corporation by authority of its governing body, and is within the scope of its corporate powers.

SEAL \_\_\_\_\_ (Corporate (Secretary))

**AUTHORITY TO BIND PARTNERSHIP**

This is to certify that the names and signatures of all partners are listed below and that the person signing the . . . .

Authority to actually bind the partnership pursuant to its . . . . . partnership agreement. Each of the partners individually has authority to enter into and execute contractual instruments on behalf of said partnership, with the United States of America, except as follows: (State NONE, or describe limitations, in any)

This authority shall remain in full force and effect until such time as the revocation of authority by any cause whatsoever has been furnished in writing to, and acknowledged by, the Contracting Officer.

TYPE OR PRINT NAMES	SIGNATURES
_____	_____
_____	_____
_____	_____

**CLAUSES INCORPORATED BY FULL TEXT**

252.204-7004 ALTERNATE A, SYSTEM FOR AWARD MANAGEMENT (FEB 2014)

(a) *Definitions.* As used in this provision—

“System for Award Management (SAM) database” means the primary Government repository for contractor information required for the conduct of business with the Government.

“Commercial and Government Entity (CAGE) code” means—

(1) A code assigned by the Defense Logistics Information Service (DLIS) to identify a commercial or Government entity; or

(2) A code assigned by a member of the North Atlantic Treaty Organization that DLIS records and maintains in the CAGE master file. This type of code is known as an “NCAGE code.”

“Data Universal Numbering System (DUNS) number” means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities.

“Data Universal Numbering System +4 (DUNS+4) number” means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional SAM records for identifying alternative Electronic Funds Transfer (EFT) accounts (see FAR 32.11) for the same parent concern.

“Registered in the System for Award Management (SAM) database” means that—

- (1) The contractor has entered all mandatory information, including the DUNS number or the DUNS+4 number, and Contractor and Government Entity (CAGE) code into the SAM database; and
  - (2) The contractor has completed the Core Data, Assertions, Representations and Certifications, and Points of Contact sections of the registration in the SAM database;
  - (3) The Government has validated all mandatory data fields, to include validation of the Taxpayer Identification Number (TIN) with the Internal Revenue Service (IRS). The Contractor will be required to provide consent for TIN validation to the Government as part of the SAM registration process; and
  - (4) The Government has marked the record “Active.”
- (b) (1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the SAM database prior to award, during performance, and through final payment of any contract, basic agreement, basic ordering agreement, or blanket purchasing agreement resulting from this solicitation.
- (2) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation “DUNS” or “DUNS+4” followed by the DUNS or DUNS+4 number that identifies the offeror’s name and address exactly as stated in the offer. The DUNS number will be used by the Contracting Officer to verify that the offeror is registered in the SAM database.
- (c) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.
- (1) An offeror may obtain a DUNS number—
- (i) Via the internet at <http://fedgov.dnb.com/webform> or if the offeror does not have internet access, it may call Dun and Bradstreet at 1-866-705-5711 if located within the United States; or
  - (ii) If located outside the United States, by contacting the local Dun and Bradstreet office. The offeror should indicate that it is an offeror for a U.S. Government contract when contacting the local Dun and Bradstreet office.
- (2) The offeror should be prepared to provide the following information:
- (i) Company legal business name.
  - (ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.
  - (iii) Company physical street address, city, state and Zip Code.
  - (iv) Company mailing address, city, state and Zip Code (if separate from physical).
  - (v) Company telephone number.
  - (vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(d) If the Offeror does not become registered in the SAM database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered Offeror.

(e) Processing time, which normally takes 48 hours, should be taken into consideration when registering. Offerors who are not registered should consider applying for registration immediately upon receipt of this solicitation.

(f) Offerors may obtain information on registration at <https://www.acquisition.gov>.

(End of Provision)

## CLAUSES INCORPORATED BY FULL TEXT

252.236-7008 CONTRACT PRICES - BIDDING SCHEDULES. (DEC 1991)

(a) The Government's payment for the items listed in the Bidding Schedule shall constitute full compensation to the Contractor for --

(1) Furnishing all plant, labor, equipment, appliances, and materials; and

(2) Performing all operations required to complete the work in conformity with the drawings and specifications.

(b) The Contractor shall include in the prices for the items listed in the Bidding Schedule all costs for work in the specifications, whether or not specifically listed in the Bidding Schedule.



Section 00600 - Representations & Certifications

CLAUSES INCORPORATED BY FULL TEXT

52.204-8 ANNUAL REPRESENTATIONS AND CERTIFICATIONS (DEC 2014)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is **237990**.

(2) The small business size standard is **\$36.5M**.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b)(1) If the provision at 52.204-7, System for Award Management, is included in this solicitation, paragraph (d) of this provision applies.

(2) If the provision at 52.204-7 is not included in this solicitation, and the offeror is currently registered in System for Award Management (SAM), and has completed the Representations and Certifications section of SAM electronically, the offeror may choose to use paragraph (d) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:

(  ) Paragraph (d) applies.

(  ) Paragraph (d) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(c) (1) The following representations or certifications in SAM are applicable to this solicitation as indicated:

(i) 52.203-2, Certificate of Independent Price Determination. This provision applies to solicitations when a firm-fixed-price contract or fixed-price contract with economic price adjustment is contemplated, unless—

(A) The acquisition is to be made under the simplified acquisition procedures in Part 13;

(B) The solicitation is a request for technical proposals under two-step sealed bidding procedures; or

(C) The solicitation is for utility services for which rates are set by law or regulation.

(ii) 52.203-11, Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions. This provision applies to solicitations expected to exceed \$150,000.

(iii) 52.204-3, Taxpayer Identification. This provision applies to solicitations that do not include the provision at 52.204-7, System for Award Management.

(iv) 52.204-5, Women-Owned Business (Other Than Small Business). This provision applies to solicitations that—

(A) Are not set aside for small business concerns;

(B) Exceed the simplified acquisition threshold; and

(C) Are for contracts that will be performed in the United States or its outlying areas.

(v) 52.209-2; Prohibition on Contracting with Inverted Domestic Corporations--Representation.

- (vi) 52.209-5; Certification Regarding Responsibility Matters. This provision applies to solicitations where the contract value is expected to exceed the simplified acquisition threshold.
- (vii) 52.214-14, Place of Performance--Sealed Bidding. This provision applies to invitations for bids except those in which the place of performance is specified by the Government.
- (viii) 52.215-6, Place of Performance. This provision applies to solicitations unless the place of performance is specified by the Government.
- (ix) 52.219-1, Small Business Program Representations (Basic & Alternate I). This provision applies to solicitations when the contract will be performed in the United States or its outlying areas.
- (A) The basic provision applies when the solicitations are issued by other than DoD, NASA, and the Coast Guard.
- (B) The provision with its Alternate I applies to solicitations issued by DoD, NASA, or the Coast Guard.
- (x) 52.219-2, Equal Low Bids. This provision applies to solicitations when contracting by sealed bidding and the contract will be performed in the United States or its outlying areas.
- (xi) 52.222-22, Previous Contracts and Compliance Reports. This provision applies to solicitations that include the clause at 52.222-26, Equal Opportunity.
- (xii) 52.222-25, Affirmative Action Compliance. This provision applies to solicitations, other than those for construction, when the solicitation includes the clause at 52.222-26, Equal Opportunity.
- (xiii) 52.222-38, Compliance with Veterans' Employment Reporting Requirements. This provision applies to solicitations when it is anticipated the contract award will exceed the simplified acquisition threshold and the contract is not for acquisition of commercial items.
- (xiv) 52.223-1, Biobased Product Certification. This provision applies to solicitations that require the delivery or specify the use of USDA-designated items; or include the clause at 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts.
- (xv) 52.223-4, Recovered Material Certification. This provision applies to solicitations that are for, or specify the use of, EPA- designated items.
- (xvi) 52.225-2, Buy American Certificate. This provision applies to solicitations containing the clause at 52.225-1.
- (xvii) 52.225-4, Buy American--Free Trade Agreements--Israeli Trade Act Certificate. (Basic, Alternates I, II, and III.) This provision applies to solicitations containing the clause at 52.225- 3.
- (A) If the acquisition value is less than \$25,000, the basic provision applies.
- (B) If the acquisition value is \$25,000 or more but is less than \$50,000, the provision with its Alternate I applies.
- (C) If the acquisition value is \$50,000 or more but is less than \$79,507, the provision with its Alternate II applies.
- (D) If the acquisition value is \$79,507 or more but is less than \$100,000, the provision with its Alternate III applies.
- (xviii) 52.225-6, Trade Agreements Certificate. This provision applies to solicitations containing the clause at 52.225-5.
- (xix) 52.225-20, Prohibition on Conducting Restricted Business Operations in Sudan--Certification. This provision applies to all solicitations.
- (xx) 52.225-25, Prohibition on Contracting with Entities Engaging in Certain Activities or Transactions Relating to Iran—Representation and Certification. This provision applies to all solicitations.

(xxi) 52.226-2, Historically Black College or University and Minority Institution Representation. This provision applies to solicitations for research, studies, supplies, or services of the type normally acquired from higher educational institutions.

(2) The following certifications are applicable as indicated by the Contracting Officer:

X (i) 52.204-17, Ownership or Control of Offeror.

X (ii) 52.222-18, Certification Regarding Knowledge of Child Labor for Listed End Products.

(iii) 52.222-48, Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Certification.

(iv) 52.222-52 Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services--Certification.

(v) 52.223-9, with its Alternate I, Estimate of Percentage of Recovered Material Content for EPA-Designated Products (Alternate I only).

(vi) 52.227-6, Royalty Information.

(A) Basic.

(B) Alternate I.

(vii) 52.227-15, Representation of Limited Rights Data and Restricted Computer Software.

(d) The offeror has completed the annual representations and certifications electronically via the SAM website accessed through <https://www.acquisition.gov>. After reviewing the SAM database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically that apply to this solicitation as indicated in paragraph (c) of this provision have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [offeror to insert changes, identifying change by clause number, title, date]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR Clause	Title	Date	Change
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Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on SAM.

(End of provision)

(a) Definitions. As used in this provision--

Administrative proceeding means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative Proceedings, Civilian Board of Contract Appeals Proceedings, and Armed Services Board of Contract Appeals Proceedings). This includes administrative proceedings at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include agency actions such as contract audits, site visits, corrective plans, or inspection of deliverables.

Federal contracts and grants with total value greater than \$10,000,000 means--

- (1) The total value of all current, active contracts and grants, including all priced options; and
- (2) The total value of all current, active orders including all priced options under indefinite-delivery, indefinite-quantity, 8(a), or requirements contracts (including task and delivery and multiple-award Schedules).

Principal means an officer, director, owner, partner, or a person having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a division or business segment; and similar positions).

(b) The offeror ( ) has ( ) does not have current active Federal contracts and grants with total value greater than \$10,000,000.

(c) If the offeror checked "has" in paragraph (b) of this provision, the offeror represents, by submission of this offer, that the information it has entered in the Federal Awardee Performance and Integrity Information System (FAPIS) is current, accurate, and complete as of the date of submission of this offer with regard to the following information:

(1) Whether the offeror, and/or any of its principals, has or has not, within the last five years, in connection with the award to or performance by the offeror of a Federal contract or grant, been the subject of a proceeding, at the Federal or State level that resulted in any of the following dispositions:

- (i) In a criminal proceeding, a conviction.
- (ii) In a civil proceeding, a finding of fault and liability that results in the payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more.

(iii) In an administrative proceeding, a finding of fault and liability that results in--

- (A) The payment of a monetary fine or penalty of \$5,000 or more; or
- (B) The payment of a reimbursement, restitution, or damages in excess of \$100,000.

(iv) In a criminal, civil, or administrative proceeding, a disposition of the matter by consent or compromise with an acknowledgment of fault by the Contractor if the proceeding could have led to any of the outcomes specified in paragraphs (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this provision.

(2) If the offeror has been involved in the last five years in any of the occurrences listed in (c)(1) of this provision, whether the offeror has provided the requested information with regard to each occurrence.

(d) The offeror shall post the information in paragraphs (c)(1)(i) through (c)(1)(iv) of this provision in FAPIS as required through maintaining an active registration in the System for Award Management database via <https://www.acquisition.gov> (see 52.204-7).

(End of provision)

## CLAUSES INCORPORATED BY FULL TEXT

### 52.223-1 BIOBASED PRODUCT CERTIFICATION (MAY 2012)

As required by the Farm Security and Rural Investment Act of 2002 and the Energy Policy Act of 2005 (7 U.S.C. 8102(c)(3)), the offeror certifies, by signing this offer, that biobased products (within categories of products listed by the United States Department of Agriculture in 7 CFR part 3201, subpart B) to be used or delivered in the performance of the contract, other than biobased products that are not purchased by the offeror as a direct result of this contract, will comply with the applicable specifications or other contractual requirements.

(End of provision)

## CLAUSES INCORPORATED BY FULL TEXT

### 52.223-4 RECOVERED MATERIAL CERTIFICATION (MAY 2008)

As required by the Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6962(c)(3)(A)(i)), the offeror certifies, by signing this offer, that the percentage of recovered materials content for EPA-designated items to be delivered or used in the performance of the contract will be at least the amount required by the applicable contract specifications or other contractual requirements.

(End of provision)

## CLAUSES INCORPORATED BY FULL TEXT

### 52.225-12 NOTICE OF BUY AMERICAN REQUIREMENT-- CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (MAY 2014)

(a) Definitions. "Commercially available off-the-shelf (COTS) item," "construction material," "designated country construction material," "domestic construction material," and "foreign construction material," as used in this provision, are defined in the clause of this solicitation entitled "Buy American -- Construction Materials Under Trade Agreements" (Federal Acquisition Regulation (FAR) clause 52.225-11).

(b) Requests for determination of inapplicability. An offeror requesting a determination regarding the inapplicability of the Buy American statute should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of FAR clause 52.225-11 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American statute before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) Evaluation of offers. (1) The Government will evaluate an offer requesting exception to the requirements of the Buy American statute, based on claimed unreasonable cost of domestic construction materials, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(4)(i) of FAR clause 52.225-11.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) Alternate offers. (1) When an offer includes foreign construction material, other than designated country construction material, that is not listed by the Government in this solicitation in paragraph (b)(3) of FAR clause 52.225-11, the offeror also may submit an alternate offer based on use of equivalent domestic or designated country construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of FAR clause 52.225-11 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of FAR clause 52.225-11 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic or designated country construction material, and the offeror shall be required to furnish such domestic or designated country construction material. An offer based on use of the foreign construction material for which an exception was requested-- (i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or

(ii) May be accepted if revised during negotiations.

(End of provision)

#### 252.204-7007 ALTERNATE A, ANNUAL REPRESENTATIONS AND CERTIFICATIONS (JAN 2015)

Substitute the following paragraphs (d) and (e) for paragraph (d) of the provision at FAR 52.204-8:

(d)(1) The following representations or certifications in the System for Award Management (SAM) database are applicable to this solicitation as indicated:

(i) 252.209-7003, Reserve Officer Training Corps and Military Recruiting on Campus--Representation. Applies to all solicitations with institutions of higher education.

(ii) 252.216-7008, Economic Price Adjustment--Wage Rates or Material Prices Controlled by a Foreign Government. Applies to solicitations for fixed-price supply and service contracts when the contract is to be performed wholly or in part in a foreign country, and a foreign government controls wage rates or material prices and may during contract performance impose a mandatory change in wages or prices of materials.

(iii) 252.222-7007, Representation Regarding Combating Trafficking in Persons, as prescribed in 222.1771. Applies to solicitations with a value expected to exceed the simplified acquisition threshold.

(iv) 252.225-7042, Authorization to Perform. Applies to all solicitations when performance will be wholly or in part in a foreign country.

(v) 252.225-7049, Prohibition on Acquisition of Commercial Satellite Services from Certain Foreign Entities--Representations. Applies to solicitations for the acquisition of commercial satellite services.

(vi) 252.225-7050, Disclosure of Ownership or Control by the Government of a Country that is a State Sponsor of Terrorism. Applies to all solicitations expected to result in contracts of \$150,000 or more.

(vii) 252.229-7012, Tax Exemptions (Italy)--Representation. Applies to solicitations when contract performance will be in Italy.

(viii) 252.229-7013, Tax Exemptions (Spain)--Representation. Applies to solicitations when contract performance will be in Spain.

(ix) 252.247-7022, Representation of Extent of Transportation by Sea. Applies to all solicitations except those for direct purchase of ocean transportation services or those with an anticipated value at or below the simplified acquisition threshold.

(2) The following representations or certifications in SAM are applicable to this solicitation as indicated by the Contracting Officer: [Contracting Officer check as appropriate.]

X (i) 252.209-7002, Disclosure of Ownership or Control by a Foreign Government.

\_\_\_ (ii) 252.225-7000, Buy American--Balance of Payments Program Certificate.

\_\_\_ (iii) 252.225-7020, Trade Agreements Certificate.

\_\_\_ Use with Alternate I.

\_\_\_ (iv) 252.225-7031, Secondary Arab Boycott of Israel.

\_\_\_ (v) 252.225-7035, Buy American--Free Trade Agreements--Balance of Payments Program Certificate.

\_\_\_ Use with Alternate I.

\_\_\_ Use with Alternate II.

\_\_\_ Use with Alternate III.

\_\_\_ Use with Alternate IV.

\_\_\_ Use with Alternate V.

(e) The offeror has completed the annual representations and certifications electronically via the SAM Web site at <https://www.acquisition.gov/>. After reviewing the SAM database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically that apply to this solicitation as indicated in FAR 52.204-8(c) and paragraph (d) of this provision have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer, and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below \_\_\_ [offeror to insert changes, identifying change by provision number, title, date]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR/DFARS Clause #	Title	Date	Change

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Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications located in the SAM database.

(End of provision)

252.209-7998 REPRESENTATION REGARDING CONVICTION OF A FELONY CRIMINAL VIOLATION UNDER ANY FEDERAL OR STATE LAW (DEVIATION 2012-O0007) (MAR 2012)

(a) In accordance with section 514 of Division H of the Consolidated Appropriations Act, 2012, none of the funds made available by that Act may be used to enter into a contract with any corporation that was convicted of a felony criminal violation under any Federal or State law within the preceding 24 months, where the awarding agency is aware of the conviction, unless the agency has considered suspension or debarment of the corporation and made a determination that this further action is not necessary to protect the interests of the Government.

(b) The Offeror represents that it is  is not  a corporation that was convicted of a felony criminal violation under a Federal or State law within the preceding 24 months.

(End of provision)



Section 00700 - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	NOV 2013
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	MAY 2014
52.203-7	Anti-Kickback Procedures	MAY 2014
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	MAY 2014
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	MAY 2014
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	OCT 2010
52.204-4	Printed or Copied Double-Sided on Postconsumer Fiber Content Paper	MAY 2011
52.204-19	Incorporation by Reference of Representations and Certifications.	DEC 2014
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	AUG 2013
52.211-13	Time Extensions	SEP 2000
52.211-18	Variation in Estimated Quantity	APR 1984
52.215-2	Audit and Records--Negotiation	OCT 2010
52.215-11	Price Reduction for Defective Certified Cost or Pricing Data--Modifications	AUG 2011
52.215-13	Subcontractor Certified Cost or Pricing Data--Modifications	OCT 2010
52.215-21	Requirements for Certified Cost or Pricing Data and Data Other Than Certified Cost or Pricing Data -- Modifications	OCT 2010
52.222-3	Convict Labor	JUN 2003
52.222-4	Contract Work Hours and Safety Standards- Overtime Compensation	MAY 2014
52.222-6	Construction Wage Rate Requirements	MAY 2014
52.222-7	Withholding of Funds	MAY 2014
52.222-8	Payrolls and Basic Records	MAY 2014
52.222-9	Apprentices and Trainees	JUL 2005
52.222-10	Compliance with Copeland Act Requirements	FEB 1988
52.222-11	Subcontracts (Labor Standards)	MAY 2014
52.222-12	Contract Termination-Debarment	MAY 2014
52.222-13	Compliance With Construction Wage Rate Requirements and Related Regulations	MAY 2014
52.222-14	Disputes Concerning Labor Standards	FEB 1988
52.222-15	Certification of Eligibility	MAY 2014
52.222-26	Equal Opportunity	APR 2015
52.222-27	Affirmative Action Compliance Requirements for Construction	APR 2015
52.222-35	Equal Opportunity for Veterans	JUL 2014
52.222-36	Equal Opportunity for Workers with Disabilities	JUL 2014
52.222-37	Employment Reports on Veterans	JUL 2014
52.223-2	Affirmative Procurement of Biobased Products Under Service and Construction Contracts	SEP 2013
52.223-3	Hazardous Material Identification And Material Safety Data	JAN 1997
52.223-5	Pollution Prevention and Right-to-Know Information	MAY 2011

52.223-6	Drug-Free Workplace	MAY 2001
52.223-17	Affirmative Procurement of EPA-Designated Items in Service and Construction Contracts	MAY 2008
52.225-11	Buy American--Construction Materials Under Trade Agreements	MAY 2014
52.225-13	Restrictions on Certain Foreign Purchases	JUN 2008
52.227-1	Authorization and Consent	DEC 2007
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	DEC 2007
52.227-4	Patent Indemnity-Construction Contracts	DEC 2007
52.228-2	Additional Bond Security	OCT 1997
52.228-11	Pledges Of Assets	JAN 2012
52.228-12	Prospective Subcontractor Requests for Bonds	MAY 2014
52.229-3	Federal, State And Local Taxes	FEB 2013
52.232-5	Payments under Fixed-Price Construction Contracts	MAY 2014
52.232-17	Interest	MAY 2014
52.232-23	Assignment Of Claims	MAY 2014
52.232-27	Prompt Payment for Construction Contracts	MAY 2014
52.232-33	Payment by Electronic Funds Transfer--System for Award Management	JUL 2013
52.232-39	Unenforceability of Unauthorized Obligations	JUN 2013
52.233-1 Alt I	Disputes (May 2014) - Alternate I	DEC 1991
52.233-3	Protest After Award	AUG 1996
52.233-4	Applicable Law for Breach of Contract Claim	OCT 2004
52.236-2	Differing Site Conditions	APR 1984
52.236-3	Site Investigation and Conditions Affecting the Work	APR 1984
52.236-5	Material and Workmanship	APR 1984
52.236-6	Superintendence by the Contractor	APR 1984
52.236-7	Permits and Responsibilities	NOV 1991
52.236-8	Other Contracts	APR 1984
52.236-9	Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements	APR 1984
52.236-10	Operations and Storage Areas	APR 1984
52.236-11	Use and Possession Prior to Completion	APR 1984
52.236-12	Cleaning Up	APR 1984
52.236-14	Availability and Use of Utility Services	APR 1984
52.236-15	Schedules for Construction Contracts	APR 1984
52.236-17	Layout of Work	APR 1984
52.236-21	Specifications and Drawings for Construction	FEB 1997
52.236-26	Preconstruction Conference	FEB 1995
52.242-13	Bankruptcy	JUL 1995
52.242-14	Suspension of Work	APR 1984
52.243-4	Changes	JUN 2007
52.244-6	Subcontracts for Commercial Items	APR 2015
52.246-12	Inspection of Construction	AUG 1996
52.246-21	Warranty of Construction	MAR 1994
52.248-3	Value Engineering-Construction	OCT 2010
52.249-2 Alt I	Termination for Convenience of the Government (Fixed-Price) (Apr 2012) - Alternate I	SEP 1996
52.249-10	Default (Fixed-Price Construction)	APR 1984
52.252-6	Authorized Deviations In Clauses	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.203-7000	Requirements Relating to Compensation of Former DoD Officials	SEP 2011

252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-DEC 2008 Contract-Related Felonies	
252.203-7002	Requirement to Inform Employees of Whistleblower Rights	SEP 2013
252.204-7000	Disclosure Of Information	AUG 2013
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Country that is a State Sponsor of Terrorism	DEC 2014
252.215-7000	Pricing Adjustments	DEC 2012
252.215-7007	Notice of Intent to Resolicit	JUN 2012
252.215-7008	Only One Offer	OCT 2013
252.223-7001	Hazard Warning Labels	DEC 1991
252.223-7004	Drug Free Work Force	SEP 1988
252.226-7001	Utilization of Indian Organizations and Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns	SEP 2004
252.227-7033	Rights in Shop Drawings	APR 1966
252.231-7000	Supplemental Cost Principles	DEC 1991
252.232-7010	Levies on Contract Payments	DEC 2006
252.236-7000	Modification Proposals-Price Breakdown	DEC 1991
252.236-7002	Obstruction of Navigable Waterways	DEC 1991
252.243-7001	Pricing Of Contract Modifications	DEC 1991
252.243-7002	Requests for Equitable Adjustment	DEC 2012
252.247-7023	Transportation of Supplies by Sea	APR 2014
252.247-7024	Notification Of Transportation Of Supplies By Sea	MAR 2000

## CLAUSES INCORPORATED BY FULL TEXT

Contractors are solely responsible for all applicable taxes. It is the contractor's responsibility to ascertain the physical and legal locations of work performed under this contract, and to ascertain the applicable tax laws for such work.

It should also be noted that Portland District projects on the Columbia River are typically in both Oregon and Washington, and subject in part to the tax laws of both states. Oregon has a general income tax, but no general sales or use taxes, but does have multiple specialized sales and use taxes. Washington has no personal income taxes, but does have a gross receipts business tax, plus multiple general and special sales and use taxes. Washington also taxes federal property bailed or otherwise loaned or given or furnished to contractors for whatever reason or use.

## CLAUSES INCORPORATED BY FULL TEXT

52.217-7 OPTION FOR INCREASED QUANTITY--SEPARATELY PRICED LINE ITEM (MAR 1989)

The Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor within (SEE INDIVIDUAL CLIN DESCRIPTION). Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree.

(End of clause)

52.219-4 NOTICE OF PRICE EVALUATION PREFERENCE FOR HUBZONE SMALL BUSINESS CONCERNS (OCT 2014)

(a) Definitions. See 13 CFR 125.6(e) for definitions of terms used in paragraph (d).

(b) Evaluation preference. (1) Offers will be evaluated by adding a factor of 10 percent to the price of all offers, except--

(i) Offers from HUBZone small business concerns that have not waived the evaluation preference; and

(ii) Otherwise successful offers from small business concerns.

(2) The factor of 10 percent shall be applied on a line item basis or to any group of items on which award may be made. Other evaluation factors described in the solicitation shall be applied before application of the factor.

(3) When the two highest rated offerors are a HUBZone small business concern and a large business, and the evaluated offer of the HUBZone small business concern is equal to the evaluated offer of the large business after considering the price evaluation preference, award will be made to the HUBZone small business concern.

(c) Waiver of evaluation preference. A HUBZone small business concern may elect to waive the evaluation preference, in which case the factor will be added to its offer for evaluation purposes. The agreements in paragraphs (d) and (e) of this clause do not apply if the offeror has waived the evaluation preference.

\_\_\_ Offeror elects to waive the evaluation preference.

(d) Agreement. A HUBZone small business concern agrees that in the performance of the contract, in the case of a contract for

(1) Services (except construction), at least 50 percent of the cost of personnel for contract performance will be spent for employees of the concern or employees of other HUBZone small business concerns;

(2) Supplies (other than procurement from a nonmanufacturer of such supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern or other HUBZone small business concerns;

(3) General construction. (i) At least 15 percent of the cost of contract performance to be incurred for personnel will be spent on the prime contractor's employees;

(ii) At least 50 percent of the cost of the contract performance to be incurred for personnel will be spent on the prime contractor's employees or on a combination of the prime contractor's employees and employees of HUBZone small business concern subcontractors;

(iii) No more than 50 percent of the cost of contract performance to be incurred for personnel will be subcontracted to

concerns that are not HUBZone small business concerns; or

(4) Construction by special trade contractors. (i) At least 25 percent of the cost of contract performance to be incurred for personnel will be spent on the prime contractor's employees;

(ii) At least 50 percent of the cost of the contract performance to be incurred for personnel will be spent on the prime contractor's employees or on a combination of the prime contractor's employees and employees of HUBZone small business concern subcontractors;

(iii) No more than 50 percent of the cost of contract performance to be incurred for personnel will be subcontracted to concerns that are not HUBZone small business concerns.

(e) A HUBZone joint venture agrees that the aggregate of the HUBZone small business concerns to the joint venture, not each concern separately, will perform the applicable percentage of work requirements.

(f)(1) When the total value of the contract exceeds \$25,000, a HUBZone small business concern nonmanufacturer agrees to furnish in performing this contract only end items manufactured or produced by HUBZone small business concern manufacturers.

(2) When the total value of the contract is equal to or less than \$25,000, a HUBZone small business concern nonmanufacturer may provide end items manufactured by other than a HUBZone small business concern manufacturer provided the end items are produced or manufactured in the United States.

(3) Paragraphs (f)(1) and (f)(2) of this section do not apply in connection with construction or service contracts.

(g) Notice. The HUBZone small business offeror acknowledges that a prospective HUBZone awardee must be a HUBZone small business concern at the time of award of this contract. The HUBZone offeror shall provide the Contracting Officer a copy of the notice required by 13 CFR 126.501 if material changes occur before contract award that could affect its HUBZone eligibility. If the apparently successful HUBZone offeror is not a HUBZone small business concern at the time of award of this contract, the Contracting Officer will proceed to award to the next otherwise successful HUBZone small business concern or other offeror.

(End of clause)

#### 52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS (OCT 2014)

(a) Definitions. As used in this contract--

HUBZone small business concern means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

Small business concern means a small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto.

Small disadvantaged business concern, consistent with 13 CFR 124.1002, means a small business concern under the size standard applicable to the acquisition, that--

(1) Is at least 51 percent unconditionally and directly owned (as defined at 13 CFR 124.105) by--

(i) One or more socially disadvantaged (as defined at 13 CFR 124.103) and economically disadvantaged (as defined at 13 CFR 124.104) individuals who are citizens of the United States; and

(ii) Each individual claiming economic disadvantage has a net worth not exceeding \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

(2) The management and daily business operations of which are controlled (as defined at 13.CFR 124.106) by individuals, who meet the criteria in paragraphs (1)(i) and (ii) of this definition.

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

Women-owned small business concern means a small business concern--

(1) That is at least 51 percent owned by one or more women, or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(b) It is the policy of the United States that small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns.

(c) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.

(d)(1) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as a small business concern, a veteran-owned small business concern, a service-disabled veteran-owned small business concern, a small disadvantaged business concern, or a women-owned small business concern.

(2) The Contractor shall confirm that a subcontractor representing itself as a HUBZone small business concern is certified by SBA as a HUBZone small business concern by accessing the System for Award Management database or by contacting the SBA. Options for contacting the SBA include--

(i) HUBZone small business database search application Web page at [http://dsbs.sba.gov/dsbs/search/dsp\\_searchhubzone.cfm](http://dsbs.sba.gov/dsbs/search/dsp_searchhubzone.cfm); or <http://www.sba.gov/hubzone>;

(ii) In writing to the Director/HUB, U.S. Small Business Administration, 409 3rd Street, SW., Washington DC 20416; or

(iii) The SBA HUBZone Help Desk at [hubzone@sba.gov](mailto:hubzone@sba.gov).

(End of clause)

#### 52.219-9 SMALL BUSINESS SUBCONTRACTING PLAN (OCT 2014)

(a) This clause does not apply to small business concerns.

(b) Definitions. As used in this clause--

“Alaska Native Corporation (ANC)” means any Regional Corporation, Village Corporation, Urban Corporation, or Group Corporation organized under the laws of the State of Alaska in accordance with the Alaska Native Claims Settlement Act, as amended (43 U.S.C. 1601, et seq.) and which is considered a minority and economically disadvantaged concern under the criteria at 43 U.S.C. 1626(e)(1). This definition also includes ANC direct and indirect subsidiary corporations, joint ventures, and partnerships that meet the requirements of 43 U.S.C. 1626(e)(2).

“Commercial item” means a product or service that satisfies the definition of commercial item in section 2.101 of the Federal Acquisition Regulation.

“Commercial plan” means a subcontracting plan (including goals) that covers the offeror’s fiscal year and that applies to the entire production of commercial items sold by either the entire company or a portion thereof (e.g., division, plant, or product line).

“Electronic Subcontracting Reporting System (eSRS)” means the Governmentwide, electronic, web-based system for small business subcontracting program reporting. The eSRS is located at <http://www.esrs.gov>.

“Indian tribe” means any Indian tribe, band, group, pueblo, or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act (43 U.S.C.A. 1601 et seq.), that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs in accordance with 25 U.S.C. 1452(c). This definition also includes Indian-owned economic enterprises that meet the requirements of 25 U.S.C. 1452(e).

“Individual contract plan” means a subcontracting plan that covers the entire contract period (including option periods), applies to a specific contract, and has goals that are based on the offeror’s planned subcontracting in support of the specific contract except that indirect costs incurred for common or joint purposes may be allocated on a prorated basis to the contract.

“Master plan” means a subcontracting plan that contains all the required elements of an individual contract plan, except goals, and may be incorporated into individual contract plans, provided the master plan has been approved.

“Subcontract” means any agreement (other than one involving an employer-employee relationship) entered into by a Federal Government prime Contractor or subcontractor calling for supplies or services required for performance of the contract or subcontract.

(c) The offeror, upon request by the Contracting Officer, shall submit and negotiate a subcontracting plan, where applicable, that separately addresses subcontracting with small business concerns, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business concerns, small disadvantaged business, and with women-owned small business concerns. If the offeror is submitting an individual contract plan, the plan must separately address subcontracting with small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns with a separate part for the basic contract and separate parts for each option (if any). The plan shall be included in and made a part of the resultant contract. The subcontracting plan shall be negotiated within the time specified by the Contracting Officer. Failure to submit and negotiate the subcontracting plan shall make the offeror ineligible for award of a contract.

(d) The offeror’s subcontracting plan shall include the following:

(1) Goals, expressed in terms of percentages of total planned subcontracting dollars, for the use of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns as subcontractors. The offeror shall include all subcontracts that contribute to contract performance, and may include a proportionate share of products and services that are normally allocated as indirect costs. In accordance with 43 U.S.C. 1626:

(i) Subcontracts awarded to an ANC or Indian tribe shall be counted towards the subcontracting goals for small business and small disadvantaged business (SDB) concerns, regardless of the size or Small Business Administration certification status of the ANC or Indian tribe.

(ii) Where one or more subcontractors are in the subcontract tier between the prime contractor and the ANC or Indian tribe, the ANC or Indian tribe shall designate the appropriate contractor(s) to count the subcontract towards its small business and small disadvantaged business subcontracting goals.

(A) In most cases, the appropriate Contractor is the Contractor that awarded the subcontract to the ANC or Indian tribe.

(B) If the ANC or Indian tribe designates more than one Contractor to count the subcontract toward its goals, the ANC or Indian tribe shall designate only a portion of the total subcontract award to each Contractor. The sum of the amounts designated to various Contractors cannot exceed the total value of the subcontract.

(C) The ANC or Indian tribe shall give a copy of the written designation to the Contracting Officer, the prime Contractor, and the subcontractors in between the prime Contractor and the ANC or Indian tribe within 30 days of the date of the subcontract award.

(D) If the Contracting Officer does not receive a copy of the ANC's or the Indian tribe's written designation within 30 days of the subcontract award, the Contractor that awarded the subcontract to the ANC or Indian tribe will be considered the designated Contractor.

(2) A statement of --

(i) Total dollars planned to be subcontracted for an individual contract plan; or the offeror’s total projected sales, expressed in dollars, and the total value of projected subcontracts to support the sales for a commercial plan;



- (ii) Total dollars planned to be subcontracted to small business concerns (including ANC and Indian tribes);
- (iii) Total dollars planned to be subcontracted to veteran-owned small business concerns;
- (iv) Total dollars planned to be subcontracted to service-disabled veteran-owned small business;
- (v) Total dollars planned to be subcontracted to HUBZone small business concerns;
- (vi) Total dollars planned to be subcontracted to small disadvantaged business concerns (including ANCs and Indian tribes); and
- (vii) Total dollars planned to be subcontracted to women-owned small business concerns.

(3) A description of the principal types of supplies and services to be subcontracted, and an identification of the types planned for subcontracting to --

- (i) Small business concerns,
- (ii) Veteran-owned small business concerns;
- (iii) Service-disabled veteran-owned small business concerns;
- (iv) HUBZone small business concerns;
- (v) Small disadvantaged business concerns, and
- (vi) Women-owned small business concerns.

(4) A description of the method used to develop the subcontracting goals in paragraph (d)(1) of this clause.

(5) A description of the method used to identify potential sources for solicitation purposes (e.g., existing company source lists, the System for Award Management (SAM), veterans service organizations, the National Minority Purchasing Council Vendor Information Service, the Research and Information Division of the Minority Business Development Agency in the Department of Commerce, or small, HUBZone, small disadvantaged, and women-owned small business trade associations). A firm may rely on the information contained in SAM as an accurate representation of a concern's size and ownership characteristics for the purposes of maintaining a small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged, and women-owned small business source list. Use of SAM as its source list does not relieve a firm of its responsibilities (e.g., outreach, assistance, counseling, or publicizing subcontracting opportunities) in this clause.

(6) A statement as to whether or not the offeror included indirect costs in establishing subcontracting goals, and a description of the method used to determine the proportionate share of indirect costs to be incurred with --

- (i) Small business concerns (including ANC and Indian tribes);
- (ii) Veteran-owned small business concerns;
- (iii) Service-disabled veteran-owned small business concerns;
- (iv) HUBZone small business concerns;
- (v) Small disadvantaged business concerns (including ANC and Indian tribes); and

(vi) Women-owned small business concerns.

(7) The name of the individual employed by the offeror who will administer the offeror's subcontracting program, and a description of the duties of the individual.

(8) A description of the efforts the offeror will make to assure that small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns have an equitable opportunity to compete for subcontracts.

(9) Assurances that the offeror will include the clause of this contract entitled "Utilization of Small Business Concerns" in all subcontracts that offer further subcontracting opportunities, and that the offeror will require all subcontractors (except small business concerns) that receive subcontracts in excess of \$650,000 (\$1.5 million for construction of any public facility with further subcontracting possibilities) to adopt a plan similar to the plan that complies with the requirements of this clause.

(10) Assurances that the offeror will --

(i) Cooperate in any studies or surveys as may be required;

(ii) Submit periodic reports so that the Government can determine the extent of compliance by the offeror with the subcontracting plan;

(iii) Submit the Individual Subcontract Report (ISR) and/or the Summary Subcontract Report (SSR), in accordance with paragraph (l) of this clause using the Electronic Subcontracting Reporting System (eSRS) at <http://www.esrs.gov>. The reports shall provide information on subcontract awards to small business concerns (including ANCs and Indian tribes that are not small businesses), veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns (including ANCs and Indian tribes that have not been certified by the Small Business Administration as small disadvantaged businesses), women-owned small business concerns, and for NASA only, Historically Black Colleges and Universities and Minority Institutions. Reporting shall be in accordance with this clause, or as provided in agency regulations;

(iv) Ensure that its subcontractors with subcontracting plans agree to submit the ISR and/or the SSR using eSRS;

(v) Provide its prime contract number, its DUNS number, and the e-mail address of the offeror's official responsible for acknowledging receipt of or rejecting the ISRs, to all first-tier subcontractors with subcontracting plans so they can enter this information into the eSRS when submitting their ISRs; and

(vi) Require that each subcontractor with a subcontracting plan provide the prime contract number, its own DUNS number, and the e-mail address of the subcontractor's official responsible for acknowledging receipt of or rejecting the ISRs, to its subcontractors with subcontracting plans.

(11) A description of the types of records that will be maintained concerning procedures that have been adopted to comply with the requirements and goals in the plan, including establishing source lists; and a description of the offeror's efforts to locate small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns and award subcontracts to them. The records shall include at least the following (on a plant-wide or company-wide basis, unless otherwise indicated):

(i) Source lists (e.g., SAM), guides, and other data that identify small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns.

(ii) Organizations contacted in an attempt to locate sources that are small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, or women-owned small business concerns.

(iii) Records on each subcontract solicitation resulting in an award of more than \$150,000, indicating --

(A) Whether small business concerns were solicited and if not, why not;

(B) Whether veteran-owned small business concerns were solicited and, if not, why not;

(C) Whether service-disabled veteran-owned small business concerns were solicited and, if not, why not;

(D) Whether HUBZone small business concerns were solicited and, if not, why not;

(E) Whether small disadvantaged business concerns were solicited and if not, why not;

(F) Whether women-owned small business concerns were solicited and if not, why not; and

(G) If applicable, the reason award was not made to a small business concern.

(iv) Records of any outreach efforts to contact --

(A) Trade associations;

(B) Business development organizations;

(C) Conferences and trade fairs to locate small, HUBZone small, small disadvantaged, and women-owned small business sources; and

(D) Veterans service organizaions.

(v) Records of internal guidance and encouragement provided to buyers through --

(A) Workshops, seminars, training, etc., and

(B) Monitoring performance to evaluate compliance with the program's requirements.

(vi) On a contract-by-contract basis, records to support award data submitted by the offeror to the Government, including the name, address, and business size of each subcontractor. Contractors having commercial plans need not comply with this requirement.

(e) In order to effectively implement this plan to the extent consistent with efficient contract performance, the Contractor shall perform the following functions:

(1) Assist small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation by such concerns. Where the Contractor's lists of potential small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business subcontractors are excessively long, reasonable effort shall be made to give all such small business concerns an opportunity to compete over a period of time.

(2) Provide adequate and timely consideration of the potentialities of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns in all “make-or-buy” decisions.

(3) Counsel and discuss subcontracting opportunities with representatives of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business firms.

(4) Confirm that a subcontractor representing itself as a HUBZone small business concern is identified as a certified HUBZone small business concern by accessing the SAM database or by contacting SBA.

(5) Provide notice to subcontractors concerning penalties and remedies for misrepresentations of business status as small, veteran-owned small business, HUBZone small, small disadvantaged or women-owned small business for the purpose of obtaining a subcontract that is to be included as part or all of a goal contained in the Contractor’s subcontracting plan.

(6) For all competitive subcontracts over the simplified acquisition threshold in which a small business concern received a small business preference, upon determination of the successful subcontract offeror, the Contractor must inform each unsuccessful small business subcontract offeror in writing of the name and location of the apparent successful offeror prior to award of the contract.

(f) A master plan on a plant or division-wide basis that contains all the elements required by paragraph (d) of this clause, except goals, may be incorporated by reference as a part of the subcontracting plan required of the offeror by this clause; provided --

(1) The master plan has been approved;

(2) The offeror ensures that the master plan is updated as necessary and provides copies of the approved master plan, including evidence of its approval, to the Contracting Officer; and

(3) Goals and any deviations from the master plan deemed necessary by the Contracting Officer to satisfy the requirements of this contract are set forth in the individual subcontracting plan.

(g) A commercial plan is the preferred type of subcontracting plan for contractors furnishing commercial items. The commercial plan shall relate to the offeror's planned subcontracting generally, for both commercial and Government business, rather than solely to the Government contract. Once the Contractor's commercial plan has been approved, the Government will not require another subcontracting plan from the same Contractor while the plan remains in effect, as long as the product or service being provided by the Contractor continues to meet the definition of a commercial item. A Contractor with a commercial plan shall comply with the reporting requirements stated in paragraph (d)(10) of this clause by submitting one SSR in eSRS for all contracts covered by its commercial plan. This report shall be acknowledged or rejected in eSRS by the Contracting Officer who approved the plan. This report shall be submitted within 30 days after the end of the Government's fiscal year.

(h) Prior compliance of the offeror with other such subcontracting plans under previous contracts will be considered by the Contracting Officer in determining the responsibility of the offeror for award of the contract.

(i) A contract may have no more than one plan. When a modification meets the criteria in 19.702 for a plan, or an option is exercised, the goals associated with the modification or option shall be added to those in the existing subcontract plan.

(j) Subcontracting plans are not required from subcontractors when the prime contract contains the clause at 52.212-5, Contract Terms and Conditions Required to Implement Statutes or Executive Orders--Commercial Items, or when the subcontractor provides a commercial item subject to the clause at 52.244-6, Subcontracts for Commercial Items, under a prime contract.

(k) The failure of the Contractor or subcontractor to comply in good faith with --

(1) The clause of this contract entitled "Utilization Of Small Business Concerns;" or

(2) An approved plan required by this clause, shall be a material breach of the contract.

(l) The Contractor shall submit ISRs and SSRs using the web-based eSRS at <http://www.esrs.gov>. Purchases from a corporation, company, or subdivision that is an affiliate of the prime Contractor or subcontractor are not included in these reports. Subcontract award data reported by prime Contractors and subcontractors shall be limited to awards made to their immediate next-tier subcontractors. Credit cannot be taken for awards made to lower tier subcontractors, unless the Contractor or subcontractor has been designated to receive a small business or small disadvantaged business credit from an ANC or Indian tribe. Only subcontracts involving performance in the United States or its outlying areas should be included in these reports with the exception of subcontracts under a contract awarded by the State Department or any other agency that has statutory or regulatory authority to require subcontracting plans for subcontracts performed outside the United States and its outlying areas.

(1) ISR. This report is not required for commercial plans. The report is required for each contract containing an individual subcontract plan.

(i) The report shall be submitted semi-annually during contract performance for the periods ending March 31 and September 30. A report is also required for each contract within 30 days of contract completion. Reports are due 30 days after the close of each reporting period, unless otherwise directed by the Contracting Officer. Reports are required when due, regardless of whether there has been any subcontracting activity since the inception of the contract or the previous reporting period.

(ii) When a subcontracting plan contains separate goals for the basic contract and each option, as prescribed by FAR 19.704(c), the dollar goal inserted on this report shall be the sum of the base period through the current option; for example, for a report submitted after the second option is exercised, the dollar goal would be the sum of the goals for the basic contract, the first option, and the second option.

(iii) The authority to acknowledge receipt or reject the ISR resides--

(A) In the case of the prime Contractor, with the Contracting Officer; and

(B) In the case of a subcontract with a subcontracting plan, with the entity that awarded the subcontract.

(2) SSR.

(i) Reports submitted under individual contract plans--

(A) This report encompasses all subcontracting under prime contracts and subcontracts with the awarding agency, regardless of the dollar value of the subcontracts.

(B) The report may be submitted on a corporate, company or subdivision (e.g. plant or division operating as a separate profit center) basis, unless otherwise directed by the agency.

(C) If a prime Contractor and/or subcontractor is performing work for more than one executive agency, a separate report shall be submitted to each executive agency covering only that agency's contracts, provided at least one of that agency's contracts is over \$650,000 (over \$1.5 million for construction of a public facility) and contains a subcontracting plan. For DoD, a consolidated report shall be submitted for all contracts awarded by military departments/agencies and/or subcontracts awarded by DoD prime Contractors. However, for construction and related maintenance and repair, a separate report shall be submitted for each DoD component.

(D) For DoD and NASA, the report shall be submitted semi-annually for the six months ending March 31 and the twelve months ending September 30. For civilian agencies, except NASA, it shall be submitted annually for the twelve month period ending September 30. Reports are due 30 days after the close of each reporting period.

(E) Subcontract awards that are related to work for more than one executive agency shall be appropriately allocated.

(F) The authority to acknowledge or reject SSRs in eSRS, including SSRs submitted by subcontractors with subcontracting plans, resides with the Government agency awarding the prime contracts unless stated otherwise in the contract.

(ii) Reports submitted under a commercial plan--

(A) The report shall include all subcontract awards under the commercial plan in effect during the Government's fiscal year.

(B) The report shall be submitted annually, within thirty days after the end of the Government's fiscal year.

(C) If a Contractor has a commercial plan and is performing work for more than one executive agency, the Contractor shall specify the percentage of dollars attributable to each agency from which contracts for commercial items were received.

(D) The authority to acknowledge or reject SSRs for commercial plans resides with the Contracting Officer who approved the commercial plan.

(End of clause)

#### 52.225-9 BUY AMERICAN—CONSTRUCTION MATERIALS (MAY 2014)

(a) Definitions. As used in this clause--

Commercially available off-the-shelf (COTS) item—

(1) Means any item of supply (including construction material) that is--

(i) A commercial item (as defined in paragraph (1) of the definition at FAR 2.101);

(ii) Sold in substantial quantities in the commercial marketplace; and

(iii) Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and

(2) Does not include bulk cargo, as defined in 46 U.S.C. 40102(4) such as agricultural products and petroleum products.

Component means an article, material, or supply incorporated directly into a construction material.

Construction material means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material

regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

Cost of components means--

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the construction material.

Domestic construction material means--

(1) An unmanufactured construction material mined or produced in the United States;

(2) A construction material manufactured in the United States, if--

(i) The cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic; or

(ii) The construction material is a COTS item.

Foreign construction material means a construction material other than a domestic construction material.

United States means the 50 States, the District of Columbia, and outlying areas.

(b) Domestic preference.

(1) This clause implements 41 U.S.C. chapter 83, Buy American, by providing a preference for domestic construction material. In accordance with 41 U.S.C. 1907, the component test of the Buy American statute is waived for construction material that is a COTS item. (See FAR 12.505(a)(2)). The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to information technology that is a commercial item or to the construction materials or components listed by the Government as follows:

(3) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) Request for determination of inapplicability of the Buy American Act. (1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including--

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American statute applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American statute applies, use of foreign construction material is noncompliant with the Buy American statute.

(d) Data. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison

Construction material description	Unit of measure	Quantity	Price (dollars) \1\
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Item 1

Foreign construction material....

Domestic construction material....

Item 2

Foreign construction material....



Domestic construction material... ..

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Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).

List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.

Include other applicable supporting information.

(End of clause)

#### 52.228-15 PERFORMANCE AND PAYMENT BONDS--CONSTRUCTION (OCT 2010)

(a) Definitions. As used in this clause--

Original contract price means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

(b) Amount of required bonds. Unless the resulting contract price is \$150,000 or less, the successful offeror shall furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance bonds (Standard Form 25). The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.

(2) Payment Bonds (Standard Form 25-A). The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.

(3) Additional bond protection. (i) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal 100 percent of the increase in contract price.

(ii) The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(c) Furnishing executed bonds. The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) Surety or other security for bonds. The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register or may be obtained from the U.S. Department of the Treasury, Financial Management Service, Surety Bond Branch, 3700 East West Highway, Room 6F01, Hyattsville, MD 20782. Or via the internet at <http://www.fms.treas.gov/c570/>.

(e) Notice of subcontractor waiver of protection (40 U.S.C. 3133(c)). Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

(End of clause)

52.236-13 ACCIDENT PREVENTION (NOV 1991) – ALTERNATE I (NOV 1991)

(a) The Contractor shall provide and maintain work environments and procedures which will

(1) safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities;

(2) avoid interruptions of Government operations and delays in project completion dates; and

(3) control costs in the performance of this contract.

(b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall-

(1) Provide appropriate safety barricades, signs, and signal lights;

(2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and

(3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.

(c) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.

(d) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.

(e) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts.

(f) Before commencing the work, the Contractor shall-

(1) Submit a written proposed plan for implementing this clause. The plan shall include an analysis of the significant hazards to life, limb, and property inherent in contract work performance and a plan for controlling these hazards; and

(2) Meet with representatives of the Contracting Officer to discuss and develop a mutual understanding relative to administration of the overall safety program.

(End of clause)

#### 52.249-5000 BASIS FOR SETTLEMENT OF PROPOSALS

Actual costs will be used to determine equipment costs for a settlement proposal submitted on the total cost basis under FAR 49.206-2(b). In evaluating a terminations settlement proposal using the total cost basis, the following principles will be applied to determine allowable equipment costs:

- (1) Actual costs for each piece of equipment, or groups of similar serial or series equipment, need not be available in the contractor's accounting records to determine total actual equipment costs.
- (2) If equipment costs have been allocated to a contract using predetermined rates, those charges will be adjusted to actual costs.
- (3) Recorded job costs adjusted for unallowable expenses will be used to determine equipment operating expenses.
- (4) Ownership costs (depreciation) will be determined using the contractor's depreciation schedule (subject to the provisions of FAR 31.205-11).
- (5) License, taxes, storage and insurance costs are normally recovered as an indirect expense and unless the contractor charges these costs directly to contracts, they will be recovered through the indirect expense rate.

(End of Clause)

#### 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://farsite.hill.af.mil/vffara.htm>  
<http://farsite.hill.af.mil/vfdfara.htm>  
<http://farsite.hill.af.mil/vfafara.htm>

(End of clause)

#### 52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

- (a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.
- (b) The use in this solicitation or contract of any DFARS (48 CFR CHAPTER 2) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of clause)

#### 252.201-7000 CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)

- (a) "Definition. Contracting officer's representative" means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

(End of clause)

#### 252.236-7004 PAYMENT FOR MOBILIZATION AND DEMOBILIZATION (DEC 1991)

(a) The Government will pay all costs for the mobilization and demobilization of all of the Contractor's plant and equipment at the contract lump sum price for this item.

(1) **SIXTY** percent of the lump sum price upon completion of the contractor's mobilization at the work site.

(2) The remaining **FORTY** percent upon completion of demobilization.

(b) The Contracting Officer may require the Contractor to furnish cost data to justify this portion of the bid if the Contracting Officer believes that the percentages in paragraphs (a) (1) and (2) of this clause do not bear a reasonable relation to the cost of the work in this contract.

(1) Failure to justify such price to the satisfaction of the Contracting Officer will result in payment, as determined by the Contracting Officer, of --

(i) Actual mobilization costs at completion of mobilization;

(ii) Actual demobilization costs at completion of demobilization; and

(iii) The remainder of this item in the final payment under this contract.

(2) The Contracting Officer's determination of the actual costs in paragraph (b)(1) of this clause is not subject to appeal.

#### 52.222-35 EMPHASIS

##### Veterans Employment Emphasis for U.S. Army Corps of Engineers Contracts

In addition to complying with the requirements outlined in FAR Part 22.13, FAR Provision 52.222-38, FAR Clause 52.222-35, FAR Clause 52.222-37, DFARS 222.13 and Department of Labor regulations, U.S. Army Corps of Engineers (USACE) contractors and subcontractors at all tiers are encouraged to promote the training and employment of U.S. veterans while performing under a USACE contract. While no set-aside, evaluation preference, or incentive applies to the solicitation or performance under the resultant contract, USACE contractors are encouraged to seek out highly qualified veterans to perform services under this contract. The following resources are available to assist USACE contractors in their outreach efforts:

Federal Veteran employment information at <http://www.fedshirevets.gov/index.aspx>  
Department of Labor Veterans Employment Assistance <http://www.dol.gov/vets/>  
Department of Veterans Affairs-VOW to Hire Heros Act <http://benefits.va.gov/vow/>  
Army Wounded Warrior Program- <http://wtc.army.mil/modules/employers/index.html>

U.S. Chamber of Commerce Foundation-Hiring Our Heros <http://www.hiringourheroes.org/>  
Guide to Hiring Veterans - Reference Material  
[http://www.whitehouse.gov/sites/default/files/docs/white\\_house\\_business\\_council-  
guide\\_to\\_hiring\\_veterans\\_O.pdf](http://www.whitehouse.gov/sites/default/files/docs/white_house_business_council-guide_to_hiring_veterans_O.pdf)

SPECIAL CONTINUING CONTRACT

**UAI 52.232-5001**

**Special Continuing Contract for Civil Works Project Managed by the United States Army Corps of Engineers [DEVIATION]**

- (a) Funds are not available at the inception of this contract to cover the entire contract price. The liability of the Government is limited by this clause notwithstanding any contrary provision of the "Payments to Contractor" clause or any other clause of this contract, except the Termination for Convenience clause. The sum of **\$2,100,000.00** has been reserved for this contract and is available for payment to the Contractor during the current fiscal year. It is expected that Congress will make appropriations for future fiscal years from which additional funds, together with funds provided by one or more non-federal project sponsors, will be reserved for this contract.
- (b) Failure to make payments in excess of the amount currently reserved, or that may be reserved from time to time, shall not be considered a breach of contract and shall not entitle the Contractor to a price adjustment under the terms of this contract.
- (c) The Government may at any time reserve additional funds for payments under the contract if there are funds available for such purpose. The Contracting Officer will promptly notify the Contractor of any additional funds reserved for the contract by issuing an administrative modification to the contract.
- (d) If earnings will be such that funds reserved for the contract will be exhausted before the end of any fiscal year, the Contractor shall give written notice to the Contracting Officer of the estimated date of exhaustion and the amount of additional funds which will be needed to meet payments due or to become due under the contract during that fiscal year. This notice shall be given not less than 120 days prior to the estimated date of exhaustion. Unless informed in writing by the Contracting Officer that additional funds have been reserved for payments under the contract, the Contractor shall stop work upon the exhaustion of funds.
- (e) No payments will be made after exhaustion of funds except to the extent that additional funds are reserved for the contract.
- (f) Any suspension, delay, or interruption of work arising from exhaustion or anticipated exhaustion of funds shall not constitute a breach of this contract and shall not entitle the Contractor to any price adjustment under the "Suspension of Work" clause or in any other manner under this contract.
- (g) An equitable adjustment in performance time shall be made for any increase in the time required for performance of any part of the work arising from exhaustion of funds or the reasonable anticipation of exhaustion of funds.
- (h) If, upon the expiration of 100 days after the beginning of the fiscal year following an exhaustion of funds, the Government has failed to reserve additional funds for this contract sufficient to cover the Government's estimate of funding required for the first quarter of that fiscal year, the Contractor, by written notice delivered to the Contracting Officer at any time before such additional funds are reserved, may elect to treat his right to proceed with the work as having been terminated. Such a termination shall be considered a termination for the convenience of the Government.
- (i) If at any time it becomes apparent that the funds reserved for any fiscal year are in excess of the funds required to meet all payments due or to become due the Contractor because of work performed and to be performed under the contract during the fiscal year, the Government reserves the right, after notice to the Contractor, to reduce said reservation by the amount of such excess.

(j) The term "Reservation" means monies that have been set aside and made available for payments under this contract. Reservations of funds shall be made in writing via an administrative modification issued by the Contracting Officer.

*(End of clause)*

UAI 22.406-6-100

UAI 22.406-6-100 CONTRACTOR SUPPLY and USE OF ELECTRONIC SOFTWARE FOR PROCESSING DAVIS-BACON ACT CERTIFIED LABOR PAYROLLS (April 2011)

The contractor is encouraged to use a commercially-available electronic system to process and submit certified payrolls electronically to the Government. The requirements for preparing, processing and providing certified labor payrolls are established by the Davis-Bacon Act as stated in FAR 52.222-8, PAYROLLS AND BASIC RECORDS and FAR 52.222-13, COMPLIANCE WITH DAVIS-BACON AND RELATED ACT REGULATIONS.

If the contractor elects to use an electronic Davis-Bacon payroll processing system, then the contractor shall be responsible for obtaining and providing for all access, licenses, and other services required to provide for receipt, processing, certifying, electronically transmitting to the Government, and storing weekly payrolls and other data required for the contractor to comply with Davis-Bacon and related Act regulations. When the contractor uses an electronic Davis-Bacon payroll system, the electronic payroll service shall be used by the contractor to prepare, process, and maintain the relevant payrolls and basic records during all work under this construction contract and the electronic payroll service shall be capable of preserving these payrolls and related basic records for the required 3 years after contract completion. If the contractor chooses to use an electronic Davis-Bacon payroll system, then the contractor shall obtain and provide electronic system access to the Government, as required to comply with the Davis-Bacon and related Act regulations over the duration of this construction contract. The access shall include electronic review access by the Government contract administration office to the electronic payroll processing system used by the contractor.

The contractor's provision and use of an electronic payroll processing system shall meet the following basic functional criteria: commercially available; compliant with appropriate Davis Bacon Act payroll provisions in the FAR; able to accommodate the required numbers of employees and subcontractors planned to be employed under the contract; capable of producing an Excel spreadsheet-compatible electronic output of weekly payroll records (format at <http://www.rmssupport.com/guides.aspx>) for export in an Excel spreadsheet to be imported into the contractor's Quality Control System (QCS) version of Resident Management System (RMS), that in turn shall export payroll data to the Government's Resident Management System (RMS); demonstrated security of data and data entry rights; ability to produce contractor-certified electronic versions of weekly payroll data; ability to identify erroneous entries and track the data/time of all versions of the certified Davis Bacon payrolls submitted to the government over the life of the contract; capable of generating a durable record copy, that is, a CD or DVD and PDF file record of data from the system database at end of the contract closeout. This durable record copy of data from the electronic Davis-Bacon payroll processing system shall be provided to the Government during contract closeout.

All contractor-incurred costs related to the contractor's provision and use of an electronic payroll processing service shall be included in the contractor's price for the overall work under the contract. The costs for Davis-Bacon Act compliance using electronic payroll processing services shall not be a separately bid/proposed or reimbursed item under this contract.

CLAUSES INCORPORATED BY FULL TEXT

52.000-4006 CONTRACT ADMINISTRATOR

Contract will be administered by:

USACE - Vancouver Resident Office  
4480 SE Columbia Way  
Vancouver, WA 98661-5580

Name: Karen Garmire, PE  
Telephone: (360) 448-7796

52.000.4007 INVOICE SUBMITTAL:

Original to:

USACE - Vancouver Resident Office  
4480 SE Columbia Way  
Vancouver, WA 98661-5580

Name: Karen Garmire, PE  
Telephone: (360) 448-7796

52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK - ALTERNATE I (APR 1984)

The Contractor shall be required to (a) commence work under this contract within TEN calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than:

JETTY (All CLINs except CLIN 0008):

- JETTY CONSTRUCTION PHYSICAL COMPLETION DATE: September 30, 2017
- SITE RESTORATION CONSTRUCTION PHYSICAL COMPLETION DATE: 270 calendar days after JETTY CONSTRUCTION PHYSICAL COMPLETION DATE.
- JETTY CONTRACT END DATE: 90 calendar days after SITE RESTORATION CONSTRUCTION PHYSICAL COMPLETION DATE.

Work that must be completed by the JETTY CONSTRUCTION PHYSICAL COMPLETION DATE includes: Mobilization and Demobilization; Procurement, Delivery, and Placement of all A-Select and A-Stone; Jetty Crest Haul Road, and Repair of Access Road.



Work that must be completed by the SITE RESTORATION CONSTRUCTION PHYSICAL COMPLETION DATE includes Site Restoration.

Work that must be completed by the JETTY CONTRACT END DATE includes submission of all corrected, final work documents per Sections 01 33 00 Submittal Procedures and 01 78 39.00 25 Record Drawings except as noted below in MITIGATION CONTRACT END DATE.

The completion dates are based on the assumption that the successful offeror will receive the notice to proceed by October 15, 2015. The completion date will be extended by the number of calendar days after the above date that the Contractor receives the notice to proceed, except to the extent that the delay in issuance of the notice to proceed results from the failure of the Contractor to execute the contract and give the required performance and payment bonds within the time specified in the offer.

MITIGATION (CLIN 0008):

- MITIGATION CONSTRUCTION PHYSICAL COMPLETION DATE: Achievement of all performance metrics described in Section 32 92 29.00 25 Eelgrass Plantings or five years after initial planting of the mitigation area is completed per section 32 92 29.00 25 Eelgrass Plantings, whichever is earlier.
- MITIGATION CONTRACT END DATE: 90 days after the MITIGATION CONSTRUCTION PHYSICAL COMPLETION DATE.

The MITIGATION CONSTRUCTION PHYSICAL COMPLETION DATE and MITIGATION CONTRACT END DATE only apply if the Government exercises CLIN 0008.

Work that must be completed by the MITIGATION CONSTRUCTION PHYSICAL COMPLETION DATE includes: all monitoring, surveys, reports, and maintenance required under CLIN 0008.

Work that must be completed by the MITIGATION CONTRACT END DATE includes: submission of all corrected, final remaining work documents required under CLIN 0008 and Sections 01 33 00 Submittal Procedures, 01 78 39.00 25 Record Drawings, and 32 92 29.00 25 for final work document requirements.

(End of clause)

52.211-12 LIQUIDATED DAMAGES--CONSTRUCTION (SEP 2000)

(a) If the Contractor fails to complete the work within the time specified in contract clause 52.211-10, the Contractor shall pay liquidated damages to the Government for each calendar day of delay until the work is completed or accepted in the amount of:

\$2,415 for each calendar day after the JETTY CONSTRUCTION PHYSICAL COMPLETION DATE.

\$656 for each calendar day after the SITE RESTORATION CONSTRUCTION PHYSICAL COMPLETION DATE, JETTY CONTRACT END DATE, MITIGATION CONSTRUCTION PHYSICAL COMPLETION DATE, and MITIGATION CONTRACT END DATE.

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

(End of clause)

52.211-5001 VARIATIONS IN ESTIMATED QUANTITIES, SUBDIVIDED ITEMS  
(MAR 1995)--UAI

This variation in estimated quantities clause is applicable only to Items Nos. 0002, 0003, 0004, 0005.

(a) Variation from the estimated quantity in the actual work performed under any second or subsequent sub-item or elimination of all work under such a second or subsequent sub-item will not be the basis for an adjustment in contract unit price.

(b) Where the actual quantity of work performed for Items Nos. 0002, 0003, 0004, 0005 is less than 85% of the quantity of the first sub-item listed under such item, the contractor will be paid at the contract unit price for that sub-item for the actual quantity of work performed and, in addition, an equitable adjustment shall be made in accordance with the clause FAR 52.212-11, Variation in Estimated Quantities.

(c) If the actual quantity of work performed under Items Nos. 0002, 0003, 0004, 0005 exceeds 115% or is less than 85% of the total estimated quantity of the sub-item under that item and/or if the quantity of the work performed under the second sub-item or any subsequent sub-item under Items Nos. 0002, 0003, 0004, 0005 exceeds 115% or is less than 85% of the estimated quantity of any such sub-item, and if such variation causes an increase or a decrease in the time required for performance of this contract the contract completion time will be adjusted in accordance with the clause FAR 52.212-11, Variation in Estimated Quantities.

(End of clause)

52.228-4005 INSURANCE—WORK ON A GOVERNMENT INSTALLATION (JAN 1990 DEV)

a. The Contractor shall, at its own expense, provide and maintain during the entire performance period of this contract, at least the kinds and minimum amounts of insurance required by this Clause as follows:

TYPE	AMOUNT
1) Workman's Compensation and Employer's Liability (including Federal Longshoremen . and Harbor Worker's Insurance)	As legally required by the State wherein the work is being performed.
2) Comprehensive General Liability Insurance	Personal Injury Liability: \$1 million per person \$1 million per occurrence  Property Damage (may be included in general aggregate limits or combined single unit coverage): \$1 million per occurrence
3) Automobile Liability	Personal Injury Liability: \$1 million per person \$1 million per occurrence  Property Damage (may be included in general aggregate limits or combined single unit coverage): \$1 million per occurrence

4) If single general aggregate limits or combined single unit coverage is obtained for General Liability and/or Automobile Liability coverage, minimum amounts shall be the sum of the personal injury and property damage coverage required above.

Umbrella Form Excess Liability insurance coverage shall be added to general liability and automobile liability coverage to determine if minimum insurance limits are met.

5) If work is to be performed in railroad right-of-way, see paragraph titled ADDITIONAL REQUIREMENTS FOR RAILROAD PROTECTION in Section 01010 of SECTION C. (THIS APPLIES TO CONSTRUCTION CONTRACTS ONLY)

b. Before commencing work under this contract, the Contractor shall certify to the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective (1) for such period as the laws of the State in which this contract is to be performed prescribe, or (2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

c. The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

d. "Government Installation" for this clause includes government vessels.

#### 52.236-4 PHYSICAL DATA (APR 1984)

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

(a) Site Conditions. Bidders should satisfy themselves before submitting their bids regarding work-related problems likely to arise from extreme weather conditions. Weather records and reports may be obtained from the National Weather Service.

(b) Weather Conditions - Time Extensions for Unusually Severe Weather.

(1) This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the contract clause entitled "Default: (Fixed Price Construction)." In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

(i) The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

(ii) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the contractor.

(2) The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities (see Table 1).

Table 1. MONTHLY ANTICIPATED ADVERSE WEATHER DELAY  
WORK DAYS BASED ON (5) DAY WORK WEEK

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No. of Days	6	4	4	2	2	1	1	1	2	3	5	6

Climate data from Astoria Wso Airport Weather Station. Temperature used was 1941 to 2006 where maximum temperature was 32 F or less. Precipitation used was 1953 to 2006 where daily total was 0.50 inch or greater. Wind data from Astoria Regional Airport (Kast), OR Weather Station was Jul 1996 to Dec 2008.

(3) Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, the contractor will record on the daily Contractor's Quality Control (CQC) report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the contractor's scheduled work day. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph 2, above, the contracting officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the contract clause entitled "Default (Fixed Price Construction)."

(End of clause)

#### 52.248-3 VALUE ENGINEERING--CONSTRUCTION (OCT 2010)

(a) General. The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any instant contract savings realized from accepted VECP's, in accordance with paragraph (f) below.

(b) Definitions. "Collateral costs," as used in this clause, means agency costs of operation, maintenance, logistic support, or Government-furnished property.

"Collateral savings," as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

"Contractor's development and implementation costs," as used in this clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

"Government costs," as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistic support. The term does not include the normal administrative costs of processing the VECP.

"Instant contract savings," as used in this clause, means the estimated reduction in Contractor cost of performance resulting from acceptance of the VECP, minus allowable Contractor's development and implementation costs, including subcontractors' development and implementation costs (see paragraph (h) below).

"Value engineering change proposal (VECP)" means a proposal that--

(1) Requires a change to this, the instant contract, to implement; and

(2) Results in reducing the contract price or estimated cost without impairing essential functions or characteristics; provided, that it does not involve a change--

(i) In deliverable end item quantities only; or

(ii) To the contract type only.

(c) VECP preparation. As a minimum, the Contractor shall include in each VECP the information described in subparagraphs(c) (1) through (7) below. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation. The VECP shall include the following:

(1) A description of the difference between the existing contract requirement and that proposed, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, and the effect of the change on the end item's performance.

(2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.

(3) A separate, detailed cost estimate for

(i) the affected portions of the existing contract requirement and

(ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under paragraph (h) below.

(4) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.

(5) A prediction of any effects the proposed change would have on collateral costs to the agency.

(6) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.

(7) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.

(d) Submission. The Contractor shall submit VECP's to the Resident Engineer at the worksite, with a copy to the Contracting Officer.

(e) Government action.

(1) The Contracting Officer will notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer will notify the Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it shall not be liable for any delay in acting upon a VECP.

If the VECP is not accepted, the Contracting Officer will notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause. The Contracting Officer may accept the VECP, even though an agreement on price reduction has not been reached, by issuing the Contractor a notice to proceed with the change. Until a notice to proceed is issued or a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The decision to accept or reject all or part of any VECP is a unilateral decision made solely at the discretion of the Contracting Officer.

(f) Sharing.

(1) Rates. The Government's share of savings is determined by subtracting Government costs from instant contract savings and multiplying the result by

(i) 45 percent for fixed-price contracts or

(ii) 75 percent for cost-reimbursement contracts.

(2) Payment. Payment of any share due the Contractor for use of a VECP on this contract shall be authorized by a modification to this contract to--

(i) Accept the VECP;

(ii) Reduce the contract price or estimated cost by the amount of instant contract savings; and

(iii) Provide the Contractor's share of savings by adding the amount calculated to the contract price or fee.

(g) Collateral savings. If a VECP is accepted, the Contracting Officer will increase the instant contract amount by 20 percent of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings will not exceed the contract's firm-fixed-price or estimated cost, at the time the VECP is accepted, or \$100,000, whichever is greater. The Contracting Officer is the sole determiner of the amount of collateral savings.

(h) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of \$65,000 or more and may include one in subcontracts of lesser value. In computing any adjustment in this contract's price under paragraph (f) above, the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs clearly resulting from a VECP accepted by the Government under this contract, but shall exclude any value engineering incentive payments to a subcontractor. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that these payments shall not reduce the Government's share of the savings resulting from the VECP.

(i) Data. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

"These data, furnished under the Value Engineering-- Construction clause of contract . . . . ., shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations." If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in Part 27 of the Federal Acquisition Regulation.)

(End of clause)

252.236-7001 CONTRACT DRAWINGS AND SPECIFICATIONS (AUG 2000)

(a) The Government will provide to the Contractor, without charge, one set of contract drawings and specifications, except publications incorporated into the technical provisions by reference, in electronic or paper media as chosen by the Contracting Officer.

(b) The Contractor shall--

- (1) Check all drawings furnished immediately upon receipt;
- (2) Compare all drawings and verify the figures before laying out the work;
- (3) Promptly notify the Contracting Officer of any discrepancies;
- (4) Be responsible for any errors that might have been avoided by complying with this paragraph (b); and
- (5) Reproduce and print contract drawings and specifications as needed.

(c) In general--

- (1) Large-scale drawings shall govern small-scale drawings; and
- (2) The Contractor shall follow figures marked on drawings in preference to scale measurements.

(d) Omissions from the drawings or specifications or the misdescription of details of work that are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.

(e) The work shall conform to the specifications and the contract drawings identified on the following index of drawings:

<b>Title</b>	<b>File</b>	<b>Drawing No.</b>
G-001	ACCESS ROAD PLAN AND VICINITY MAP	
G-002	NOTES AND ABBREVIATIONS	
G-003	EXISTING SITE CONTROL	
C-001	JETTY A PLAN	
C-002	STAGING AND STOCKPILE AREA PLAN	
C-003	REPAIR AREA PLAN AND PROFILE	
C-004	REPAIR AREA PLAN AND PROFILE	
C-005	REPAIR AREA PLAN AND PROFILE	
C-006	CENTERLINE AND OFFSET PROFILES 1	
C-007	CENTERLINE AND OFFSET PROFILES 2	
C-008	CROSS SECTIONS - 46+00 TO 49+50	
C-009	CROSS SECTIONS - 50+00 TO 53+50	
C-010	CROSS SECTIONS - 54+00 TO 57+50	
C-011	CROSS SECTIONS - 58+00 TO 61+50	
C-012	CROSS SECTIONS - 62+00 TO 65+50	
C-013	CROSS SECTIONS - 66+00 TO 69+50	
C-014	CROSS SECTIONS - 70+00 TO 73+50	
C-015	CROSS SECTIONS - 74+00 TO 77+50	
C-016	CROSS SECTIONS - 78+00 TO 81+50	
C-017	CROSS SECTIONS - 82+00 TO 85+50	
C-018	CROSS SECTIONS - 86+00 TO 89+00	
C-019	EROSION CONTROL PLAN	
C-020	EROSION CONTROL NOTES AND DETAILS	
C-021	UTILITY PLAN	
C-022	BARGE OFF-LOAD DETAILS	

(End of clause)

#### EQUIPMENT OWNERSHIP

##### **Equipment Ownership and Operating Expense Schedule (MAR 1995)**

(a) This special contract requirement does not apply to terminations. See 52.249-5000, Basis for Settlement of Proposals, and [FAR Part 49](#).

(b) Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of [EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule](#), Region IX. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the contracting officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time the work was performed shall apply.

(c) Equipment rental costs are allowable, subject to the provisions of [FAR 31.105\(d\)\(ii\)](#) and [FAR 31.205-36, Rental Costs](#). Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

(d) When actual equipment costs are proposed and the total amount of the pricing action exceeds the SAT, the contracting officer shall request the contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet.

*(End of special contract requirement)*



**PROJECT TABLE OF CONTENTS**

**DIVISION 01 - GENERAL REQUIREMENTS**

01 10 00.00 25	CONTRACT ADMINISTRATION DATA
01 10 10.00 25	CONTRACTOR'S OPERATIONS AND REQUIREMENTS
01 11 00.00 25	SUMMARY OF WORK
01 22 00.00 25	MEASUREMENT AND PAYMENT
01 32 01.00 25	PROJECT SCHEDULE
01 33 00	SUBMITTAL PROCEDURES
01 35 26.00 25	GOVERNMENTAL SAFETY REQUIREMENTS
01 35 27.00 25	DIVING
01 42 00	SOURCES FOR REFERENCE PUBLICATIONS
01 45 00.00 25	QUALITY CONTROL
01 45 00.10 25	QUALITY CONTROL SYSTEM (QCS)
01 57 20.00 25	ENVIRONMENTAL PROTECTION
01 57 23.00 25	TEMPORARY STORM WATER POLLUTION CONTROL
01 78 39.00 25	PROJECT RECORD DOCUMENTS

**DIVISION 31 - EARTHWORK**

31 11 00.00 25	CLEARING AND GRUBBING
----------------	-----------------------

**DIVISION 32 - EXTERIOR IMPROVEMENTS**

32 12 16.00 25	HOT-MIX ASPHALT (HMA) FOR ROADS
32 90 00.00 25	SITE RESTORATION
32 92 29.00 25	EELGRASS PLANTINGS

**DIVISION 35 - WATERWAY AND MARINE CONSTRUCTION**

35 20 23.13 25	DREDGING
35 20 23.14 25	NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM
35 31 26.40 25	JETTY REPAIRS
35 52 00.00 25	MATERIAL OFF-LOADING FACILITY CONSTRUCTION

-- End of Project Table of Contents --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 10 00.00 25

CONTRACT ADMINISTRATION DATA

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 MEANING OF TERMS
- 1.3 CONTRACT ADMINISTRATION
- 1.4 CONTRACTING OFFICER
- 1.5 SERIAL LETTER CORRESPONDENCE
  - 1.5.1 Numbering
  - 1.5.2 Subcontractors
  - 1.5.3 Transmittals
- 1.6 EM 385-1-1 SAFETY AND HEALTH REQUIREMENTS MANUAL
- 1.7 PROJECT-SPECIFIC MANAGEMENT PLAN
- 1.8 LETTERS OF AUTHORITY
- 1.9 CONTRACTOR PERFORMANCE EVALUATIONS
- 1.10 LABOR STANDARDS
  - 1.10.1 Coverage
  - 1.10.2 Wages
  - 1.10.3 Overtime
  - 1.10.4 Deductions
  - 1.10.5 Apprentices
  - 1.10.6 Equal Opportunity
  - 1.10.7 Reporting
  - 1.10.8 Subcontracts
  - 1.10.9 Payrolls
  - 1.10.10 Records
  - 1.10.11 Job Interviews
  - 1.10.12 Work Stoppage
  - 1.10.13 Other

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section Table of Contents --

SECTION 01 10 00.00 25

CONTRACT ADMINISTRATION DATA

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this Specification to the extent referenced. The publications are referred to in the text by basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2014) Safety and Health Requirements Manual

1.2 MEANING OF TERMS

a. Specification Sections of this Contract are generally written in the imperative mood. In sentences using the imperative mood, the subject, "the Contractor," is implied. Also implied in this language are "must," "must be," or similar words and phrases. In material specifications, the subject may also be the supplier, fabricator, or manufacturer supplying material, products, or equipment for use on the project.

b. Wherever "directed," "required," "prescribed," or other similar words are used, the "direction," "requirement," or "order" of the Contracting Officer is intended. Similarly, wherever "approved," "acceptable," "suitable," "satisfactory," or similar words are used, the words mean "approved by," "acceptable to," or "satisfactory to" the Contracting Officer.

c. The word "will" generally pertains to decisions or actions of the Contracting Officer.

1.3 CONTRACT ADMINISTRATION

This Contract will be administered by the Office or Person(s) listed in Section 00800 Contract Clause 52.000-4006, CONTRACT ADMINISTRATOR.

1.4 CONTRACTING OFFICER

The Contracting Officer (CO) who signed this Contract is the primary Contracting Officer for the Contract. Nevertheless, any CO assigned to the Portland District and acting within his/her authority may take formal action on this Contract when a Contract action needs to be taken and the primary Contracting Officer is unavailable. All correspondence must be through the Contracting Officer or, upon notification, their authorized Representative (COR).

1.5 SERIAL LETTER CORRESPONDENCE

All correspondence will be electronic, via email, to an email address that will be provided during the preconstruction meeting.

## MCR Jetty A Rehabilitation

### 1.5.1 Numbering

All letter correspondence must be independently numbered serially with no numbers missing or duplicated, and in sequence, commencing with number one (1). Each letter must show the Contract number, description, and subject matter. Only one subject must be covered in the same letter.

### 1.5.2 Subcontractors

Subcontractors must not correspond with either the Resident or District offices; the Prime Contractor must handle all correspondence.

### 1.5.3 Transmittals

Transmittals of signed pay estimates, payrolls, submittals, and other similar correspondence will not require a Serial Letter; use of a commercial transmittal form or speed letter is encouraged.

## 1.6 EM 385-1-1 SAFETY AND HEALTH REQUIREMENTS MANUAL

The latest version in effect on the date of the Solicitation for this Contract (in accordance with EM 385-1-1 Paragraph 4 General, subparagraphs b.(1) and c.) will be contractually binding as part of this Contract. The latest version, including all errata and changes, must be used for this Contract and is obtainable at [http://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM 385-1-1.pdf](http://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM%20385-1-1.pdf). This manual is also available in hard copy (paper) version.

## 1.7 PROJECT-SPECIFIC MANAGEMENT PLAN

Submit SD-01, Preconstruction Submittals (listed on the preliminary submittal register, Attachment A1, and defined in Section 01 33 00, SUBMITTAL PROCEDURES). The Project-Specific Management Plan must be submitted as a single document and address job-specific accident prevention program, environmental protection plan, construction quality control program, and project work plan. Acceptance of the Preconstruction Submittals are required prior to commencement of work.

The PSMP must include:

a. Section I - Accident Prevention Program.

(1) Accident prevention plan (EM 385-1-1 and Section 01 35 26.00 25, GOVERNMENTAL SAFETY REQUIREMENTS).

(2) Drug-free workplace policy.

(3) Global Harmonization program (EM 385-1-1). Note: Replaces hazard communication program.

(4) Activity hazard analysis (EM 385-1-1).

(5) Equipment certification.

b. Section II - Environmental Protection Plan (Section 01 57 20.00 25, ENVIRONMENTAL PROTECTION).

c. Section III - Construction Quality Control System

(Section 01 45 00.00 25, QUALITY CONTROL).

(1) Contractor's quality control (CQC) plan.

(2) CQC Daily Report form.

d. Project Work Plan. The following are examples:

(1) Roadway Access Agreement.

(2) Temporary electrical systems.

(3) Welder qualifications.

(4) Welding procedures.

(5) Bolt pre-tensioning procedure.

e. Schedule for Construction.

f. Submittal Register.

#### 1.8 LETTERS OF AUTHORITY

a. To authenticate actions required under terms of this Contract, furnish a letter of authority to the CO and Resident Engineer that indicates the names of individual or individuals who must be authorized to perform the following functions on behalf of the company:

(1) Sign progress payment estimates.

(2) Accept Government-furnished property (if applicable).

(3) Sign Contract modifications, supplemental agreements and consent of surety.

(4) Monitor and report on the environmental protection plan, management plan, quality control plan, and safety plan.

(5) Supervise the field activities

(6) Sign Release of Claims

(7) Sign Correspondence.

b. This letter of authority must bear the typewritten names and the handwritten signatures of each individual and be signed by the person whose signature appears on the final Contract.

#### 1.9 CONTRACTOR PERFORMANCE EVALUATIONS

In accordance with the provisions of Federal Acquisition Regulation (FAR) Subpart 36.201, Evaluation of Contractor Performance, construction Contractor's performance will be evaluated throughout the performance of the Contract. For construction contracts awarded at or above \$650,000.00, USACE will evaluate Contractor Performance Assessment Reporting System (CPARS). After an evaluation (interim or final) is completed by USACE, the Contractor will have the ability to access, review, and comment on the evaluation for a period of 30 days. Accessing and using CPARS requires

specific software, called PKI certification, which is installed on the user's computer. The certification is a Department of Defense requirement and was implemented to provide security in electronic transactions. The certification software could cost approximately \$110 - \$125 per certificate per year and is purchased from an External Certificate Authorities (ECA) vendor. Current information about the PKI certification process and for contacting vendors can be found on the web site:

<http://www.cpars.gov/index.htm>. If the Contractor wishes to participate in the performance evaluation process, access to CPARS and PKI certification is the sole responsibility of the Contractor.

#### 1.10 LABOR STANDARDS

The Contractor and all subcontractors must comply with the following labor standards, statutes, and regulations: Davis-Bacon Act; Contract Work Hours and Safety Standards Act; Secretary of Labor's regulations (Parts 3 and 5, Subtitle A, Title 29, Code of Federal Regulations).

##### 1.10.1 Coverage

Contract provisions relating to wages, overtime, payroll deductions, and other labor standards requirements cover foremen, laborers, and mechanics, including owner-operators of other than hauling equipment and other individual enterprises performing the duties of a laborer or mechanic. Bona fide owner-operators of hauling equipment, such as trucks, who are independent contractors, are not covered, and the certified payrolls, including the names of such owner-operators, need not show hours worked nor rates paid, but only the notation "owner-operator."

##### 1.10.2 Wages

Wages must be paid at least once a week and be computed at hourly rates not less than those set forth in the Contract wage schedule, as set by the Davis-Bacon Act wage determinations, for the particular classifications of work performed. Instructions regarding wage determination obligations are available upon request.

##### 1.10.3 Overtime

Pay overtime for work in excess of 40 hours in any workweek at not less than 1-1/2 times the basic rate of pay. Rates paid for fringe benefits are excluded in the computations of overtime.

##### 1.10.4 Deductions

Deductions from wages earned may be only those that are permitted by the Copeland Act (Anti-Kickback) regulations. An instruction sheet entitled "Payroll Deductions" is available upon request.

##### 1.10.5 Apprentices

Apprentices must be individually registered in a program of a State apprenticeship and training agency approved and recognized by the U.S. Bureau of Apprenticeship and Training. Written evidence of such registration must accompany the first payroll on which apprentices appear.

##### 1.10.6 Equal Opportunity

Take affirmative measures to ensure that applicants are employed, and that

## MCR Jetty A Rehabilitation

employees are treated fairly during employment, without regard to their race, creed, color, religion, sex, or national origin. Section 00700 Contract Clause 52.222-26, EQUAL OPPORTUNITY, requires the posting of notices and sending of a notice to each labor union or representative of workers with which you have an agreement. Posting of the notice available from the Resident Engineer's office satisfies both requirements.

### 1.10.7 Reporting

In accordance with Section 00700, Clause 52.222-27, AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION, Form CC-257, Monthly Employment Utilization Report, must be submitted to Department of Labor on a monthly basis. A sample copy of the report form is available upon request.

### 1.10.8 Subcontracts

Subcontracts (first tier or otherwise) must physically contain the labor standards provisions of the prime Contract. Subcontracts of any tier in excess of \$10,000 must also contain Section 00700 Contract Clause 52.222-26, EQUAL OPPORTUNITY.

### 1.10.9 Payrolls

Prepare and submit correct Weekly Payrolls, including those of subcontractors. An instruction sheet is available upon request. Incorrect and delinquent payrolls will delay processing of partial payment estimates. The Contractor must use a commercially-available electronic system to process and submit certified payrolls to the Government in accordance with Section 00800 (S-102) CONTRACTOR SUPPLY AND USE OF ELECTRONIC SOFTWARE FOR PROCESSING DAVIS-BACON ACT CERTIFIED LABOR PAYROLLS (APRIL 2011). Use of electronic payrolls will expedite review of payrolls, reduce chances for error, expedite closeout, and decrease potential for withholdings for payroll processing. Vendors with electronic payroll software compatible with QCS: Emars, Inc; Elation Systems, Inc; LCPTracker, Inc; Hill International, Inc; or an approved equal.

### 1.10.10 Records

Maintain payroll and Employment Records during the course of work and for three years thereafter. They are subject to inspection by the Contracting Officer and the U.S. Department of Labor.

### 1.10.11 Job Interviews

A Government representative will interview Contractor and subcontractor employees from time to time during working hours on the job.

### 1.10.12 Work Stoppage

Promptly report to the CO, with all relevant information, work stoppages resulting, or likely to result, from actual or potential labor disputes.

### 1.10.13 Other

The Contractor's attention is called to the following Section 00600 Contract Clauses: 52.219-1, SMALL BUSINESS PROGRAM REPRESENTATIONS, and 52.204-5, WOMEN-OWNED BUSINESS (OTHER THAN SMALL BUSINESS). The Contractor assumes affirmative obligations with respect to subcontracting with such enterprises. The Prime Contractor must send a copy of the clauses to each

MCR Jetty A Rehabilitation

subcontractor.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section --



SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 10 10.00 25

CONTRACTOR'S OPERATIONS AND REQUIREMENTS

PART 1 GENERAL

- 1.1 DESCRIPTION OF WORK
- 1.2 REFERENCES
- 1.3 SUBMITTALS
- 1.4 SCHEDULE FOR CONSTRUCTION
- 1.5 INTERIM CONSTRUCTION COMPLETION DATES
- 1.6 PERMITS AND RESPONSIBILITIES
- 1.7 IN-WATER WORK
  - 1.7.1 In-Water Work (IWW) Periods
- 1.8 INCLEMENT WEATHER CONSTRUCTION
- 1.9 WORK BY THE GOVERNMENT CONCURRENT WITH CONTRACTOR WORK
- 1.10 WEEKLY COORDINATION MEETINGS
- 1.11 PARTNERING
- 1.12 CONTRACTOR EMPLOYEES
- 1.13 ACCESS AGREEMENTS
  - 1.13.1 Access Agreements
  - 1.13.2 Helicopter Pad
  - 1.13.3 Stone Delivery on Weekends
  - 1.13.4 Employee Access and Parking
- 1.14 GOVERNMENT TRAILER
- 1.15 SECURITY PROCEDURES
  - 1.15.1 Project Security
  - 1.15.2 Contractor's General Personnel
  - 1.15.3 Identification of Employees
  - 1.15.4 Foreign Born Employees
  - 1.15.5 Identification of Contractor Vehicles
  - 1.15.6 Use of Private Vehicles
- 1.16 CONSTRUCTION PROJECT IDENTIFICATION SIGN
- 1.17 UTILITIES
  - 1.17.1 Sanitary Facilities
  - 1.17.2 Electrical Power
    - 1.17.2.1 General
  - 1.17.3 Telephone
- 1.18 CONTRACTOR'S EQUIPMENT
  - 1.18.1 Contractor's Planned Equipment Methods
  - 1.18.2 Plant and Equipment List
- 1.19 CRANES AND HEAVY EQUIPMENT
  - 1.19.1 Contractor Crane Safety
  - 1.19.2 Contractor Crane Testing
  - 1.19.3 Contractor's Cranes and Heavy Equipment
- 1.20 DAMAGED EQUIPMENT OR ABNORMAL CONDITIONS
- 1.21 NOISE CONTROL
  - 1.21.1 General
  - 1.21.2 Noise Constraints
  - 1.21.3 Nighttime Noise Limitations
- 1.22 DISPOSITION OF MATERIALS
  - 1.22.1 Daily Cleanup and Disposal

MCR Jetty A Rehabilitation

- 1.22.2 Disposal of Equipment and Miscellaneous Materials
- 1.23 PRESERVATION OF HISTORICAL, ARCHEOLOGICAL, AND CULTURAL RESOURCES
- 1.24 PROTECTION OF MATERIAL AND WORK
- 1.25 HAZARDOUS, TOXIC AND RADIOLOGICAL WASTE (HTRW)
- 1.26 PROTECTION OF EXISTING UTILITIES
- 1.27 RESTORATION OF PROJECT ROADS

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

- 3.1 WEIGHT MEASUREMENT
  - 3.1.1 Weigh Scale
  - 3.1.2 Scale Tickets

-- End of Section Table of Contents --

SECTION 01 10 10.00 25

CONTRACTOR'S OPERATIONS AND REQUIREMENTS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

This Section covers general requirements applicable to specific Contractor's operations and equipment.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2014) Safety and Health Requirements Manual

EP 310-1-6A (2006) Sign Standards Manual, Vol 1

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.95 Occupational Noise Exposure

29 CFR 1926.52 Occupational Noise Exposure

29 CFR 1926.101 Hearing Protection

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Schedule for Construction; G

Access Agreements; G

Security Procedures; G

Contractor's Planned Equipment Methods; G

Plant and Equipment List; G

Lifting Diagram; G

Loading Plan for Cranes and Heavy Equipment; G

Disposal Plan; G

Platform Weigh Scales and Recording Equipment; G

Independent Testing Company or Agency; G

Traffic Control Plan; G

SD-06 Test Reports

Scale Certification; G

Scale Tickets; G

#### 1.4 SCHEDULE FOR CONSTRUCTION

In accordance with Section 00700 Contract Clause 52.236-15, SCHEDULES FOR CONSTRUCTION CONTRACTS, submit a detailed schedule for accomplishing the work in this Contract (per Section 01 32 01.00 25, PROJECT SCHEDULE). The schedule will not be used by the Government to select a Contractor; rather it will be used to ensure that the Contractor is capable of accomplishing the necessary work in the allotted time periods. The schedule must be consistent with the completion dates as specified in Section 00800 Contract Clause 52.211-10, COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK. Other Contractor's work must also be coordinated in accordance with Section 00700 Contract Clause 52.236-8, OTHER CONTRACTS.

#### 1.5 INTERIM CONSTRUCTION COMPLETION DATES

All Contract requirements must be complete by the completion date as specified in Section 00800 Contract Clause 52.211-10, COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK. Refer to Section 01 11 00.00 25, SUMMARY OF WORK for interim construction completion dates.

#### 1.6 PERMITS AND RESPONSIBILITIES

Obtain all permits and licenses for the work as required under Section 00700 Contract Clause 52.236-7, PERMITS AND RESPONSIBILITIES (Nov 1991).

#### 1.7 IN-WATER WORK

##### 1.7.1 In-Water Work (IWW) Periods

The Government has established interim construction completion date, described as "in-water work periods," coinciding with the annual cycles of fish migration and related allowed maintenance periods. This is a work period that allows for work in the water, on the water, and adjacent to the water where the work might affect fish passage. In-water work on this job is defined as dredging and pile driving. The IWW period established for pile driving is: 1 May through 30 September. The IWW period established for dredging is: 1 March through 31 December.

#### 1.8 INCLEMENT WEATHER CONSTRUCTION

The Contractor's schedule must reflect adverse weather days in all weather dependent activities as defined in Section 00800 Contract Clause 52.236-4, PHYSICAL DATA. Protect work areas from inclement weather, wind damage, and precipitation so that no delay in the prosecution of critical work items, or damage to USACE property occurs. No time extensions will be authorized for materials, work in place, or equipment damaged due to negligence during periods of inclement weather.

#### 1.9 WORK BY THE GOVERNMENT CONCURRENT WITH CONTRACTOR WORK

The Government will limit interference with the Contractor's work to the maximum reasonable extent and the Government and Contractor must coordinate as necessary.

#### 1.10 WEEKLY COORDINATION MEETINGS

Weekly coordination meetings must be held between the Contractor and the Government. This meeting will be used to discuss Contractor's safety, Quality Control Program, submittals, deficiencies, Contract administration, schedule, actual progress in the last week, work planned in the upcoming two weeks, and as-built drawings. During the Preconstruction Meeting, the Government will determine responsibility of running this meeting. If the Government elects to run the coordination meeting, the Contractor must provide a two week look ahead, with the previous week as-builts, 48 hours before each weekly meeting to the Government representative. The responsible party must prepare and distribute, by e-mail, the coordination meeting agenda with a two week look ahead no later than 24 hours before each meeting. A meeting time and place will be mutually agreed upon for the same time each week. Coordination meeting notes with changes to be distributed no later than the close of business the first workday following the weekly meeting. Provide a bluetooth speaker model Logitech P170e or approved equal for use during the meetings. Bluetooth speaker will become the property of the Government at Contract completion.

#### 1.11 PARTNERING

The Government intends to encourage the foundation of a cohesive partnership with the Contractor and its subcontractors. This partnership will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. Among the objectives are effective and efficient Contract performances and are intended to achieve completion within budget, on schedule, and in accordance with the plans and specifications; and to develop a single cooperative management team focused on the success of the project to mutual benefit of all stakeholders. This partnership will be bilateral in makeup, and participation will be totally voluntary. Any cost associated with effectuating this partnership will be agreed to by both parties, and will be shared equally with no change to the Contract price. An integral aspect of partnering is the resolution of disputes in a timely, professional, and non-adversarial manner through the use of issue clarification and problem solving. Alternate Dispute Resolution (ADR) methodologies will be encouraged in place of the more formal dispute resolution procedures. ADR will assist in promoting and maintaining an amicable working relationship to preserve the partnership. ADR is a voluntary, non-binding procedure available for use by the parties to this Contract to resolve any dispute that may arise during performance.

#### 1.12 CONTRACTOR EMPLOYEES

Ensure that all employees are capable of demonstrating adequate knowledge of tools, supplies, equipment, and techniques necessary to competently perform the work. All personnel employed by the Contractor must be fully qualified in their respective fields to render the services necessary. The Government may require the Contractor to discontinue using any employee in the performance of the work specified in this Contract determined by the Government to be unsatisfactory. Contractor employees will not be permitted to bring guests, family members, or non-employees to the job site

at any time.

1.13 ACCESS AGREEMENTS

1.13.1 Access Agreements

- a. Submit access procedures to and from the work site after the Contractor, the Contract Officer, and the GQAR have coordinated and determined the most advantageous access to, and staging of, the Contractor's assets deployed to the work site.
- b. The right-of-way for the work (or delivery site) and access thereto will be furnished as stated in this paragraph subject to mutual agreement between the Contractor and the Government concerning the specific route the Contractor is to use. Such mutual agreement must be reached prior to initiation, construction, or delivery.
- c. The existing access roadway and any associated access roads on the Project, must not be closed as a result of construction or delivery activities associated with this Contract unless previously coordinated and approved by the Government. Traffic delays will only be permitted in accordance with the provisions of this Section.
- d. When necessary to operate on or to cross existing highways or roads, all necessary permits must be obtained from the appropriate private or public authority.
- e. In accordance with Section 00700 Contract Clause 52.236-13 Alt I, ACCIDENT PREVENTION - ALTERNATE I, and EM 385-1-1, flaggers, signs, lights, and/or other safeguards must be provided to safely control and direct the flow of traffic when necessary for equipment to operate on or to cross access roads, arterial roads, or highways.
- f. Spillage on Project roads and state or county roads will not be permitted, and the spillage must be immediately cleaned up at the expense of the Contractor.
- g. No clefted or crawler-type equipment may be operated on paved surfaces.
- h. Install orange construction fence along perimeter of the work area to ensure work stays within the boundaries (See sheet C-002).
- i. Submit an incident response procedure for allowing emergency access for U.S. Coast Guard personnel to their buildings, vessels, and helicopter pad.
- j. When trucks and equipment are entering the job site through the U.S. Coast Guard security gate the Contractor must provide a minimum of two traffic control specialists. Submit a traffic control plan for safely navigating vehicles through the coast guard station.

1.13.2 Helicopter Pad

U.S Coast Guard helicopter pad requires a 100 ft buffer at all times. No material or equipment will be staged in this area. Contractor will be notified of scheduled helicopter use. If emergency use of the helicopter pad is needed Contract must stop all work in the staging area to allow Coast Guard access to the helicopter pad.

1.13.3 Stone Delivery on Weekends

Stone delivery through Ilwaco must be done Monday through Friday. To deliver stone by truck through the city of Ilwaco on Saturdays and Sundays, the Contractor must obtain and submit a permit from the City Ilwaco to the U.S Army Corps of Engineers. Contractor will be required to coordination with the U.S Coast Guard for weekend deliveries as well.

1.13.4 Employee Access and Parking

Contractor's employee private vehicle parking areas must be restricted to the area as agreed upon before construction or delivery. Keep the parking areas free of litter and debris. An adequate number and size of trash receptacles must be placed in the parking areas and emptied, as necessary to avoid overflowing. Trash receptacles must be adequately secured to provide protection from the wind and animals.

1.14 GOVERNMENT TRAILER

Provide a 10- by 40-foot temporary office trailer at the construction site for use by USACE construction administration personnel. Comply with the current building and electrical codes for the type of occupancy specified. The trailer must be ready for Government use no later than 30 days after Notice to Proceed (NTP). Provide the following in the Government trailer:

- a. Security bars over all windows.
- b. Matching dead bolts on all doors with three sets of keys provided to the CO.
- c. Temporary power. Contractor must pay all fees and monthly charges to establish service and usage for the duration of the Contract.
- d. Thermostatically controlled air conditioning and heating unit capable of maintaining 72 degrees F during all seasons.
- e. Cell phone signal booster. Booster must be able to support 3g and 4g with all carriers. Contractor must pay all fees and monthly charges associated with cellular booster.
- f. Wireless internet access. Provide internet access to the Government.
- g. Two - Work stations. Each work station must include:
  - (1) One standard size office desk.
  - (2) One - 5-wheeled, padded, ergonomic desk chair with lumbar support and armrests
- h. Two -Filing cabinets with two drawers each.
- i. One - 4- by 8-footplan table
- j. Four - folding chairs
- k. Meeting room. Room must accommodate 10 people with 10 chairs. This room may be in either the Government or Contractors trailer.

## MCR Jetty A Rehabilitation

- l. Provide bottled drinking water. Pay all fees and monthly charges to establish service and usage for the duration of the Contract.
- m. Bathroom - If the trailer provided has a bathroom; it must be fully functional and maintained by the Contractor.
- n. Provide janitorial services at a minimum of once per week, including emptying of trash cans and sweeping and mopping of floors
- o. Dedicate a minimum of two parking spots as "Government Parking Only" in the office parking area.

### 1.15 SECURITY PROCEDURES

#### 1.15.1 Project Security

- a. The Project is not open to the public. Access to the site by land is through the Coast Guard security gate. Submit a procedure for approval for identification and control of employees entering or leaving the Project during the hours of closure.
- b. Arrangement and scheduling of working hours and crews must be coordinated through the U.S. Coast Guard. Working hours that extend past 5:00 p.m. weekdays or on weekends and holidays must be coordinated through the U.S. Coast Guard. Submit the intended working hours of staff on site and identify any employees working in any capacity in accordance with the subparagraph entitled Identification of Employees.
- c. Security of the Contractor's property and items furnished under this Contract, until the Government accepts items, are the Contractor's responsibility whether stored inside or outside.
- d. All Contractor personnel, subcontractor personnel, suppliers, etc. must comply with the Project's security policies. Salespersons or personnel seeking employment will not be permitted inside the Project. Costs associated with Contractor failure to comply with the Project security policies must be at the expense of the Contractor.
- e. Signs may be erected outside the project containing instructions for personnel seeking the Contractor. The content and location of the signs will be approved by the CO prior to erection. Posts or other means of support, if required, must be provided by the Contractor and removed when the Contract is completed. Any open post holes must be suitably backfilled, prior to the end of the shift in which posts are removed, and any other damage must be repaired to preconstruction conditions.

#### 1.15.2 Contractor's General Personnel

Prepare an organizational chart and revise whenever organizational changes occur. Maintain a complete organizational chart of all positions that will be working on the project.

#### 1.15.3 Identification of Employees

Submit a complete, dated and signed, list of all Contractor and subcontractor personnel and their titles who will be working on the project at the Weekly Coordination Meeting. This listing must be revised and



resubmitted when personnel changes occur.

#### 1.15.4 Foreign Born Employees

Submit photocopies of the green card work permits and/or passports to the CO of all Contractor employees who are foreign born and have non-citizen status. Submit photocopies at least one month in advance of the start of work by the employees. This allows the USACE District Security Office sufficient time to run a security check on these affected personnel. Contractor personnel who fit the above description of non-citizenship must not be permitted to work until they pass the security check in addition to other requirements of this Contract.

#### 1.15.5 Identification of Contractor Vehicles

All Contractor vehicles used for prosecuting the work must have a Contractor sign or other permanent identification and must carry the required insurance. Private vehicles not owned by the Prime Contractor or subcontractors must not be used for prosecuting the work.

#### 1.15.6 Use of Private Vehicles

Private vehicles of the Contractor and its employees must enter and leave the project as directed. Restrict parking to approved areas.

#### 1.16 CONSTRUCTION PROJECT IDENTIFICATION SIGN

Paint, fabricate, and install one construction project identification sign in accordance with EP 310-1-6A, Attachment A3, within three days of beginning site work.

#### 1.17 UTILITIES

Provide all utilities required for the performance of work under this Contract.

##### 1.17.1 Sanitary Facilities

Use of the Coast Guard restrooms by Contractor personnel will not be permitted. Provide portable, temporary sanitary facilities in accordance with EM 385-1-1.

##### 1.17.2 Electrical Power

###### 1.17.2.1 General

Government-furnished or public utility electrical power is not available for the Contractor's use.

##### 1.17.3 Telephone

Telephone will not be available for Contractor use.

#### 1.18 CONTRACTOR'S EQUIPMENT

##### 1.18.1 Contractor's Planned Equipment Methods

Submit proposed methods of transportation and operation of cranes and other heavy equipment for approval prior to commencement of those operations.

## MCR Jetty A Rehabilitation

Submittals must include the type, size, and loadings of equipment, and the proposed transportation routes and work areas to be used on the project. Operation of heavy equipment adjacent to existing structures must be avoided when possible. Testing requirements and operation of cranes and other heavy equipment must be in accordance with EM 385-1-1. All cranes, rigging, lifts, operators, vehicles, and other necessary means to move equipment or items must be Contractor-furnished as required to pursue and complete the work and must comply with EM 385-1-1.

### 1.18.2 Plant and Equipment List

At least seven days prior to commencing site operations, provide a complete list of all plant and equipment to be used on the job site, exclusive of shop equipment. Throughout the life of the Contract, submit an up-to-date plant and equipment list with each progress payment request. Include rented equipment as well as lease purchase or sale leaseback equipment on the lists. Initial list and the revised monthly lists must indicate dates equipment is assigned to or removed from the project; deadline dates for repairs and returned for use; dates of the most recent and planned inspections; and adequate identification or description of each item of equipment including manufacturer's name (abbreviated), model number, manufacturer's serial number, year of manufacture, and Contractor's assigned serial or record number.

### 1.19 CRANES AND HEAVY EQUIPMENT

#### 1.19.1 Contractor Crane Safety

a. Contractor's cranes and equipment furnished for this work must conform with all applicable OSHA requirements, ASME, EM 385-1-1, and Section 00700 Contract Clause 52.236-13 Alt I, ACCIDENT PREVENTION - ALTERNATE I.

b. At least thirty days prior to beginning site work, submit for approval a Lifting Diagram addressing such issues as list, trim, maximum load, maximum wind speed, lifting radius, and all other applicable information required by EM 385-1-1 and OSHA.

#### 1.19.2 Contractor Crane Testing

Prior to use on the project, test all Contractor cranes in accordance with EM 385-1-1. Crane testing must be witnessed by the CO. Provide 48 hours notice of the test, excluding weekends and federal holidays, to the Government.

#### 1.19.3 Contractor's Cranes and Heavy Equipment

Coordinate with the CO and submit the planned method of transportation and operation of Contractor-furnished cranes and other heavy equipment to be used in the performance of this Contract for Government approval. The loading plan for cranes and heavy equipment must include the type, size, loading, and placement of outriggers of all cranes or heavy equipment, and the proposed transportation routes and work areas to be used on the project. Operation of heavy equipment adjacent to existing structures must be avoided when possible.

### 1.20 DAMAGED EQUIPMENT OR ABNORMAL CONDITIONS

Inform the CO immediately upon finding any damaged equipment or other

## MCR Jetty A Rehabilitation

abnormal conditions involving additional work in which the Contractor believes it has no responsibility. The failure or abnormality must not be disturbed until witnessed by the CO. Prior to proceeding further with work, the Contractor and the Government must agree in writing as to the responsibility for the damage or abnormality. Any damage or abnormal conditions not reported as specified above must be corrected.

### 1.21 NOISE CONTROL

#### 1.21.1 General

Noise control and noise levels must conform to requirements set forth in the appropriate regulations, including EM 385-1-1, Section 05.C, 29 CFR 1910.95, 29 CFR 1926.52, and 29 CFR 1926.101. The most conservative requirement must govern.

#### 1.21.2 Noise Constraints

- a. Trucks will only be allowed to use roads through Cape Disappointment State park during daylight hours.
- b. Trucks will not unnecessarily stop along the roads through Cape Disappointment State Park.
- c. Follow all state and local laws regarding Jake-brakes, once leaving 101 the use of Jake-brakes are not allowed.

#### 1.21.3 Nighttime Noise Limitations

During construction, the noise levels, as measured from the nearest dwelling, must not exceed 50 decibels during the hours from 2200 hours to 0700 hours.

### 1.22 DISPOSITION OF MATERIALS

Submit the location of the Contractor's offsite disposal area and a plan for safe disposal of material in the Disposal Plan. Dispose of all demolished material and miscellaneous materials off-site in conjunction with Section 01 57 20.00 25, ENVIRONMENTAL PROTECTION, and in accordance with all local, state, and federal rules and regulations.

#### 1.22.1 Daily Cleanup and Disposal

Keep all work areas reasonably neat on a daily basis. Collect, remove, and dispose of all debris resulting from the work, such as waste metalwork, packing cases, scrap lumber, and other debris off-site at least once per week. Do not use the Government's or the Park's trash cans, dump boxes, and other containers. All costs of removing debris shall be incidental to the work, and therefore, no separate payment will be made.

#### 1.22.2 Disposal of Equipment and Miscellaneous Materials

Title to all materials and equipment to be disposed of will be vested in the Contractor when beginning disassembly work or when such materials and equipment are designated as scrap. The Government will not be responsible for the condition, loss, or damage to such property after title transfer. The Contractor may retain these items in usable form and take possession of them providing that there is no subsequent cost or inconvenience to the Government. The Government does not guarantee that these items are

## MCR Jetty A Rehabilitation

complete or in working order and the Contractor shall assume responsibility for any damages caused by their use immediately upon taking possession of them.

### 1.23 PRESERVATION OF HISTORICAL, ARCHEOLOGICAL, AND CULTURAL RESOURCES

If during construction activities items are observed that might have historical or archaeological value, such observations shall be reported immediately so that the appropriate authorities may be notified and a determination can be made as to their significance and what, if any, special disposition of the finds should be made. Cease all activities that may result in the destruction of these resources and prevent employees from trespassing on, removing, or otherwise damaging such resources.

### 1.24 PROTECTION OF MATERIAL AND WORK

All materials, supplies, tools, equipment and Government property (including all tools, equipment, and special devices supplied by the Contractor and to be turned over to the Government at the end of the Contract) must at all times be protected and preserved in an approved manner. If material, equipment, supplies, and work performed are not adequately protected, such property may be protected by the Government and the cost thereof will be charged to the Contractor or deducted from any payment due.

### 1.25 HAZARDOUS, TOXIC AND RADIOLOGICAL WASTE (HTRW)

All barrels, containers, or other debris that are found onsite suspected of containing HTRW are to be reported to the Coast Guard National Response Center at 1-800-424-8802 within 1 hour of discovery.  
<http://www.nrc.uscg.mil/Default.aspx>.

### 1.26 PROTECTION OF EXISTING UTILITIES

Protect existing utilities in accordance with Section 00700 Contract Clause 52.236-9, PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Repairs must be made immediately and at Contractor's expense.

### 1.27 RESTORATION OF PROJECT ROADS

Project roads, including State Park and Coast Guard roads and parking lots used for construction access will be evaluated and restored to at least their original condition by the Contractor upon completion of work. Complete repair work in accordance with Section 32 12 16.00 25, HOT-MIX ASPHALT (HMA) FOR ROADS. Prior to beginning work, evaluate existing conditions and submit a Project Roads Report that includes photographs and topographic data. Topographic survey data must include cross-sections of at least 5-points taken every 100 ft. Photographs must be taken with a GPS-enabled camera at each survey cross section and in the presence of a Government representative. During the course of construction, make intermediate repairs to project roads and parking lots to prevent additional or continued deterioration. Major maintenance, repair, or restoration will be made at the applicable cost per Section 01 22 00.00 25, MEASUREMENT AND PAYMENT; minor maintenance and interim repairs not specifically addressed in this section will be made at the Contractor's Expense.

## MCR Jetty A Rehabilitation

### PART 2 PRODUCTS - NOT USED

### PART 3 EXECUTION

#### 3.1 WEIGHT MEASUREMENT

##### 3.1.1 Weigh Scale

Provide Platform Weigh Scales and Recording Equipment that is of sufficient width and length to weigh all axles of each hauling vehicle in one operation and be suitable in quality and capacity for the maximum load to be weighed. Scales and recording equipment may be quarry or commercial scales, at a location approved by the CO, for the rock procurement. An onsite scale is required for weighing the rock prior to placement on the jetty. Calibrate the weigh scale in tons and hundredths of tons. Test the scale with an approved Independent Testing Company or Agency in the presence of the CO and submit the Scale Certification before placing any material. Give the CO at least one week notice of when the scale testing is to be performed. Retest the scale whenever a variance is suspected. The CO will perform spot checks as necessary to confirm proper weighing. The CO reserves the right to inspect the scale operation at any time and to direct re-testing of the scales to assure the scales are maintaining accuracy.

##### 3.1.2 Scale Tickets

The ticket recorder at the weigh scale shall be electronic and able to hold and recall the tare weight for all trucks used. Gross weight, tare (truck) number and weight, net weight, date, and time shall be printed or stamped on the scale tickets by an electrical or mechanical device. Have hard copy weight tickets available for immediate inspection after weighing, and provide copies of the weight tickets attached to the Daily Quality Control Reports. Provide electronic spreadsheets summarizing the weigh tickets on a weekly basis. Provide all certified Scale Tickets in one submittal after all material has been placed.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 11 00.00 25

SUMMARY OF WORK

PART 1 GENERAL

- 1.1 SUMMARY
- 1.2 WORK COVERED BY CONTRACT DOCUMENTS
  - 1.2.1 Project Description
  - 1.2.2 Location
- 1.3 COMPLETION DATE
- 1.4 CONTRACT DRAWINGS
- 1.5 EXISTING WORK

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section Table of Contents --

SECTION 01 11 00.00 25

SUMMARY OF WORK

PART 1 GENERAL

1.1 SUMMARY

This Section provides a summary of the various Contract work elements and their relationship to each other. This summary describes work activities within interim construction completion date. This Section does not provide the technical detail for particular work activities, but describes the work as a whole, providing overall perspective to the separate tasks and their interrelationships. Use this Section in conjunction with all the Specification Sections and the Drawings to establish the total work requirements.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

1.2.1 Project Description

The work includes rehabilitation of Jetty A, construction of jetty head and incidental related work. This effort is to include all associated work required and described within this Contract package. Repairs will be made to the upper area of the jetty cross-section using armor stone. Barging of jetty materials is permitted and may require mitigation.

1.2.2 Location

a. The work is located at the Mouth of the Columbia River Jetty A which is located at the confluence of the Columbia River with the Pacific Ocean, between the states of Washington and Oregon. Contractor access to the work site will be from Cape Disappointment Coast Guard Station in Ilwaco, WA. The Contractor may access the site from land or sea. The job site is located on an active Coast Guard station, the Contractor must coordinate with the Coast Guard for access through the site.

b. A designated barge off-loading zone has been outlined if barging is needed. If barging is needed, a remnant haul road adjacent to the Jetty A on the estuary side is available to be rebuilt and used.

c. A staging area is available as outlined in the plans for stone and equipment storage. Access must not be restricted for Coast Guard use of the helicopter pad. The staging area is not to extend below the defined ordinary high water contours as indicated on the plan sheets.

1.3 COMPLETION DATE

In accordance with Section 00800 Contract Clause 52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984) - ALTERNATE I (APR 1984), and 52.211-12 LIQUIDATED DAMAGES--CONSTRUCTION (SEP 2000), work must be completely finish to the points specified for each of the dates.

a. JETTY CONSTRUCTION COMPLETION: All construction, features in the Plans and Specifications for the jetty must be complete. Temporary

construction supports, construction aids and construction debris must be removed from the site. The date stated for completion must include all work and final cleanup of the premises. As-built drawings are required 90 days following physical completion.

b. RESTORATION CONSTRUCTION COMPLETION: All construction, features in the Plans and Specifications for the RESTORATION must be complete. Temporary construction supports, construction aids and construction debris must be removed from the site. The date stated for completion must include all work and final cleanup of the premises. As-built drawings are required 90 days following physical completion.

c. (If applicable) MITIGATION CONSTRUCTION PHYSICAL COMPLETION: All construction, features in the Plans and Specifications for mitigation must be complete. Temporary construction supports, construction aids and construction debris must be removed from the site. The date stated for completion must include all work and final cleanup of the premises. As-built drawings are required 90 days following physical completion.

d. (If applicable) MITIGATION MAINTENANCE COMPLETION: All submittals, inspection reports, and all other requirements submitted and approved.

e. CONTRACT END DATE: All submittals, As-Build Drawings, and all other requirements submitted and approved.

1.4 CONTRACT DRAWINGS

a. The Drawings that accompany these Specifications are a part thereof.

b. One set of full size Contract drawings, maps, and Specifications will be furnished to the Contractor without charge per Section 00700 Contract Clause 252.236-7001, CONTRACT DRAWINGS AND SPECIFICATIONS. Reference publications will not be furnished.

c. Contractor must immediately check furnished Drawings and notify the Government of any discrepancies.

1.5 EXISTING WORK

In addition to Section 00700 Contract Clause 52.236-9, PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS:

a. Remove or alter existing work in such a manner as to prevent injury or damage to any portion of the existing work to remain.

b. Upon completion of the work, repair or replace portions of existing work, which have been damaged by Contractor's operations, to preconstruction conditions at the expense of the Contractor.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section --



SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 22 00.00 25

MEASUREMENT AND PAYMENT

PART 1 GENERAL

- 1.1 GENERAL INFORMATION
- 1.2 SUBMITTALS
- 1.3 UNIT PRICE PAYMENT ITEMS
- 1.4 JOB PAYMENT ITEMS
- 1.5 MEASUREMENT AND PAYMENT
  - 1.5.1 Mobilization and Demobilization, CLIN 0001
  - 1.5.2 A-Stone Procurement and Delivery, CLIN 0002
    - 1.5.2.1 First 25,000 CY, CLIN 0002AA
    - 1.5.2.2 Over 25,000, CLIN 0002AB
  - 1.5.3 A-Select Procurement and Delivery, CLIN 0003
    - 1.5.3.1 First 3,900 CY, CLIN 0003AA
    - 1.5.3.2 Over 3,900, CLIN 0003AB
  - 1.5.4 A-Stone In-Place, CLIN 0004
    - 1.5.4.1 First 25,000 CY, CLIN 0004AA
    - 1.5.4.2 Over 25,000 CY, CLIN 0004AB
  - 1.5.5 A-Select In-Place, CLIN 0005
    - 1.5.5.1 First 3,900 CY, CLIN 0005AA
    - 1.5.5.2 Over 3,900 CY, CLIN 0005AB
  - 1.5.6 Jetty Crest Haul Road, In-Place, CLIN 0006
  - 1.5.7 Site Restoration, CLIN 0007
  - 1.5.8 Site Mitigation, CLIN 0008 (Optional)
  - 1.5.9 Repair of Access Road - Digout Repair Method, CLIN 0009  
(Optional)
  - 1.5.10 Repair of Access Road - Rubbleize/Pulverize Repair Method,  
CLIN 0010 (Optional)
  - 1.5.11 Repair of Access Road - Asphalt Overlay Repair Method, CLIN  
0011 (Optional)

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section Table of Contents --

SECTION 01 22 00.00 25

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 GENERAL INFORMATION

a. In each instance, the Contract price for an item will constitute full compensation as herein specified, as shown, or as otherwise approved. The Contract price and payment will also constitute full compensation for all work incidental to completion of the item, unless such work is otherwise specifically mentioned for separate payment under another line item. In the event any work is required by the specifications Sections or by the Drawings and not specifically mentioned in the measurement and payment paragraphs, separate or direct payment will not be made and all costs thereof are incidental to the work and included in the Contract prices and payments for all Contract Line Item Numbers (CLIN) listed in the price schedule.

b. As stated in Section 00700 Contract Clause 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, the word "provided" shall be understood to mean "furnished and installed" when used in this Section or elsewhere in the Specification Sections.

c. Payment for procurement, delivery, and placement of broken stones that are not large enough to fall within the approved gradation in the jetty cross section will not be approved.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Schedule of Mobilization and Demobilization Costs; G

Schedule of values; G

1.3 UNIT PRICE PAYMENT ITEMS

Payment items for the work of this Contract on which the Contract unit price payments will be made are listed in Section 00010, PRICE SCHEDULE, and described below. The unit price and payment made for each item listed will constitute full compensation for furnishing all plant, labor, materials, and equipment; performing all associated Contractor quality control, environmental protection, commissioning, preparation of working as-built drawing redlines, final as-builts, O&M manuals, tests and reports, meeting safety requirements; and for performing all work required for each of the unit price items.

1.4 JOB PAYMENT ITEMS

Payment items for the work of this Contract for which Contract job payments

will be made are listed in Section 00010, PRICE SCHEDULE, and described below. All costs for items of work, which are not specifically mentioned to be included in a particular job item, shall be included in the listed job item most closely associated with the work involved. The job price and payment made for each item listed will constitute full compensation for furnishing all plant, labor, materials, and equipment; performing all associated Contractor quality control, environmental protection, commissioning, preparation of working as-built drawing redlines, final as-builts, O&M manuals, tests and reports, meeting safety requirements; and for performing all work required for which separate payment is not otherwise provided. A schedule of values for the job items must be submitted and approved prior to the first payment request. Schedule must be updated and submitted with each subsequent payment request.

**MANDATORY ITEMS**

1.5 MEASUREMENT AND PAYMENT

1.5.1 Mobilization and Demobilization, CLIN 0001

a. Measurement will be made as a job for mobilizing and demobilizing all plant, equipment, fuel, supplies, materials, and personnel to and from the job site; including equipment necessary for clearing and grubbing; equipment for handling and placing jetty stones; erection and removal of Contractor furnished office/trailer space and office equipment for Government use; security/safety fences and gates; construction, maintenance, and removal of any marine landings and Material Delivery Access Route (MDAR) determined to be necessary by the Contractor; woody debris removal/disposal from the jetty; preparing the staging area for jetty stone stockpiling; the construction of the transition section to the start of the jetty repairs; provision of the weight scale, scale house, and latrine. This Contract Line Item Number (CLIN) applies to the Prime Contractor and all subcontractor mobilization and demobilization.

b. Payment: Payment will be made at the Contract amount under CLIN 0001 at a rate of 60 percent for mobilization and 40 percent for demobilization as defined in Contract Clause 252.236-7004, PAYMENT FOR MOBILIZATION AND DEMOBILIZATION (Dec 1991). Submit a schedule of mobilization and demobilization costs prior to submitting the first request for payment.

1.5.2 A-Stone Procurement and Delivery, CLIN 0002

1.5.2.1 First 25,000 CY, CLIN 0002AA

a. Measurement. Measurement for A-Stone (Armor Stone) Procurement/Delivery to the storage/staging area will be the weight of the stone in the hauling vehicle in tons of 2,000 pounds, as determined by scale weights at the quarry or on-site for stone placement. A conversion will be used to convert stone weight (tons) to pay volume (CY) that does not include void space. Examples of the weight to volume conversion are given below.

$$\text{Pay Volume (CY)} = \text{Armor Stone Weight in Tons} \times 2,000 \text{ lb/Ton} \times 1 \text{ ft}^3 / (\text{mass density-lb/ft}^3) \times 1 \text{ CY}/27 \text{ ft}^3.$$

For Rock Mass Density = 171 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:

MCR Jetty A Rehabilitation

$$10 \text{ Ton Weight} \times 2,000 \text{ lb/ton} \times 1 \text{ ft}^3 / (171 \text{ lb/ft}^3) \times 1 \text{ CY} / 27 \text{ ft}^3 \\ = 4.332 \text{ CY}$$

For Rock Mass Density = 195 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:

$$10 \text{ Ton Weight} \times 2,000 \text{ lb/ton} \times 1 \text{ ft}^3 / (195 \text{ lb/ft}^3) \times 1 \text{ CY} / 27 \text{ ft}^3 \\ = 3.799 \text{ CY}$$

b. Payment. The quantity determined as stated above will be paid for at the Contract price per cubic yard (CY) for Stone placed under CLIN 0002AA, A-Stone Procurement/Delivery; which price and payment will constitute full compensation for placement of the stone in the storage/staging area in accordance with drawings and these specifications. Payment will not be made for unsuitable stone, road building material, or materials placed beyond the boundary of the storage/staging area. Unsuitable material, or stone fragments weighed and delivered to the site will be reweighed by an on-site scale, by a loader with a load cell, or estimated by the GQAR and such volume deducted from the material measured for payment.

c. Rejected Stone and Residue. The weight of all rejected pieces of stone and residue remaining in the hauling vehicle shall be determined by reloading and weighing, and such calculated volume shall be deducted from the volume previously determined for payment. All rejected stone and residue shall be disposed of in an approved manner.

1.5.2.2 Over 25,000, CLIN 0002AB

a. Measurement. Measurement for A-Stone (Armor Stone) Procurement/Delivery to the storage/staging area will be the weight of the stone in the hauling vehicle in tons of 2,000 pounds, as determined by scale weights at the quarry or on-site for stone placement. A conversion will be used to convert stone weight (tons) to pay volume (CY) that does not include void space. Examples of the weight to volume conversion are given below.

$$\text{Pay Volume (CY)} = \text{Armor Stone Weight in Tons} \times 2,000 \text{ lb/Ton} \times 1 \\ \text{ft}^3 / (\text{mass density-lb/ft}^3) \times 1 \text{ CY} / 27 \text{ ft}^3.$$

For Rock Mass Density = 171 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:

$$10 \text{ Ton Weight} \times 2,000 \text{ lb/ton} \times 1 \text{ ft}^3 / (171 \text{ lb/ft}^3) \times 1 \text{ CY} / 27 \text{ ft}^3 \\ = 4.332 \text{ CY}$$

For Rock Mass Density = 195 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:

$$10 \text{ Ton Weight} \times 2,000 \text{ lb/ton} \times 1 \text{ ft}^3 / (195 \text{ lb/ft}^3) \times 1 \text{ CY} / 27 \text{ ft}^3 \\ = 3.799 \text{ CY}$$

b. Payment. The quantity determined as stated above will be paid for at the Contract price per cubic yard (CY) for Stone placed under CLIN 0002AB, A-Stone Procurement/Delivery; which price and payment will constitute full compensation for placement of the stone in the storage/staging area in accordance with drawings and these specifications. Payment will not be made for unsuitable stone, road building material, or materials placed beyond the boundary of the storage/staging area. Unsuitable material, or stone fragments weighed and delivered to the site will be reweighed by an on-site scale, by a loader with a load cell, or estimated by the GQAR and such volume

deducted from the material measured for payment.

c. Rejected Stone and Residue. The weight of all rejected pieces of stone and residue remaining in the hauling vehicle shall be determined by reloading and weighing, and such calculated volume shall be deducted from the volume previously determined for payment. All rejected stone and residue shall be disposed of in an approved manner.

1.5.3 A-Select Procurement and Delivery, CLIN 0003

1.5.3.1 First 3,900 CY, CLIN 0003AA

a. Measurement. Measurement for A-Select (Armor Stone) Procurement/Delivery to the storage/staging area will be the weight of the stone in the hauling vehicle in tons of 2,000 pounds, as determined by scale weights at the quarry or on-site for stone placement. A conversion will be used to convert stone weight (tons) to pay volume (CY) that does not include void space. Examples of the weight to volume conversion are given below.

$$\text{Pay Volume (CY)} = \text{Armor Stone Weight in Tons} \times 2,000 \text{ lb/Ton} \times 1 \text{ ft}^3 / (\text{mass density-lb/ft}^3) \times 1 \text{ CY}/27 \text{ ft}^3.$$

For Rock Mass Density = 171 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:

$$10 \text{ Ton Weight} \times 2,000 \text{ lb/ton} \times 1 \text{ ft}^3 / (171 \text{ lb/ft}^3) \times 1 \text{ CY}/27 \text{ ft}^3 = 4.332 \text{ CY}$$

For Rock Mass Density = 195 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:

$$10 \text{ Ton Weight} \times 2,000 \text{ lb/ton} \times 1 \text{ ft}^3 / (195 \text{ lb/ft}^3) \times 1 \text{ CY}/27 \text{ ft}^3 = 3.799 \text{ CY}$$

b. Payment. The quantity determined as stated above will be paid for at the Contract price per cubic yard (CY) for Stone placed under CLIN 0003AA, A-Stone Procurement/Delivery; which price and payment will constitute full compensation for placement of the stone in the storage/staging area in accordance with drawings and these specifications. Payment will not be made for unsuitable stone, road building material, or materials placed beyond the boundary of the storage/staging area. Unsuitable material, or stone fragments weighed and delivered to the site will be reweighed by an on-site scale, by a loader with a load cell, or estimated by the GQAR and such volume deducted from the material measured for payment.

c. Rejected Stone and Residue. The weight of all rejected pieces of stone and residue remaining in the hauling vehicle shall be determined by reloading and weighing, and such calculated volume shall be deducted from the volume previously determined for payment. All rejected stone and residue shall be disposed of in an approved manner.

1.5.3.2 Over 3,900, CLIN 0003AB

a. Measurement. Measurement for A-Select (Armor Stone) Procurement/Delivery to the storage/staging area will be the weight of the stone in the hauling vehicle in tons of 2,000 pounds, as determined by scale weights at the quarry or on-site for stone placement. A conversion will be used to convert stone weight (tons) to pay volume (CY) that does not include void space. Examples of the

weight to volume conversion are given below.

Pay Volume (CY) = Armor Stone Weight in Tons x 2,000 lb/Ton x 1 ft<sup>3</sup>/(mass density-lb/ft<sup>3</sup>) x 1 CY/27 ft<sup>3</sup>.

For Rock Mass Density = 171 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:

10 Ton Weight x 2,000 lb/ton x 1 ft<sup>3</sup>/(171 lb/ft<sup>3</sup>) x 1 CY/27 ft<sup>3</sup>  
= 4.332 CY

For Rock Mass Density = 195 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:

10 Ton Weight x 2,000 lb/ton x 1 ft<sup>3</sup>/(195 lb/ft<sup>3</sup>) x 1 CY/27 ft<sup>3</sup>  
= 3.799 CY

b. Payment. The quantity determined as stated above will be paid for at the Contract price per cubic yard (CY) for Stone placed under CLIN 0003AB, A-Stone Procurement/Delivery; which price and payment will constitute full compensation for placement of the stone in the storage/staging area in accordance with drawings and these specifications. Payment will not be made for unsuitable stone, road building material, or materials placed beyond the boundary of the storage/staging area. Unsuitable material, or stone fragments weighed and delivered to the site will be reweighed by an on-site scale, by a loader with a load cell, or estimated by the GQAR and such volume deducted from the material measured for payment.

c. Rejected Stone and Residue. The weight of all rejected pieces of stone and residue remaining in the hauling vehicle shall be determined by reloading and weighing, and such calculated volume shall be deducted from the volume previously determined for payment. All rejected stone and residue shall be disposed of in an approved manner.

1.5.4 A-Stone In-Place, CLIN 0004

1.5.4.1 First 25,000 CY, CLIN 0004AA

a. Measurement. Measurement for A-Stone In-Place using stone procured under CLIN 0004AA will be the weight of the stone in the hauling vehicle in tons of 2,000 pounds, as determined by scale weights at the quarry or on-site for stone placement. A conversion will be used to convert stone weight (tons) to pay volume (CY) that does not include void space. Examples of the weight to volume conversion are given below.

Pay Volume (CY) = Armor Stone Weight in Tons x 2,000 lb/Ton x 1 ft<sup>3</sup>/(mass density-lb/ft<sup>3</sup>) x 1 CY/27 ft<sup>3</sup>.

For Rock Mass Density = 171 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:

10 Ton Weight x 2,000 lb/ton x 1 ft<sup>3</sup>/(171 lb/ft<sup>3</sup>) x 1 CY/27 ft<sup>3</sup>  
= 4.332 CY

For Rock Mass Density = 195 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:

10 Ton Weight x 2,000 lb/ton x 1 ft<sup>3</sup>/(195 lb/ft<sup>3</sup>) x 1 CY/27 ft<sup>3</sup>  
= 3.799 CY

b. Payment. The quantity determined as stated above will be paid for at

MCR Jetty A Rehabilitation

the Contract price per CY for Stone placed under CLIN 0004AA; which price and payment will constitute full compensation for placement of the stone on the jetty in accordance with drawings and these specifications. Rework of existing jetty stones and all surveys are included in the unit cost. Payment will not be made for unsuitable stone, road building material, or materials placed beyond the boundary of the design section. Unsuitable material, or stone fragments weighed and delivered to the site will be reweighed on removal from the site and such weight deducted from the material measured for payment.

1.5.4.2 Over 25,000 CY, CLIN 0004AB

a. Measurement. Measurement for A-Stone In-Place using stone procured under CLIN 0004AB will be the weight of the stone in the hauling vehicle in tons of 2,000 pounds, as determined by scale weights at the quarry or on-site for stone placement. A conversion will be used to convert stone weight (tons) to pay volume (CY) that does not include void space. Examples of the weight to volume conversion are given below.

$$\text{Pay Volume (CY)} = \text{Armor Stone Weight in Tons} \times 2,000 \text{ lb/Ton} \times 1 \text{ ft}^3 / (\text{mass density-lb/ft}^3) \times 1 \text{ CY}/27 \text{ ft}^3.$$

For Rock Mass Density = 171 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:

$$10 \text{ Ton Weight} \times 2,000 \text{ lb/ton} \times 1 \text{ ft}^3 / (171 \text{ lb/ft}^3) \times 1 \text{ CY}/27 \text{ ft}^3 = 4.332 \text{ CY}$$

For Rock Mass Density = 195 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:

$$10 \text{ Ton Weight} \times 2,000 \text{ lb/ton} \times 1 \text{ ft}^3 / (195 \text{ lb/ft}^3) \times 1 \text{ CY}/27 \text{ ft}^3 = 3.799 \text{ CY}$$

b. Payment. The quantity determined as stated above will be paid for at the Contract price per CY for Stone placed under CLIN 0004AB; which price and payment will constitute full compensation for placement of the stone on the jetty in accordance with drawings and these specifications. Rework of existing jetty stones and all surveys are included in the unit cost. Payment will not be made for unsuitable stone, road building material, or materials placed beyond the boundary of the design section. Unsuitable material, or stone fragments weighed and delivered to the site will be reweighed on removal from the site and such weight deducted from the material measured for payment.

1.5.5 A-Select In-Place, CLIN 0005

1.5.5.1 First 3,900 CY, CLIN 0005AA

a. Measurement. Measurement for A-Select In-Place using stone procured under CLIN 0005AA will be the weight of the stone in the hauling vehicle in tons of 2,000 pounds, as determined by scale weights at the quarry or on-site for stone placement. A conversion will be used to convert stone weight (tons) to pay volume (CY) that does not include void space. Examples of the weight to volume conversion are given below.

$$\text{Pay Volume (CY)} = \text{Armor Stone Weight in Tons} \times 2,000 \text{ lb/Ton} \times 1 \text{ ft}^3 / (\text{mass density-lb/ft}^3) \times 1 \text{ CY}/27 \text{ ft}^3.$$

MCR Jetty A Rehabilitation

For Rock Mass Density = 171 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:  
10 Ton Weight x 2,000 lb/ton x 1 ft<sup>3</sup>/(171 lb/ft<sup>3</sup>) x 1 CY/27 ft<sup>3</sup>  
= 4.332 CY

For Rock Mass Density = 195 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:  
10 Ton Weight x 2,000 lb/ton x 1 ft<sup>3</sup>/(195 lb/ft<sup>3</sup>) x 1 CY/27 ft<sup>3</sup>  
= 3.799 CY

b. Payment. The quantity determined as stated above will be paid for at the Contract price per CY for Stone placed under CLIN 0005AA; which price and payment will constitute full compensation for placement of the stone on the jetty in accordance with drawings and these specifications. Rework of existing jetty stones and all surveys are included in the unit cost. Payment will not be made for unsuitable stone, road building material, or materials placed beyond the boundary of the design section. Unsuitable material, or stone fragments weighed and delivered to the site will be reweighed on removal from the site and such weight deducted from the material measured for payment.

1.5.5.2 Over 3,900 CY, CLIN 0005AB

a. Measurement. Measurement for A-Select In-Place using stone procured under CLIN 0005AB will be the weight of the stone in the hauling vehicle in tons of 2,000 pounds, as determined by scale weights at the quarry or on-site for stone placement. A conversion will be used to convert stone weight (tons) to pay volume (CY) that does not include void space. Examples of the weight to volume conversion are given below.

Pay Volume (CY) = Armor Stone Weight in Tons x 2,000 lb/Ton x 1 ft<sup>3</sup>/(mass density-lb/ft<sup>3</sup>) x 1 CY/27 ft<sup>3</sup>.

For Rock Mass Density = 171 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:  
10 Ton Weight x 2,000 lb/ton x 1 ft<sup>3</sup>/(171 lb/ft<sup>3</sup>) x 1 CY/27 ft<sup>3</sup>  
= 4.332 CY

For Rock Mass Density = 195 lb/ft<sup>3</sup>, the Pay Volume (CY) for 10 tons of Rock is:  
10 Ton Weight x 2,000 lb/ton x 1 ft<sup>3</sup>/(195 lb/ft<sup>3</sup>) x 1 CY/27 ft<sup>3</sup>  
= 3.799 CY

b. Payment. The quantity determined as stated above will be paid for at the Contract price per CY for Stone placed under CLIN 0005AB; which price and payment will constitute full compensation for placement of the stone on the jetty in accordance with drawings and these specifications. Rework of existing jetty stones and all surveys are included in the unit cost. Payment will not be made for unsuitable stone, road building material, or materials placed beyond the boundary of the design section. Unsuitable material, or stone fragments weighed and delivered to the site will be reweighed on removal from the site and such weight deducted from the material measured for payment.

1.5.6 Jetty Crest Haul Road, In-Place, CLIN 0006

a. Measurement: Measurement will be made as a job for "Jetty Crest Haul Road, In-Place" CLIN 0006. Payment will be considered complete



and full compensation for the effort and cost for quarry production of material for construction of the haul road on the jetty crest, transportation to the job site of all material required for construction of the haul road on the jetty crest, placement of all material required for construction of the haul road on the jetty crest, and maintenance of the constructed haul road on the jetty crest and will be paid for at the job price for this item.

b. Payment: Payment will be made at the Contract amount under CLIN 0006, "Jetty Crest Haul Road, In-Place."

1.5.7 Site Restoration, CLIN 0007

a. Measurement: The total quantity of site restoration for which payment will be made will be based on Section 32 90 00.00 25, SITE RESTORATION. Price shall be per the job and include all labor, equipment, materials, monitoring, maintaining, and incidentals associated with obtaining and installing planting/seeding, and associated features as described in Section 32 90 00.00 25, SITE RESTORATION.

b. Payment: Payment will be made at the Contract amount under CLIN 0007, "Site Restoration."

OPTIONAL ITEMS

1.5.8 Site Mitigation, CLIN 0008 (Optional)

a. Measurement: The total quantity of mitigation will be based on the area of impacted below jurisdictional waters of the U.S. (+11.2 feet NAVD88) due to any cut (dredging) or fill caused by temporary construction of a landing for barging of material. Price is a job item and includes all labor, equipment, materials, monitoring, maintaining, surveying, and incidentals associated with obtaining and installing eelgrass, and associated features as described in 32 92 29.00 25, EELGRASS PLANTINGS. The total of area of impact may not exceed 2.9 acres (combined dredging and fill). The total area of eelgrass plantings may not exceed 0.5 acres. The ratio of mitigation required due to area impacted by construction is 0.25:1.

Example:

Dredging area of impact proposed: 0.85 acres  
Fill area of impact proposed: 0.65 acres  
Total area impacted: 1.5 acres

Eelgrass required: .375 acres

b. Payment: Payment will be made at the Contract amount under CLIN 0008, "Site Mitigation."

1.5.9 Repair of Access Road - Digout Repair Method, CLIN 0009 (Optional)

a. Measurement: The total quantity of access road repair using the digout method for which payment will be made will be based on Section 32 12 16.00 25, HOT-MIX ASPHALT (HMA) FOR ROADS. Price shall be per the square yard and include all labor, equipment, materials, monitoring, maintaining, and incidentals associated with repairing the jetty access road utilizing the digout repair method as described in

MCR Jetty A Rehabilitation

Section Section 32 12 16.00 25, HOT-MIX ASPHALT (HMA) FOR ROADS. Interim repairs and maintenance will be incidental to the job and will not be paid under this CLIN.

b. Payment: Payment will be made at the Contract amount under CLIN 0009, "Repair of Access Road - Digout Repair Method".

1.5.10 Repair of Access Road - Rubbleize/Pulverize Repair Method, CLIN 0010 (Optional)

a. Measurement: The total quantity of access road repair using the rubbleize/pulverize method for which payment will be made will be based on Section 32 12 16.00 25, HOT-MIX ASPHALT (HMA) FOR ROADS. Price shall be per the square yard and include all labor, equipment, materials, monitoring, maintaining, and incidentals associated with repairing the jetty access road utilizing the rubbleize/pulverize repair method as described in Section 32 12 16.00 25, HOT-MIX ASPHALT (HMA) FOR ROADS. Interim repairs and maintenance will be incidental to the job and will not be paid under this CLIN.

b. Payment: Payment will be made at the Contract amount under CLIN 0010, "Repair of Access Road - Rubbleize/Pulverize Repair Method".

1.5.11 Repair of Access Road - Asphalt Overlay Repair Method, CLIN 0011 (Optional)

a. Measurement: The total quantity of access road repair using the asphalt overlay method for which payment will be made will be based on Section 32 12 16.00 25, HOT-MIX ASPHALT (HMA) FOR ROADS. Price shall be per the square yard and include all labor, equipment, materials, monitoring, maintaining, and incidentals associated with repairing the jetty access road utilizing the asphalt overlay repair method as described in Section 32 12 16.00 25, HOT-MIX ASPHALT (HMA) FOR ROADS. Interim repairs and maintenance will be incidental to the job and will not be paid under this CLIN.

b. Payment: Payment will be made at the Contract amount under CLIN 0011, "Repair of Access Road - Asphalt Overlay Repair Method".

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 32 01.00 25

PROJECT SCHEDULE

PART 1 GENERAL

- 1.1 SUBMITTALS
- 1.2 QUALITY CONTROL
- 1.3 GENERAL REQUIREMENTS
- 1.4 BASIS FOR PAYMENT AND COST LOADING
- 1.5 DETAILED REQUIREMENTS
  - 1.5.1 Critical Path Method
  - 1.5.2 Milestones
  - 1.5.3 Level of Detail Required
    - 1.5.3.1 Activity Durations
    - 1.5.3.2 Procurement Activities
    - 1.5.3.3 Critical Activities
    - 1.5.3.4 Government Activities
    - 1.5.3.5 Responsibility
    - 1.5.3.6 Work Areas
    - 1.5.3.7 Contract Line Item Number (CLIN)
    - 1.5.3.8 Definable Features of Work
    - 1.5.3.9 Modification or Claim Number
  - 1.5.4 Scheduled Project Completion and Activity Calendars
    - 1.5.4.1 Project Start Date
    - 1.5.4.2 Constraint of Last Activity
    - 1.5.4.3 Early Project Completion
  - 1.5.5 Interim Completion Dates
    - 1.5.5.1 Start Phase
    - 1.5.5.2 End Phase
    - 1.5.5.3 Phase "X" Hammock
  - 1.5.6 Default Progress Data Disallowed
  - 1.5.7 Out-of-Sequence Progress
  - 1.5.8 Negative Lags and Start to Finish Relationships
  - 1.5.9 Calculation Mode
- 1.6 SUBMISSIONS
  - 1.6.1 Preliminary Schedule
  - 1.6.2 Initial Schedule
- 1.7 SUBMISSION REQUIREMENTS
  - 1.7.1 Data Submission
  - 1.7.2 Narrative Report
  - 1.7.3 Approved Changes Verification
  - 1.7.4 Schedule Reports
    - 1.7.4.1 Activity Report
    - 1.7.4.2 Logic Report
    - 1.7.4.3 Total Float Report
    - 1.7.4.4 Earnings Report by CLIN
  - 1.7.5 Grant Chart
    - 1.7.5.1 Continuous Flow
    - 1.7.5.2 Project Milestone Dates

MCR Jetty A Rehabilitation

- 1.7.5.3 Critical Path
- 1.7.5.4 Banding
- 1.7.5.5 S-Curves
- 1.8 PERIODIC PROGRESS MEETINGS
  - 1.8.1 Update Submission Following Progress Meeting
  - 1.8.2 Status of Activities
    - 1.8.2.1 Start and Finish Dates
    - 1.8.2.2 Remaining Duration
    - 1.8.2.3 Cost Completion
    - 1.8.2.4 Percent Complete
    - 1.8.2.5 Logic Changes
    - 1.8.2.6 Other Changes
- 1.9 REQUESTS FOR TIME EXTENSIONS
  - 1.9.1 Justification of Delay
  - 1.9.2 Extension Submission Requirements
  - 1.9.3 Additional Submission Requirements
- 1.10 DIRECTED CHANGES
- 1.11 OWNERSHIP OF FLOAT
- 1.12 PAYMENT

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section Table of Contents --

SECTION 01 32 01.00 25

PROJECT SCHEDULE

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Preliminary Schedule; G ECCC

Initial Schedule; G ECCC

1.2 QUALITY CONTROL

Designate an authorized representative who must be responsible for the preparation of the schedule and all required updating (activity status) and preparation of reports. The authorized representative must have previously developed, created, and maintained at least two electronic schedules for projects similar in nature and complexity to this project and must be experienced in the use of the scheduling software that meets the requirements of this specification.

1.3 GENERAL REQUIREMENTS

a. Prepare for approval a Project Schedule, as described herein, pursuant to Section 00700 Contract Clause 52.236-15, SCHEDULE FOR CONSTRUCTION CONTRACTS. Show in the schedule the sequence in which the Contractor proposes to perform the work and dates on which the Contractor contemplates starting and completing all schedule activities. The scheduling of the entire project is required. The scheduling of construction must be the responsibility of the Contractor. Contractor management personnel must actively participate in its development. Subcontractors and suppliers working on the project must also contribute in developing and maintaining an accurate Project Schedule. Coordinate with other Contractor's work at or near the site of the work under this Contract in accordance with Section 00700 Contract Clause 52.236-8, OTHER CONTRACTS.

b. The approved Project Schedule must be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments.

1.4 BASIS FOR PAYMENT AND COST LOADING

Use the schedule as the basis for determining Contract earnings during each update period and therefore the amount of each progress payment. Lack of an approved schedule update, or qualified scheduling personnel, will result in the inability of the Contracting Officer (CO) to evaluate Contractor's

progress for the purposes of payment. Failure of the Contractor to provide all required information will result in the disapproval of the preliminary, initial, and subsequent schedule updates. In the event schedule revisions have been directed by the CO and those revisions have not been included in subsequent revisions or updates, the CO may hold retainage up to the maximum allowed by Contract, each payment period, until such revisions to the Project Schedule have been made. Activity cost loading must be reasonable, as determined by the Contracting Officer. The aggregate value of all activities coded to a Contract Line Item Number (CLIN) must equal the value of the CLIN on the Schedule.

#### 1.5 DETAILED REQUIREMENTS

The Portland District utilizes Primavera P6 v7 Project Management and MS Project 2007 scheduling software. The schedule must be compatible with either Primavera P6 v7 Project Management or MS Project 2007 scheduling software. Note that MS Project 2010 is not acceptable. Failure of the Contractor to meet the requirements of this specification must result in the disapproval of the schedule.

##### 1.5.1 Critical Path Method

Use the Critical Path Method (CPM) of network calculation to generate the Project Schedule.

##### 1.5.2 Milestones

Include milestone activities for each significant project event including but not limited to: Notice to Proceed (NTP), contractually required work windows, temporary haul road construction, delivery of stone, stone placement, restoration, , construction complete, and contract complete. If applicable - mitigation, pile driving, and pile removal.

##### 1.5.3 Level of Detail Required

Include an appropriate level of detail in the Project Schedule. Failure to develop or update the Project Schedule or provide data at the appropriate level of detail, as determined by the CO, will result in its disapproval. The CO will consider, but is not limited to, the following characteristics and requirements to determine the appropriate level of detail:

###### 1.5.3.1 Activity Durations

Submissions must follow the direction of the CO regarding reasonable activity durations. Reasonable durations are those that allow the progress of activities to be accurately determined between payment periods. Procurement activities are defined herein. Less than 2 percent of all non-procurement activities must have Original Durations (OD) greater than 20 work days or 30 calendar days.

###### 1.5.3.2 Procurement Activities

Include activities associated with the submittal, approval, procurement, fabrication and delivery of long lead materials, equipment, fabricated assemblies, and supplies. Long lead materials and equipment are those materials that have a procurement cycle of over 90 calendar days. A typical procurement sequence includes the string of activities: submit, approve, procure, fabricate, and deliver.

#### 1.5.3.3 Critical Activities

The following must be included and properly scheduled:

- a. Submission and approval of O&M manuals.
- b. Submission and approval of Record (As-built) drawings.
- c. Contractor's punch-out inspection.
- d. Correction of punchlist from Contractor's punch-out inspection.
- e. Government's pre-final inspection.
- f. Correction of punch list from Government's pre-final inspection.
- g. Final acceptance inspection.

#### 1.5.3.4 Government Activities

Government and other agency activities that could impact progress must be shown. These activities include, but are not limited to: submittal reviews, approvals, environmental permit approvals, inspections, and NTP for phasing requirements.

#### 1.5.3.5 Responsibility

Identify all activities in the Project Schedule by the party responsible to perform the work. Responsibility includes, but is not limited to: the subcontractor, the Prime Contractor, or Government agency performing a given task. Activities must not have more than one Responsibility Code. The responsible party for each activity must be identified by the Responsibility Code.

#### 1.5.3.6 Work Areas

Identify all activities in the Project Schedule by the work area in which the activity occurs. Activities must not be allowed to cover more than one work area. Define work areas based on resource constraints or space constraints that would preclude a resource, such as a particular trade or craft work crew, from working in more than one work area at a time due to restraints on resources or space. The work area of each activity must be identified by the Work Area Code and activities must not have more than one Work Area Code.

#### 1.5.3.7 Contract Line Item Number (CLIN)

Code all activities to the CLIN on the Contract Line Item Schedule to which the activity belongs. An activity must not contain more than one CLIN Item Code. CLIN Item code all activities, even when an activity is not cost loaded.

#### 1.5.3.8 Definable Features of Work

Assign a Definable Feature of Work Code to appropriate activities based on the definable feature of work to which the activity belongs. Definable Feature of Work is defined in Specification Section 01 45 00.00 25 QUALITY CONTROL. An activity must not have more than one Definable Feature of Work Code. Not all activities are required to be Definable Feature of Work

Coded.

#### 1.5.3.9 Modification or Claim Number

Assign Activity code to any activity or sequence of activities added to the schedule as a result of a Contract Modification, when approved by the CO. Any activity that is added or changed by Contract modification or used to justify claimed time must be identified by a Mod or Claim Number that changed the activity. Activities must not belong to more than one modification or claim item. Approval to add these activities does not necessarily mean the Government accepts responsibility and, therefore, liability for such activities and any associated impacts to the schedule, but rather the Government recognizes such activities are appropriately added to the schedule for the purposes of maintaining a realistic and meaningful schedule. Such activities must not be Responsibility Coded to the Government unless approved. Existing activities must not normally be changed to reflect modifications.

#### 1.5.4 Scheduled Project Completion and Activity Calendars

The schedule interval must extend from NTP date to the required final physical completion and Contract end dates. The Contract completion activity (End Project) must finish based on the required Contract duration in the accepted Contract proposal, as adjusted for any approved Contract time extensions. The first scheduled work period must be the day after NTP is received by the Contractor. Schedule activities on a calendar to which the activity logically belongs. Activities may be assigned to a 7-day calendar when the Contract assigns calendar day durations for the activity such as a Government Acceptance activity. If the Contractor intends to perform physical work less than seven days per week, schedule the associated activities on a calendar with non-work periods identified including weekends and holidays. Assign the Category of Work Code - Weather Sensitive Installation to those activities that are weather sensitive. Original durations must account for anticipated normal adverse weather. The Government will interpret all work periods not identified as non-work periods on each calendar as meaning the Contractor intends to perform work during those periods.

##### 1.5.4.1 Project Start Date

Start the schedule no earlier than the date on which the NTP was acknowledged. Include as the first activity in the Project Schedule an activity called "Start Project." The "Start Project" activity must have an "ES" constraint date, equal to the date that the NTP was acknowledged, and a zero-day duration.

##### 1.5.4.2 Constraint of Last Activity

Completion of the last physical activity in the schedule must be constrained by final construction physical completion date. Submission and acceptance of the last transmittal in the schedule must be constrained by the Contract end date. Schedule calculations must result in a negative float when the calculated early finish date of the last activity is later than the Contract end date. Include as the last activity in the Project Schedule an activity called "End Project." The "End Project" activity must have a "LF" constraint date equal to the Contract end date for the project, and a zero-day duration or by using the "project must finish by" date in the scheduling software. The schedule must have no constrained dates other than those specified in the Contract. There must only be two open ended



activities: Start Project (or NTP) with no predecessor logic and End Project with no successor logic.

#### 1.5.4.3 Early Project Completion

In the event the Project Schedule shows completion of the project prior to the final construction physical completion and/or Contract end date, identify those activities that it intends to accelerate and/or those activities that are scheduled in parallel to support the Contractor's "early" completion. Specifically address each of the activities noted in the narrative report at every Project Schedule update period to assist the CO in evaluating the Contractor's ability to actually complete prior to the Contract period. The last activity must have a late finish constraint equal to the Contract end date and the schedule must calculate positive float. The Government will not approve an early completion schedule with zero float on the longest path. The Government is under no obligation to accelerate activities for which it is responsible to support a proposed early Contract completion.

#### 1.5.5 Interim Completion Dates

Contractually specified interim construction completion dates must be constrained to show negative float if the early finish date of the last activity in that phase falls after the interim construction completion date.

##### 1.5.5.1 Start Phase

Include as the first activity for a project phase an activity called "Start Phase X" where "X" refers to the phase of work. The "Start Phase X" activity must have an "ES" constraint date equal to the date on which the NTP was acknowledged, and a zero-day duration.

##### 1.5.5.2 End Phase

Include as the last activity in a project phase an activity called "End Phase X" where "X" refers to the phase of work. The "End Phase X" activity must have an "LF" constraint date equal to the date on which the NTP was acknowledged, and a zero-day duration.

##### 1.5.5.3 Phase "X" Hammock

Include a hammock type activity for each project phase called "Phase X" where "X" refers to the phase of work. The "Phase X" activity must be logically tied to the earliest and latest activities in the phase.

#### 1.5.6 Default Progress Data Disallowed

Actual Start and Finish dates must not be automatically updated by default mechanisms that may be included in the scheduling software systems. Actual Start (AS) and Actual Finish (AF) dates assigned during the updating process must match those dates provided from Contractor Quality Control Reports. Failure of the Contractor to document the AS and AF dates on the Daily Quality Control Report for every in-progress or completed activity, and failure to ensure that the data contained on the Daily Quality Control reports is the sole basis for schedule updating must result in the disapproval of the Contractor's schedule and the inability of the CO to evaluate Contractor progress for payment purposes. Updating of the percent complete and the remaining duration of any activity must be independent functions. Program features which calculate one of these parameters from

the other must be disabled.

#### 1.5.7 Out-of-Sequence Progress

Activities that have progressed before all preceding logic has been satisfied (Out-of-Sequence Progress) will be allowed only on a case-by-case basis subject to approval by the CO. Propose logic corrections to eliminate all out of sequence progress or justify not changing the sequencing for approval prior to submitting an updated Project Schedule. Correct out of sequence progress that continues for more than two update cycles by logic revision, as approved by the CO.

#### 1.5.8 Negative Lags and Start to Finish Relationships

Lag durations contained in the Project Schedule must not have a negative value. Do not use Start to Finish (SF) relationships.

#### 1.5.9 Calculation Mode

Schedule calculations must retain the logic between predecessors and successors even when the successor activity starts and the predecessor activity has not finished. Software features that in effect sever the tie between predecessor and successor activities when the successor has started and the predecessor logic is not satisfied ("progress override") will not be allowed.

### 1.6 SUBMISSIONS

Provide the submissions as described below. The data CDs, reports, and network diagrams required for each submission must be in accordance with paragraph entitled SUBMISSION REQUIREMENTS.

#### 1.6.1 Preliminary Schedule

Submit the Preliminary Schedule, defining the Contractor's planned operations for the first 90 calendar days, for approval within 15 calendar days after the NTP is acknowledged. The approved preliminary schedule must be used for payment purposes not to exceed 90 calendar days after NTP. Completely cost load the Preliminary Schedule to balance the Contract award CLINs shown on the Price Schedule. Detail it for the first 90 calendar days after NTP. It may be summary in nature for the remaining performance period. It must be early start and late finish constrained and logically tied as previously specified. The Preliminary Schedule forms the basis for the Initial Schedule specified herein and must include all of the required submissions and approvals identified in the Contract (for example, Quality Control Plan, Safety Plan, and Environmental Protection Plan), other construction, and non-construction activities intended to occur within the first 90 calendar days after NTP.

#### 1.6.2 Initial Schedule

a. Submit the Initial Schedule for approval within 15 calendar days after NTP. Provide a reasonable and realistic sequence of activities which represent all work through the entire Contract performance period. The Initial Schedule must be at a reasonable level of detail as determined by the CO.

b. Periodic Schedule Updates - Based on the result of progress meetings, specified in paragraph entitled PERIODIC PROGRESS MEETINGS,

submit periodic schedule updates. Periodic schedule updates must be submitted with progress payment. These submissions will enable the CO to assess Contractor's progress. If the Contractor fails or refuses to furnish the information and Project Schedule data, which in the judgment of the CO is necessary for verifying the Contractor's progress, the Contractor must be deemed not to have provided an estimate upon which progress payment may be made.

#### 1.7 SUBMISSION REQUIREMENTS

Submit the following items for the Preliminary Schedule, Initial Schedule, and every Periodic Schedule update throughout the life of the project:

##### 1.7.1 Data Submission

Provide two sets of data CDs containing the Project Schedule in the backup format. Each CD must also contain all previous update backup files. File medium must be CD-R. Permanently label each CD-R indicating the type of schedule (Preliminary, Initial, or Update), full Contract number, project name, project location, Data Date and file name, and name and telephone number of person responsible for the schedule. Each schedule must have a unique file name as determined by the Contractor.

##### 1.7.2 Narrative Report

Provide a Narrative Report with the preliminary, initial, and each update of the Project Schedule, as the basis of the Contractor's progress payment request. Include: a description of activities along the two most critical paths, a description of current and anticipated problem areas or delaying factors and their impact, and an explanation of corrective actions taken or required to be taken. The narrative report is expected to communicate to the Government the Contractor's thorough analysis of the schedule output and its plans to compensate for any problems, either current or potential, which are revealed through that analysis. Identify and explain why any activities that, based on their calculated late dates, should have either started or finished during the update period but did not.

##### 1.7.3 Approved Changes Verification

Include only those project schedule changes in the schedule submission that have been previously approved by the CO. Specifically reference, on an activity by activity basis, all changes made since the previous period and relate each change to documented, approved schedule changes.

##### 1.7.4 Schedule Reports

The format for each activity for the schedule reports listed below must contain: Activity Numbers, Activity Description, Original Duration, Remaining Duration, Early Start Date, Early Finish Date, Late Start Date, Late Finish Date, Total Float, Actual Start Date, Actual Finish Date, and Percent Complete. The following lists typical reports that will be requested, of which one or more may be requested for each schedule submission:

###### 1.7.4.1 Activity Report

A list of all activities sorted according to activity number.

## MCR Jetty A Rehabilitation

### 1.7.4.2 Logic Report

A list of detailed Preceding and Succeeding activities for every activity in ascending order by activity number.

### 1.7.4.3 Total Float Report

A list of all incomplete activities sorted in ascending order of total float. List activities which have the same amount of total float in ascending order of Early Start Dates. Do not show completed activities on this report.

### 1.7.4.4 Earnings Report by CLIN

A compilation of the Contractor's Total Earnings on the project from the NTP to the data date. This report must reflect the Earnings of specific activities based on the agreements made in the field and approved between the Contractor and CO at the most recent Monthly Progress Meeting. Provided that the Contractor has provided a complete schedule update, this report must serve as the basis of determining Contractor progress payments. Group activities by CLIN and sorted by activity numbers. This report must: sum all activities coded to a particular CLIN and provide a CLIN item percent earned value, and complete and sum all CLIN items to provide a total project percent complete. Printed report must contain, for each activity: the Activity Number, Activity Description, Original Budgeted Amount, Total Quantity, Quantity to Date, Percent Complete (based on cost), and Earnings to Date.

### 1.7.5 Grant Chart

The grant chart is required for the Preliminary, Initial, and Periodic Updates. Depict and display the order and interdependence of activities and the sequence in which the work is to be accomplished. The CO will use, but is not limited to, the following conditions to review compliance with this paragraph:

#### 1.7.5.1 Continuous Flow

Diagrams must show a continuous flow from left to right with no arrows from right to left. Show the activity number, description, duration, and estimated earned value on the diagram.

#### 1.7.5.2 Project Milestone Dates

Show dates on the diagram for start of project, any Contract required interim completion dates, and final construction physical completion and Contract end dates.

#### 1.7.5.3 Critical Path

Clearly show the two critical paths.

#### 1.7.5.4 Banding

Organize activities as directed to assist in the understanding of the activity sequence. Typically, this flow will group activities by category of work, work area, and/or responsibility.

1.7.5.5 S-Curves

Show earnings curves for projected early and late earnings and earnings to date.

1.8 PERIODIC PROGRESS MEETINGS

Progress meetings to discuss payment must include a monthly onsite meeting or other regular intervals as determined by CO. During this meeting describe, on an activity by activity basis, all proposed revisions and adjustments to the Project Schedule required to reflect the current status of the project. The CO will approve activity progress, proposed revisions, and adjustments as appropriate. The Contractor's Project Manager and Authorized Scheduler must attend the meeting with the CO.

1.8.1 Update Submission Following Progress Meeting

If required by the CO, submit a schedule update, not later than four working days after the monthly progress meeting. Include a complete update of the Project Schedule containing all approved progress, revisions, and adjustments, based on the regular progress meeting, reflecting only those changes made during the previous update meeting.

1.8.2 Status of Activities

Update information, including Actual Start (AS) Dates, Actual Finish (AF) Dates, Remaining Durations (RD), and Percent Complete must be subject to the approval of the CO. As a minimum, address the following items on an activity by activity basis during each progress meeting:

1.8.2.1 Start and Finish Dates

Accurately show the status of the Actual Start (AS) and Actual Finish (AF) dates for each activity currently in-progress or completed since the last update. Only assign AS dates when actual progress occurs on an activity.

1.8.2.2 Remaining Duration

Update the estimated Remaining Duration for each activity in-progress. Base time-based progress calculations on Remaining Duration for each activity.

1.8.2.3 Cost Completion

Update the earnings for each activity started. Payment will be based on earnings for each in-progress or completed activity. Payment for individual activities will not be made for work that contains quality defects. A portion of the overall project amount may be retained based on delays of activities.

1.8.2.4 Percent Complete

Update the percent complete for each activity started based on the realistic assessment of earned value. Activities which are complete but for remaining minor punch list work and which do not restrain the initiation of successor activities may be declared 100 percent complete.

#### 1.8.2.5 Logic Changes

Specifically identify and discuss all logic changes pertaining to NTP on change orders, change orders to be incorporated into the schedule, Contractor proposed changes in work sequence, corrections to schedule logic for out-of-sequence progress, lag durations, and other changes that have been made pursuant to Contract provisions. The Government will only approve logic revisions for the purpose of keeping the schedule valid in terms of its usefulness in calculating a realistic completion date, correcting erroneous logic ties, and accurately sequencing the work.

#### 1.8.2.6 Other Changes

Other changes required due to delays in completion of any activity or group of activities include:

- a. Delays beyond the Contractor's control, such as strikes and unusual weather.
- b. Delays encountered due to submittals, Government Activities, deliveries, or work stoppages which make re-planning the work necessary.
- c. Changes required to correct a schedule which does not represent the actual or planned prosecution and progress of the work.

### 1.9 REQUESTS FOR TIME EXTENSIONS

In the event the Contractor believes it is entitled to an extension of the Contract performance period, final construction physical completion date, Contract end date, or any interim milestone date, furnish the following for a determination by the CO: justification, Project Schedule data, and supporting evidence as the CO may deem necessary. Submission of proof of excusable delay, based on revised activity logic, duration, and costs (updated to the specific date that the delay occurred) is obligatory to any approvals by the Government. In response to each Request For Proposal issued by the Government, submit a schedule impact analysis demonstrating whether or not the change contemplated by the Government impacts the critical path.

#### 1.9.1 Justification of Delay

The Project Schedule must clearly display that the Contractor has used, in full, all the float time available for the work involved with this request. The CO's determination as to the number of allowable days of Contract extension must be based upon the Project Schedule updates in effect for the time period in question, and other factual information. Actual delays that are found to be caused by the Contractor's own actions, which result in a calculated schedule delay, will not be a cause for a time extension to the performance period, final construction physical completion date, Contract end date, or any interim milestone date.

#### 1.9.2 Extension Submission Requirements

- a. Submit a justification for each request for a change in the final construction physical completion and Contract end dates of less than two weeks based upon the most recent schedule update at the time of the NTP or constructive direction issued for the change. Such a request must be in accordance with the requirements of other appropriate

Contract Clauses and must include, as a minimum:

- (1) A list of affected activities, with their associated Project Schedule activity number.
- (2) A brief explanation of the causes of the change.
- (3) An analysis of the overall impact of the changes proposed.
- (4) A sub-network of the affected area.

b. Identify activities impacted by a unique activity code contained in the required data file.

### 1.9.3 Additional Submission Requirements

For any requested time extension of over two weeks, the CO may request an interim update with revised activities for a specific change request. Provide this within four days of the CO's request.

### 1.10 DIRECTED CHANGES

If the NTP is issued for changes prior to settlement of price and/or time, submit proposed schedule revisions within seven calendar days of the NTP being issued. The proposed revisions to the schedule will be approved by the Government prior to inclusion of those changes within the Project Schedule. If the Contractor fails to submit the proposed revisions, the CO may furnish the Contractor with suggested revisions to the Project Schedule. Include these revisions in the Project Schedule until revisions are submitted and final changes and impacts have been negotiated. If the Contractor has any objections to the revisions furnished by the Contracting Officer, advise the CO within one week of receipt of the revisions. Regardless of the objections, continue to update the schedule with the CO's revisions until a mutual agreement in the revisions is reached. If the Contractor fails to submit alternative revisions within one week of receipt of the CO's proposed revisions, the Contractor will be deemed to have concurred with the CO's proposed revisions. The proposed revisions will then be the basis for an equitable adjustment for performance of the work.

### 1.11 OWNERSHIP OF FLOAT

Float available in the schedule, at any time, must not be considered for the exclusive use of either the Government or the Contractor.

### 1.12 PAYMENT

Include an updated schedule with each progress payment request submitted. The updated schedule will be used as a basis to evaluate the Contractor's progress for purposes of payment. Lack of an updated schedule will result in an inability of the CO to perform a full evaluation of the Contractor's progress. Failure to provide all information, as specified, must result in the disapproval of the entire Project Schedule submission. The CO may withhold payment until the Contractor's schedule has been approved by the Government. In the case where Project Schedule revisions have been directed by the CO and those revisions have not been included in the Project Schedule, the CO may hold retainage up to the maximum allowed by Contract, each payment period, until revisions to the Project Schedule have been made.

MCR Jetty A Rehabilitation

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section --



SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 GENERAL

- 1.1 GENERAL INFORMATION
- 1.2 SUBMITTALS
- 1.3 DEFINITIONS
  - 1.3.1 Submittal Descriptions (SD)
  - 1.3.2 Approving Authority
  - 1.3.3 Work
- 1.4 SUBMITTAL DESIGNATION
- 1.5 SUBMITTAL REGISTER
  - 1.5.1 Maintain Submittal Register
  - 1.5.2 Use of Submittal Register
  - 1.5.3 Government Approval Submittals
    - 1.5.3.1 Quantity of Submittals
    - 1.5.3.2 Processing of "G" Submittals.
  - 1.5.4 Information Only Submittals
    - 1.5.4.1 General
    - 1.5.4.2 Processing of Information Only Submittals
- 1.6 SUBMITTAL COORDINATION
  - 1.6.1 Submittal Coordination Meeting
  - 1.6.2 Submittal Register ENG Form 4288-R
  - 1.6.3 Submittal Register Updates
- 1.7 SCHEDULING
- 1.8 TRANSMITTAL FORM (ENG FORM 4025-R)
- 1.9 CROSS-REFERENCE (ENG FORM 4288-R/ENG FORM 4025-R)
- 1.10 SUBMITTAL PROCEDURES
  - 1.10.1 e-Submittals
  - 1.10.2 Drawings
    - 1.10.2.1 As-Built Drawings
    - 1.10.2.2 Shop Drawing Reproducibles
    - 1.10.2.3 Printed Material
- 1.11 SAMPLES REQUIRING LABORATORY ANALYSIS
- 1.12 SAMPLES REQUIRING VISUAL INSPECTION
- 1.13 FIELD TEST REPORTS
- 1.14 PURCHASE ORDERS
- 1.15 CERTIFICATES OF COMPLIANCE
- 1.16 DISAPPROVED SUBMITTALS
- 1.17 APPROVED SUBMITTALS
- 1.18 APPROVED SAMPLES
- 1.19 CONTRACTOR'S FILES
- 1.20 PAYMENT
- 1.21 WITHHOLDING OF PAYMENT
- 1.22 CONTRACTOR APPROVAL STAMP

PART 2 PRODUCTS - NOT USED

MCR Jetty A Rehabilitation

PART 3 EXECUTION - NOT USED

-- End of Section Table of Contents --

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 GENERAL INFORMATION

a. Section 00700 Contract Clauses 52.236-5, MATERIAL AND WORKMANSHIP, paragraph (b) and 252.236-7001, CONTRACT DRAWINGS AND SPECIFICATIONS, apply to all submittals.

b. Make submittals as required by the Specifications. The Contracting Officer (CO) may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective Sections.

c. Use the same units of weights and measures on all submittals as those used in the Contract Drawings.

d. Each submittal must be complete and in sufficient detail to allow ready determination of compliance with Contract requirements.

e. The Contractor's Quality Control (CQC) System Manager must check and approve all items prior to submittal and stamp, sign, and date indicating action taken. Proposed deviations from the Contract requirements must be clearly identified. Submittals must include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

f. Submittals requiring Government approval must be scheduled and approved prior to the acquisition of the material or equipment covered thereby.

g. Pick up and dispose of samples not incorporated into the work in accordance with manufacturer's Safety Data Sheets (SDS) and in compliance with existing laws and regulations.

h. Submittals requiring professional licensure, signature, and stamp must comply with all State professional licensing and registration requirements.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with this Section:

SD-01 Preconstruction Submittals

Submittal Register; G

1.3 DEFINITIONS

1.3.1 Submittal Descriptions (SD)

Submittal requirements are specified in the technical Sections and in the preliminary submittal register (ENG Form 4288-R, Attachment A1). Submittals are identified by Submittal Description (SD) numbers and titles as follows:

SD-01 Preconstruction Submittals

Submittals required prior to start of construction work. Includes, but not limited to: schedules, tabular list of data, or tabular list including location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work.

Certificates of insurance.

Surety bonds.

List of proposed subcontractors.

List of proposed products.

Construction Progress Schedule.

Submittal register.

Schedule of prices.

Health and safety plans.

Work plan.

Contractor Quality Control (CQC) plan.

Environmental protection plan.

SD-02 Shop Drawings

Drawings, diagrams, and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance, and other characteristics of materials, systems, or equipment for some portion of the work.

Warranty language when the Contract requires extended product warranties.

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product, or system identical to the material, product, or system to be provided has been tested in accordance with specified requirements. (Testing must have been within three years of date of Contract award for the project.)

Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports.

Daily logs and checklists.

Final acceptance test and operational test procedure.

Any reports required by the CO or designated representative to assure successful completion of tasks during the life of the Contract.

SD-07 Certificates

Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system, or material attesting that product, system, or material meets specification requirements. Must be dated after award of project Contract and clearly name the project.

Document required of Contractor, or of a manufacturer, supplier, installer, or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.

Confined space entry permits.

Text of posted operating instructions.

SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

Special requirements necessary to properly close out a construction Contract. For example, Record Drawings and as-built drawings.

1.3.2 Approving Authority

Office or designated person authorized to approve submittal.

1.3.3 Work

As used in this Section, on- and off-site construction required by Contract

documents, including labor necessary to produce submittals (except those SD-01 Pre-Construction Submittals noted above) construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction.

#### 1.4 SUBMITTAL DESIGNATION

Submittals are classified as follows:

a. Government Approved (G). Government approval is required for critical materials, deviations, an "or equal" decision, equipment whose compatibility with the entire system must be checked, and other items as designated by the CO. Within the terms of Section 00700 Contract Clause 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, they are considered to be "shop drawings."

b. Information Only. Submittals not requiring Government approval will be for information only. Within the terms of the Section 00700, Contract Clause 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, these submittals are not considered to be "shop drawings."

#### 1.5 SUBMITTAL REGISTER

##### 1.5.1 Maintain Submittal Register

a. Prepare and maintain Submittal Register, ENG Form 4288-R, per subparagraph entitled Submittal Management, in Section 01 45 00.10 25, QUALITY CONTROL SYSTEM (QCS), as the work progresses. Do not change data which is output in columns (c), (d), (e), and (f) as delivered by Government; retain data which is output in columns (a), (g), (h), and (i) as approved. This list may not be all inclusive and additional submittals may be required. Do not preassign transmittal numbers when preparing the submittal register. The preliminary and then the approved submittal register will become the scheduling documents and will be updated monthly and used to control submittals throughout the life of the Contract.

b. The Government will provide the preliminary submittal register in electronic format.

(1) Column (c): Lists Specification Section in which submittal is required.

(2) Column (d): Lists each submittal description (SD No. and type, e.g. SD-02 Shop Drawings) required in each Specification Section.

(3) Column (e): Lists one principal paragraph in Specification Section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting project requirements.

c. Thereafter, track all submittals by maintaining a complete list, including completion of all data columns, including dates on which submittals are received and returned by the Government.

##### 1.5.2 Use of Submittal Register

Submit submittal register with project schedule and QC plan. Verify that

all submittals required for work are listed and add missing submittals. Coordinate, update, and complete the fields on the submitted register in QCS with the project schedule and QC plan.

### 1.5.3 Government Approval Submittals

#### 1.5.3.1 Quantity of Submittals

SD-01, SD-02, SD-03, and SD-05 through SD-11 submittals: Upload submittals with corresponding ENG 4025-R transmittal forms (Attachment A2) as outlined in paragraph entitled e-Submittals. SD-04 submittals: Submit two samples of "G" submittals with two corresponding ENG 4025-R transmittal forms, unless otherwise specified. Upon completion of review, "G" submittal copies will be marked with an action code, dated, electronically signed, and electronically returned to the Contractor as specified below:

#### 1.5.3.2 Processing of "G" Submittals.

a. Submittals will be reviewed and processed as follows:

(1) Approved as Submitted (Action Code "A"): Submittals which can be approved without correction will be stamped "Approved" and returned electronically to the Contractor.

(2) Approved, Except as Noted on Drawings (Action Code "B"): Submittals which have only minor discrepancies will be annotated in red to indicate necessary corrections. Marked material will be stamped "Approved Except as Noted" and returned electronically to the Contractor for correction.

(3) Approved, Except as Noted on Drawings, Resubmission Required (Action Code "C"): Submittals which are incomplete or require more than minor corrections will be annotated in red to indicate necessary corrections. Marked material will be stamped "Approved Except as Noted - Resubmission Required" and returned electronically to the Contractor for correction. Resubmittal of only those items needing correction required.

(4) Will be Returned by Separate Correspondence (Action Code "D"): Submittals will be addressed by Serial Letter and the Contractor must respond according to instructions in the letter.

(5) Disapproved (Action Code "E"): Submittals which are fundamentally in error, cover wrong equipment or construction, or require extensive corrections, will be returned to the Contractor stamped "Disapproved." Submittal will be returned electronically to the Contractor and an explanation will be furnished on the submitted material or on ENG Form 4025-R indicating reason for disapproval. Complete resubmittal required.

(6) Receipt Acknowledged (Action Code "F"): Submittals stamped "Receipt Acknowledged" are complete and returned electronically to the Contractor.

(7) Other (Specify) (Action Code "G"): Submittals requiring other specific action will be stamped "Other (Specify)" and returned with a description in the Remarks section. Submittal will be returned electronically to the Contractor. Resubmittal of only those items needing correction required.

(8) Receipt Acknowledged, Does Not Comply (Action Code "X"):  
Submittals which have been received but do not comply with Contract requirements. Submittal will be returned electronically to the Contractor stamped "Receipt Acknowledged, Does Not Comply" and an explanation will be furnished. Corrective action and resubmittal required.

b. Resubmittal will not be required for approved submittals unless subsequent changes are made by Contractor or by Contract modification. For submittals required to be resubmitted, make corrections required, note any changes by dating the revisions to correspond with the change request date, and promptly resubmit the corrected material. Resubmittals must be associated with the "parent" by use of sequential numbers (for example, resubmittal of transmittal 8 will be 8.1, 8.2, etc). Government costs incurred after the first resubmittal may be charged to the Contractor.

#### 1.5.4 Information Only Submittals

##### 1.5.4.1 General

Upload submittal with corresponding ENG 4025 forms as outlined in paragraph entitled e-Submittals. Normally information only submittals will not be returned. Government approval is not required on information only submittals. These submittals will be used for information purposes. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the Contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the CO from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

##### 1.5.4.2 Processing of Information Only Submittals

Submit information only submittals electronically prior to delivery of the material or equipment to the job site. ENG Form 4025-R must be marked with the words "Contractor approved - information copy only" in the REMARKS block of the form. Submittals will be monitored and spot checks made. When such checks indicate noncompliance, the Contractor will be notified by the same method used for Government Approval submittals. Resubmittal of nonconforming information only submittals must be reclassified Government Approval ("G") and re-submitted electronically for approval.

#### 1.6 SUBMITTAL COORDINATION

##### 1.6.1 Submittal Coordination Meeting

Meet with the CO, after the preconstruction conference and before any submittals are sent to the CO, to further develop the preliminary submittal register (ENG Form 4288-R). During the meeting identify and group all required items into the categories as shown in paragraph entitled SUBMITTAL DESIGNATION.

##### 1.6.2 Submittal Register ENG Form 4288-R

Coordinate the submittal register with the progress schedule and submit



## MCR Jetty A Rehabilitation

within 30 days of Notice to Proceed. In preparing the final document, allow a minimum of 30 days for review and approval, and possible resubmittal of each item on the register.

### 1.6.3 Submittal Register Updates

The CQC System Manager must review the listing at least every 30 days and take appropriate action to maintain an effective system. Submit copies of updated or corrected listings to the CO at least every 30 days in the quantity specified.

## 1.7 SCHEDULING

Schedule and submit concurrently submittals covering component items forming a system or items that are interrelated. Adequate time (a minimum of 30 calendar days) must be allowed and shown on the register for Government review and approval. No delay damages or time extensions will be allowed for time lost in late submittals.

a. Coordinate scheduling, sequencing, preparing, and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow for potential resubmittal of requirements.

b. Submittals called for by the Contract documents must be listed on the register. Approval by the CO does not relieve the Contractor of supplying submittals required by the Contract documents but which have been omitted from the register.

c. Re-submit register and annotate monthly with actual submission and approval dates. When all items on the register have been fully approved, no further re-submittal is required.

d. Carefully control procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

## 1.8 TRANSMITTAL FORM (ENG FORM 4025-R)

Use the sample transmittal form (ENG Form 4025-R, Attachment A2) for submitting both Government Approval and Information Only submittals in accordance with the instructions on the reverse side of the form. These forms are included in the QCS software that the Contractor is required to use for this Contract, per Section 01 45 00.10 25, QUALITY CONTROL SYSTEM (QCS). Fill forms in completely prior to submittal. Exercise special care to ensure proper listing of the specification paragraph number(s) and Contract Drawing sheet number(s) pertinent to the data submitted for each item. List each submittal item separately on the form, naming subcontractor, supplier, or manufacturer; applicable specification paragraph number(s); drawing/sheet number; pay item number; and any other information needed to identify the item, define its use, and locate it in the work. One or more ENG 4025-R forms may be used per Specification Section, however, DO NOT include more than one Specification Section per transmittal.

## 1.9 CROSS-REFERENCE (ENG FORM 4288-R/ENG FORM 4025-R)

To provide a cross-reference between the approved submittal register and transmittal forms, the Contractor must record the "transmittal numbers" assigned when submitting items in column "Transmittal No." of the ENG Form

## MCR Jetty A Rehabilitation

4288-R. The numbers in column "Transmittal No." of the submittal register must correspond to the column "Item No." on ENG Form 4025-R.

### 1.10 SUBMITTAL PROCEDURES

Upload submittals in accordance with subparagraphs entitled Government Approved Submittals and Information Only Submittals, unless indicated otherwise in the technical specifications. Submit a complete collated "reviewers copy" with one ENG 4025-R form and attachments (not originals). Submit hard copy and electronic copies of Record (as-built) Drawings and O&M Manuals in accordance with the applicable Specification Sections.

#### 1.10.1 e-Submittals

The intent of electronic submittals is to expedite the construction process by reducing paperwork, improving information flow, and decreasing turnaround time. Transmittals (ENG 4025) must be signed and submitted to the Government in electronic format (PDF) via email. Submittals must be entered and tracked using QCS (see Section 01 45 00.10 25, QUALITY CONTROL SYSTEM (QCS)). At completion of Contract closeout, provide a minimum of two archival discs (DVD-R) that include all documents and tracking logs. Color samples, color charts, or physical material samples must not be transmitted electronically. e-Submittals will not relieve the Contractor from following all applicable requirements within this and other Specifications Sections and Contract Clauses.

#### 1.10.2 Drawings

Each drawing must be not larger than D size (22 inches high by 34 inches wide), include a title block in lower right hand corner, and a 3- by 4-inch clear area adjacent. The title block must contain vendor's name, Contract number, description of item(s), Contract line item number, and a revision block. Separate drawings are required for each Contract line item. Where drawings are submitted for assemblies of more than one piece of equipment or systems, of components dependent on each other for compatible characteristics, complete information must be submitted on all such related components at the same time. The information must be complete and the sequence of drawing submittal must be such that all information is available for reviewing each drawing. Drawings for all items and equipment, of special manufacture or fabrication, must consist of complete assembly and detail drawings. All revisions after initial submittal must be shown by number, date, and subject in revision block. Any drawing or electronic drawing file submitted, that is not of satisfactory quality, will be returned and must be corrected and re-submitted.

##### 1.10.2.1 As-Built Drawings

Each as-built drawing must maintain the original size, format, and border sheet as provided by the Government, showing final as-constructed conditions. Unless otherwise specified, submit in accordance with Section 01 78 39.00 25, PROJECT RECORD DOCUMENTS.

##### 1.10.2.2 Shop Drawing Reproducibles

Upon completion of the work under this Contract, provide a complete set of:

- a. Electronic drawing files, per Section 01 78 39.00 25, PROJECT RECORD DOCUMENTS, for all the drawings as finally approved under this Contract. Show all changes and revisions, including any field changes,

made up to the time that the work is accepted. Include all pertinent data files to reproduce the complete set. Record files on CD-ROM, CD-R discs only, or other digital media noted otherwise in this Contract.

b. Full-size reproducible hard-copy sets of drawings identical to the electronic drawing files. Show all changes and revisions, including field changes, made up to the time that the work is accepted.

#### 1.10.2.3 Printed Material

All requirements for shop drawings must apply to catalog cuts, illustrations, printed specifications, or other data submitted, except that the 3- by 4-inch clear area adjacent to the title block is not mandatory. Mark out inapplicable portions of the documents. Applicable items such as model numbers, sizes, and accessories must be indicated by arrow or highlighted.

#### 1.11 SAMPLES REQUIRING LABORATORY ANALYSIS

See Section 01 45 00.00 25, QUALITY CONTROL, for procedures and address for samples requiring Government testing.

#### 1.12 SAMPLES REQUIRING VISUAL INSPECTION

Coordinate samples requiring only physical inspection for appearance and suitability with the on-site Government Quality Assurance Representative (GQAR).

#### 1.13 FIELD TEST REPORTS

Deliver routine tests such as soil density, concrete deliveries, and repetitive pressure testing to the GQAR with the daily Quality Control reports. See Section 01 45 00.00 25, QUALITY CONTROL.

#### 1.14 PURCHASE ORDERS

a. Each purchase order issued by the Contractor for materials and equipment to be incorporated into the work must:

- (1) Clearly identify the applicable Contract number
- (2) Carry an identifying number
- (3) Be in sufficient detail to identify the material being purchased
- (4) Indicate a definite delivery date.

b. Furnish copies of purchase orders to the CO when the Contractor requests assistance for expediting deliveries of equipment or materials, or when requested by the CO for the purpose of quality assurance review.

#### 1.15 CERTIFICATES OF COMPLIANCE

Submit an electronic copy of certificates required for demonstrating proof of compliance of materials with specification requirements. Each certificate must be signed by an official authorized to certify on behalf of the manufacturing company, contain the name and address of the

## MCR Jetty A Rehabilitation

Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates must contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification must not be construed as relieving the Contractor from furnishing satisfactory material if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

### 1.16 DISAPPROVED SUBMITTALS

a. Make all corrections required by the CO and promptly furnish a corrected submittal in the form specified for the initial submittal. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the Contract drawings or Specifications; notice as required under Section 00700 Contract Clause 52.243-4, CHANGES, is to be given to the CO. The Contractor must be responsible for the dimensions and design of connection details and construction of work. Failure to point out deviations may result in the Government requiring rejection and removal of such work at the Contractor's expense.

b. If changes are necessary to submittals, make such revisions and re-submit the submittals in accordance with the procedures above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved.

### 1.17 APPROVED SUBMITTALS

a. The CO's approval or acceptance of submittals must not be construed as a complete check, and indicates only that the general method of construction, materials, detailing, and other information are satisfactory.

b. Approval or acceptance will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this Contract must be responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work.

c. After submittals have been approved by the CO, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

### 1.18 APPROVED SAMPLES

a. Approval of a sample is only for the characteristics or use named in such approval and must not be construed to change or modify any Contract requirements. Before submitting samples, ensure that the materials or equipment will be available in quantities required. No change or substitution will be permitted after a sample has been approved.

b. If requested, approved and/or disapproved samples, including those which may be damaged in testing, will be returned at the expense of the Contractor upon completion of the Contract.

c. Failure of any materials to pass the specified tests will be sufficient cause for refusal to consider, under this Contract, any

further samples of the same brand or make of that material. Government reserves the right to disapprove any material or equipment which previously has proved unsatisfactory in service.

d. Samples of various materials or equipment delivered on the site or in place may be taken by the CO for testing. Samples failing to meet Contract requirements will automatically void previous approvals. Contractor must replace such materials or equipment to meet Contract requirements.

e. Approval of the Contractor's samples by the CO does not relieve the Contractor of his responsibilities under the Contract.

1.19 CONTRACTOR'S FILES

Maintain "Approved as Accepted" and "Approved, Except as Noted on Drawings" (Action Codes "A" and "B") shop drawing files in fabrication shops and at field sites for Government use.

1.20 PAYMENT

Separate payment will not be made for submittals, and all costs associated therein must be included in the applicable unit prices or job prices contained in the Price Schedule. Payment will not be made for any material or equipment which does not comply with Contract requirements.

1.21 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained. No payment will be made for any materials incorporated into the work for Information Only submittals found to contain errors.

1.22 CONTRACTOR APPROVAL STAMP

Stamps used by the Contractor on the submittal data to certify that the submittal meets Contract requirements must be similar to the following:

CONTRACTOR (Firm Name)
_____ Approved
_____ Approved with corrections as noted on submittal data and/or attached sheets(s).
SIGNATURE: _____
TITLE: _____
DATE: _____

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 35 26.00 25

GOVERNMENTAL SAFETY REQUIREMENTS

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 SUBMITTALS
- 1.3 DEFINITIONS
- 1.4 REGULATORY REQUIREMENTS
- 1.5 DRUG AND ALCOHOL USE PREVENTION PROGRAM
- 1.6 SITE QUALIFICATIONS, DUTIES, AND MEETINGS
  - 1.6.1 Personnel Qualifications
    - 1.6.1.1 Site Safety and Health Officer (SSHO)
    - 1.6.1.2 Alternate SSHO and Designated Representative (DR)
    - 1.6.1.3 SSHO Requirements for Dredging
    - 1.6.1.4 Designated Representative (DR) Requirements for Dredging
    - 1.6.1.5 Safety Personnel Training Requirements for Dredging
    - 1.6.1.6 Crane Operators
  - 1.6.2 Personnel Duties
    - 1.6.2.1 Site Safety and Health Officer (SSHO)
  - 1.6.3 Meetings
    - 1.6.3.1 Preconstruction Conference
    - 1.6.3.2 Safety Meetings
    - 1.6.3.3 Work Phase Meetings
- 1.7 TRAINING
  - 1.7.1 New Employee Indoctrination
  - 1.7.2 Periodic Training
  - 1.7.3 Training Plan
- 1.8 ACCIDENT PREVENTION PLAN (APP)
  - 1.8.1 General Information
  - 1.8.2 EM 385-1-1 Contents
- 1.9 ACTIVITY HAZARD ANALYSIS (AHA)
  - 1.9.1 General
  - 1.9.2 Periodic AHA Review and Updating
- 1.10 DISPLAY OF SAFETY INFORMATION
- 1.11 SITE SAFETY REFERENCE MATERIALS
- 1.12 EMERGENCY MEDICAL TREATMENT
- 1.13 THIRD PARTY CERTIFICATION OF BARGE-MOUNTED MOBILE CRANES AND MOBILE EQUIPMENT
- 1.14 REPORTS
  - 1.14.1 Accident Notification
  - 1.14.2 Accident or Mishap Reports
  - 1.14.3 Crane Testing Reports
  - 1.14.4 Certificate of Compliance
- 1.15 HOT WORK
- 1.16 FACILITY OCCUPANCY CLOSURE
- 1.17 INCLEMENT WEATHER AND HEAT/COLD STRESS MANAGEMENT

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

- 3.1 CONSTRUCTION AND OTHER WORK
  - 3.1.1 General
  - 3.1.2 Hazardous Material Exclusions
  - 3.1.3 Unforeseen Hazardous Material
- 3.2 FALL HAZARD PROTECTION AND PREVENTION PROGRAM
  - 3.2.1 General
  - 3.2.2 Fall Protection Equipment and Systems
    - 3.2.2.1 General
    - 3.2.2.2 Personal Fall Arrest Equipment
  - 3.2.3 Work Over Water
  - 3.2.4 Personal Flotation Devices (PFD's)
  - 3.2.5 Guardrails and Safety Nets
  - 3.2.6 Rescue and Evacuation Procedures
  - 3.2.7 Aerial Lift Equipment and Movable Work Platforms
  - 3.2.8 Safety Monitoring System
  - 3.2.9 Controlled Access Zones
- 3.3 EQUIPMENT
  - 3.3.1 Load Handling Equipment (LHE)
  - 3.3.2 Cranes, Hoists, and Rigging
- 3.4 ELECTRICAL
  - 3.4.1 Conduct of Electrical Work
  - 3.4.2 Portable Extension Cords
- 3.5 WORK IN CONFINED SPACES
- 3.6 HOUSEKEEPING
  - 3.6.1 Clean-Up
  - 3.6.2 Dust control

-- End of Section Table of Contents --



SECTION 01 35 26.00 25

GOVERNMENTAL SAFETY REQUIREMENTS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)

ASSE/SAFE A10.28	(2011) Safety Requirements for Work Platforms Suspended from Cranes or Derricks - American National Standard for Construction and Demolition Operations
ASSE/SAFE A10.34	(2001; R 2012) Protection of the Public on or Adjacent to Construction Sites
ASSE/SAFE Z359-PKG	(2009) Fall Protection Code
ANSI/ASSE Z490.1	(2009) Criteria for Acceptance Practices in Safety, Health, & Environmental Training

ASME INTERNATIONAL (ASME)

ASME B30-PKG	Load Handling Equipment
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NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10	(2013) Standard for Portable Fire Extinguishers
NFPA 241	(2013) Standard for Safeguarding Construction, Alteration, and Demolition Operations
NFPA 51B	(2014) Standard for Fire Prevention During Welding, Cutting, and Other Hot Work
NFPA 70	(2014; AMD 1 2013; Errata 2013; AMD 2 2013) National Electrical Code
NFPA 70E	(2012; Errata 2012) Standard for Electrical Safety in the Workplace

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2014) Safety and Health Requirements Manual
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MCR Jetty A Rehabilitation

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1910.146	Permit-required Confined Spaces
29 CFR 1915	Occupational Safety and Health Standards for Shipyard Employment
29 CFR 1919	Gear Certification Marine Activity
29 CFR 1926	Safety and Health Regulations for Construction
CPL 2.100	(1995) Application of the Permit-Required Confined Spaces (PRCS) Standards, 29 CFR 1910.146

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following must be submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Crane Operators; G, Section 01 of EM 385-1-1.

Training Plan; G, Section 01 of EM 385-1-1.

Accident Prevention Plan (APP); G, Section 01 and Appendix A of EM 385-1-1.

Activity Hazard Analysis (AHA); G, Section 01 of EM 385-1-1.

Inclement Weather and Heat/Cold Stress Management Plans; G, Section 06 and 19 of EM 385-1-1.

Fall Prevention and Protection Plan; G, Section 21 of EM 385-1-1.

Fatigue Management Plan (FMP); G, Section 01 of EM 385-1-1.

SD-06 Test Reports

Submit reports as their incidence occurs, in accordance with the requirements of the paragraph, REPORTS.

Regulatory Citations, Violations, and Corrective Action

Drug and Alcohol Use Prevention Program

Accident or Mishap Reports, Section 01 of EM 385-1-1.

Crane Testing Reports

SD-07 Certificates

Confined Space Entry Permit, Section 34 of EM 385-1-1.

Hot Work Permit, Section 9 and 10 of EM 385-1-1.

Submit one copy of each permit attached to each Daily Contractor Quality Control Report (Section 01 45 00.00 25, QUALITY CONTROL).

Third Party Certification of Barge-Mounted Mobile Cranes and Mobile Equipment, , Section 16 and 19 of EM 385-1-1.

Certificate of Compliance

### 1.3 DEFINITIONS

a. High Visibility Mishap. Any mishap which may generate publicity and/or high visibility. The following high visibility mishaps must be reported immediately:

- (1) Electrical - to include Arc Flash and Uncontrolled release of Hazardous Energy.
- (2) Load Handling Equipment of Rigging.
- (3) Fall-from-Height; and
- (4) Underwater diving

b. Medical Treatment. Treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even though provided by a physician or registered personnel.

c. Recordable Injuries or Illnesses. Any work-related injury or illness that results in:

- (1) Death, regardless of the time between the injury and death, or the length of the illness;
- (2) Days away from work (any time lost after day of injury/illness onset);
- (3) Restricted work or transfer to another job;
- (4) Medical treatment beyond first aid;
- (5) Loss of consciousness; or
- (6) A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (1) through (5) above.

d. "USACE" property and equipment specified in EM 385-1-1 must be interpreted as Government property and equipment.

### 1.4 REGULATORY REQUIREMENTS

a. In addition to the detailed requirements included in the provisions of this Contract, comply with the most recent edition of EM 385-1-1, in effect on the date of the Solicitation for this Contract, and applicable Federal, State, and local laws, ordinances, criteria, rules

and regulations. Submit regulatory citations, violations, and corrective action and matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements must apply.

b. Contact the Contracting Officer immediately of any OSHA or other regulatory agency inspection or visit, and provide the Contracting Officer with a copy of each citation, report, and Contractor response. Correct violations and citations promptly and provide written corrective actions to the Contracting Officer.

#### 1.5 DRUG AND ALCOHOL USE PREVENTION PROGRAM

Conduct a proactive drug and alcohol use prevention program for all workers, prime and subcontractor, on the site, to include administrative action for employees failing the program. Ensure that no employee uses illegal drugs, in accordance with Federal law, or consumes alcohol during work hours. Ensure there are no employees under the influence of drugs or alcohol during work hours and are fit for duty. During the Contract period a copy of tests, to include results of random testing, must be submitted to the Contracting Officer. No personal data must be submitted, only numbers of individuals tested and results of tests.

#### 1.6 SITE QUALIFICATIONS, DUTIES, AND MEETINGS

##### 1.6.1 Personnel Qualifications

##### 1.6.1.1 Site Safety and Health Officer (SSHO)

a. Provide a Safety oversight team that includes a minimum of one competent person to function as the SSHO. The SSHO must meet the requirements of EM 385-1-1, section 1, and ensure that the requirements of 29 CFR 1926 are met for the project. The SSHO must be at the work site at all times to implement and administer the Contractor's safety program and Government-accepted Accident Prevention Plan. The SSHO's training, experience, and qualifications must be as required by EM 385-1-1.

b. Provide a Competent Person for all of the hazards identified in the Contractor's Safety and Health Program in accordance with the accepted Accident Prevention Plan. The Competent Person must be on-site at all times when the work that presents the hazards associated with their professional expertise is being performed. Provide the credentials of the Competent Persons(s) for acceptance by the Contracting Officer in consultation with the Safety Office.

c. The Contractor Quality Control (CQC) manager

d. The SSHO duties other than SSHO. The SSHO must meet the following requirements:

(1) A minimum of five years of continuous construction industry safety experience in supervising/managing general construction (managing safety programs or processes or conducting hazard analyses and developing controls) on similar projects.

(2) Thirty-hour OSHA Construction safety class or equivalent

within the last four years.

(3) SSHOs must maintain competency through having taken eight hours of documented formal, on-line, or self-study safety and health related coursework every year.

(4) Competent person training as needed.

#### 1.6.1.2 Alternate SSHO and Designated Representative (DR)

a. The Alternate SSHO must meet the same requirements and assume the responsibilities of the project SSHO. Assistant SSHO's may be necessary during the main shift along with the lead SSHO, but are primarily intended to be on-site during the times that the lead SSHO is absent from the work site. The assistant SSHO may have other duties on the jobsite.

b. If the SSHO is off-site for a period longer than 24 hours, an alternate SSHO must be provided and fulfill the same roles and responsibilities as the primary SSHO.

c. When the SSHO is temporarily (up to 24 hours) off-site, a Designated Representative (DR), as identified in the AHA may be used in lieu of an Alternate SSHO, and shall be on the project site at all times when work is being performed.

Note: DRs are collateral duty safety personnel, with safety duties in addition to their full-time occupation.

d. If an activity, task or DFOW contains multiple sites and has been assessed and given an activity Risk Assessment Code (RAC) of low or medium, a DR shall be appointed for each site where remote work locations are more than 45 minutes travel time from the SSHO's duty location.

(1) DRs shall perform safety program tasks as designated by the SSHO and report safety findings to the SSHO.

(2) A DR may not be assigned to projects that have a RAC level of high or extremely high.

#### 1.6.1.3 SSHO Requirements for Dredging

a. In addition to requirements stated elsewhere in this specification, the SSHO must be present at the project site, located so they have full mobility and reasonable access to all major work operations, for at least one shift in each 24 hour period when work is being done. The SSHO, or Alternate SSHO, must be available during all shifts for immediate verbal consultation and notification, either by phone or radio. The SSHO must be a full-time, dedicated position.

b. The SSHO must inspect all work areas and operations during initial set-up and at least monthly observe and provide personal oversight on each shift during dredging operations for projects with many work sites, more often for those with less work sites.

c. For projects with multiple shifts or when SSHO is temporarily off-site, an Alternate SSHO must be assigned to ensure SSHO coverage for the project at all times work activities are conducted. The

Alternate SSHO must meet the same requirements and assume the responsibilities of the project SSHO. The Alternate SSHO position may be a collateral duty.

d. If the SSHO is off-site for a period longer than 24 hours, a qualified replacement SSHO must be provided and must fulfill the same roles and responsibilities as the primary/initial SSHO.

#### 1.6.1.4 Designated Representative (DR) Requirements for Dredging

a. Designated Representatives (DR) are collateral duty safety personnel, with safety duties in addition to their full-time occupation, and support and supplement the SSHO efforts in managing, implementing, and enforcing the Contractor's Safety and Health Program. DRs must be individual(s) with work oversight responsibilities, such as masters, mates, fill foremen, and superintendents. DRs must not be positions requiring continuous mechanical or equipment operations, such as equipment operators.

b. Appoint a DR for all remote work locations more than 45 minutes travel time from the SSHO's duty location, typically including dredged material placement sites, towing and scow operations, and other operations.

c. The DRs must perform safety program tasks as designated by the SSHO and report safety findings to the SSHO/Alternate SSHO. The SSHO must document results of safety findings and provide information for inclusion in the CQC reports to the Government Representative.

#### 1.6.1.5 Safety Personnel Training Requirements for Dredging

a. The SSHO, Alternate SSHO, and DR for dredging contracts must take either the OSHA 30-hour Construction Safety Course or an equivalent 30 hours of formal safety and health training covering the subjects of the OSHA 30-hour Course (see EM 385-1-1 Appendix A, paragraph 4.b) applicable to dredging work and given by qualified instructors.

b. The SSHOs must also have taken eight hours of formal classroom or online safety and health related coursework in the past four years. Hours spent as an instructor in such courses will be considered the same as attending them, but each course only gets credit once (i.e. Instructing a 1-hour asbestos awareness course five times in the past four years provides one hour credit for training).

c. The SSHO, Alternate SSHO, and DR must have a minimum of three years continuous experience within the past five years in supervising/managing dredging, marine or land-based construction, work managing safety programs or processes, or conducting hazard analyses and developing controls in activities or environments with similar hazards. This is in lieu of the construction experience required by paragraph 01.A.17.b, EM 385-1-1.

#### 1.6.1.6 Crane Operators

Meet the crane operator's training and medical requirements in EM 385-1-1, Section 16 and Appendix I; ASME B30-PKG; 29 CFR 1910; and 29 CFR 1926. Provide proof of current qualification.

## MCR Jetty A Rehabilitation

### 1.6.2 Personnel Duties

#### 1.6.2.1 Site Safety and Health Officer (SSHO)

Failure to perform the following duties will result in dismissal of the superintendent, QC manager, SSHO, and a project work stoppage will go into effect. The project work stoppage will remain in effect pending approval of a suitable replacement. The SSHO must:

- a. Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Attach safety inspection logs to the Daily Contractor Quality Control Report.
- b. Conduct mishap investigations and complete required reports. Maintain the OSHA Form 300 and Daily Contractor Quality Control Report for prime and subcontractors.
- c. Maintain applicable safety reference material on the job site.
- d. Attend the pre-construction conference, pre-work meetings including the Contractor Quality Control Preparatory Phase inspection meeting, Initial Phase inspection meetings, Follow-up Phase, additional Preparatory and Initial Phase meetings, and periodic in-progress meetings.
- e. Implement and enforce accepted APPs and AHAs.
- f. Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution. Post a list of unresolved safety and health deficiencies on the safety bulletin board.
- g. Ensure subcontractor compliance with safety and health requirements.
- h. Maintain a list of hazardous chemicals on site and their safety data sheets (SDS).

### 1.6.3 Meetings

#### 1.6.3.1 Preconstruction Conference

- a. The purpose of the Preconstruction conference is for the Contractor and the Contracting Officer to become acquainted and explain the functions and operating procedures of their respective organizations.
- b. Contractor representatives who have a responsibility or significant role in accident prevention on the project must attend the preconstruction conference. This includes the project superintendent, SSHO, quality control supervisor, or any other assigned safety and health professionals who participated in the development of the APP (including the Activity Hazard Analyses (AHAs) and special plans, program and procedures associated with it).
- c. Discuss the details of the submitted APP to include incorporated plans, programs, procedures, and a listing of anticipated AHAs that will be developed and implemented during the performance of the Contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and

## MCR Jetty A Rehabilitation

the Contracting Officer's representative as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, review, and acceptance of AHAs to preclude project delays.

d. Deficiencies in the submitted APP will be brought to the attention of the Contractor at the Preconstruction conference, and the Contractor must revise the plan to correct deficiencies and re-submit it for acceptance. Do not begin work until there is an accepted APP.

### 1.6.3.2 Safety Meetings

Conduct weekly safety meetings at the project site for all employees as required by EM 385-1-1. The Contracting Officer must be informed of the meeting in advance and be allowed attendance. Minutes showing Contract title, signatures of attendees, and a list of topics discussed must be attached to the Daily Contractor Quality Control Report.

### 1.6.3.3 Work Phase Meetings

Appropriate AHA's must be discussed during CQC work phase meetings as required in Section 01 45 00.00 25, QUALITY CONTROL.

## 1.7 TRAINING

### 1.7.1 New Employee Indoctrination

New employees (prime and subcontractor) must be informed of specific site hazards before they begin work. Documentation of this orientation must be kept on file at the project site.

### 1.7.2 Periodic Training

Provide Safety and Health Training in accordance with EM 385-1-1 and the accepted APP. Ensure all required training has been accomplished for all onsite employees.

### 1.7.3 Training Plan

Prior to beginning a new phase, training must be provided to all affected employees to include a review of the AHA to be implemented. Contractors can chose to utilize Job Hazard Analyses in lieu of AHAs as long as the JHA meets the requirements of an AHA to include a Risk Assessment.

## 1.8 ACCIDENT PREVENTION PLAN (APP)

### 1.8.1 General Information

a. Use a Qualified person to prepare the written site-specific APP. See Appendix Q of EM 385-1-1 for definition of Qualified Person. Prepare the APP in accordance with the format and requirements of EM 385-1-1 and as supplemented herein. Cover all paragraph and subparagraph elements in EM 385-1-1, **Appendix A, entitled Minimum Basic Outline for Accident Prevention Plans**. Specific requirements for some of the APP elements are described below:

- (1) The APP must be job-specific and must address any unusual or unique aspects of the project or activity for which it is written.



(2) The APP must interface with the Contractor's overall safety and health program. Include any portions of the Contractor's overall safety and health program referenced in the APP in the applicable APP element and made site-specific.

(3) The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors.

(4) Contractors must inform their subcontractors of the safety provisions under the terms of the Contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out.

(5) The APP must be signed by the person and firm (senior person) preparing the APP, the Contractor, the on-site superintendent, the designated SSHO.

b. Submit the APP to the Contracting Officer 15 calendar days after Notice to Proceed for acceptance. Work cannot proceed without an accepted APP. The Contracting Officer will review and comment on the Contractor's submitted APP and accept it when it meets the requirements of the Contract provisions.

c. Once accepted by the Contracting Officer, the APP and appendices will be enforced as part of the Contract. Disregarding the provisions of this Contract or the accepted APP will be cause for stoppage of work, at the discretion of the Contracting Officer, until the matter has been rectified.

d. Once work begins, changes to the accepted APP must be made with the knowledge and concurrence of the Contracting Officer, project superintendent, SSHO, and quality control manager. Should any severe hazard exposure, i.e. imminent danger, become evident, stop work in the area, secure the area, and develop a plan to remove the exposure and control the hazard. Notify the Contracting Officer, both verbally and in writing, within 24 hours of discovery. In the interim all necessary action must be taken by the Contractor to restore and maintain safe working conditions in order to safeguard on-site personnel, visitors, the public (as defined by ASSE/SAFE A10.34), and the environment.

e. Copies of the accepted APP must be maintained at the CO's office and at the work site. Continuously review and amend the APP, as necessary, throughout the life of the Contract. Incorporate unusual or high-hazard activities not identified in the original APP in the plan as they are discovered.

#### 1.8.2 EM 385-1-1 Contents

In addition to the requirements above and those outlined in Appendix A of EM 385-1-1, the following is required:

a. Names and qualifications (resumes including education, training, experience and certifications) of all site safety and health personnel designated to perform work on this project to include the designated site safety and health officer and other Competent and Qualified personnel to be used. The duties of each position must be specified.

b. Qualifications of Competent and Qualified persons. As a minimum, designate Competent persons and submit qualifications for each of the following major areas: excavation; scaffolding; fall protection; hazardous energy; confined space; health hazard recognition, evaluation and control of chemical, physical and biological agents; personal protective equipment and clothing to include selection, use and maintenance.

c. Confined Space Entry Plan. Develop a confined space entry plan in accordance with EM 385-1-1, applicable OSHA standards 29 CFR 1910, 29 CFR 1910.146, 29 CFR 1915, and 29 CFR 1926, and any other Federal, State, and local regulatory requirements identified in this Contract. Identify the Qualified person's name and qualifications, training, and experience. Delineate the Qualified person's authority to direct work stoppage in the event of hazardous conditions. Include procedure for rescue by Contractor personnel and the coordination with emergency responders. (If there is no confined space work, include a statement that no confined space work exists and none will be created.)

d. Health Hazard Control Program. Designate a Competent and Qualified person to establish and oversee a Health Hazard Control Program in accordance with EM 385-1-1, Section 6. The program must ensure that employees, on-site Government representatives, and others, are not adversely exposed to chemical, physical, and biological agents and that necessary controls and protective actions are instituted to ensure health.

e. A Drug and Alcohol Use Prevention Program. Provide description of the on-site prevention program.

f. Training Records and Requirements. List of mandatory training and certifications which are applicable to this project (e.g. explosive actuated tools, confined space entry, fall protection, crane operation, hazardous energy control, vehicle operator, forklift operators, personal protective equipment); list of requirements for periodic retraining/certification; outline requirements for supervisory and employee safety meetings.

g. Fall Protection and Prevention (FP&P) Plan. The plan must be site specific and address all fall hazards in the work place and during different phases of construction (paragraph entitled FALL HAZARD PROTECTION AND PREVENTION PROGRAM). It must address how to protect and prevent workers from falling to lower levels when they are exposed to fall hazards above 6 feet. A Competent Person For Fall Protection or a Qualified Person for Fall Protection prepare and sign the plan. See Appendix Q of EM 385-1-1 for definitions of Competent and Qualified Person for Fall Protection. The plan must include fall protection and prevention systems, equipment and methods employed for every phase of work, responsibilities, self-rescue, rescue and escape equipment and operations, evacuation procedures, training requirements, and monitoring methods. For Horizontal Lifelines, see EM 385-1-1, section 21 and ASSE/SAFE Z359-PKG. Revise the Fall Protection and Prevention Plan for lengthy projects, reflecting any changes during the course of construction due to changes in personnel, equipment, systems, or work habits. The accepted Fall Protection and Prevention Plan must be kept and maintained at the job site for the duration of the project.

h. Occupant Protection Plan. The safety and health aspects of

lead-based paint removal, prepared in accordance with EM 385-1-1, Section 06.

i. Site Safety and Health Plan. The safety and health aspects prepared in accordance with EM 385-1-1.

j. Excavation Plan. The safety and health aspects prepared in accordance with EM 385-1-1.

k. Crane Critical Lift Plan. Prepare and sign weight handling critical lift plans for lifts over 75 percent of the capacity of the crane or hoist (or lifts over 50 percent of the capacity of a barge mounted mobile crane's hoists) at any radius of lift; lifts involving more than one crane or hoist; lifts of personnel; and lifts involving non-routine rigging or operation, sensitive equipment, or unusual safety risks. Submit 15 calendar days prior to on-site work and include the requirements of EM 385-1-1, Section 16, ASME B30-PKG, and the following:

(1) For lifts of personnel, the plan must demonstrate compliance with the requirements of EM 385-1-1, Section 16.

(2) For barge mounted mobile cranes, a Naval Architectural Analysis (NAA) must be performed to determine barge stability calculations identifying barge list and trim based on anticipated loading; and load charts based on calculated list and trim. The amount of list and trim must be within the crane manufacturer's requirements.

o. Standard Lift Plan. For all crane activities a written standard lift plan (SLP) must be prepared for every lift or series of lifts (if duty cycle or routine lifts are being performed). The SLP must be developed, reviewed and accepted by all personnel involved in the lift in accordance with EM 385-1-1, Section 16.

p. Fatigue Management Plan (FMP). A FMP must be completed as part of the APP whenever work hours:

(1) exceed 10-hours a day for more than four consecutive days;

(2) exceed 50-hours in a 7-day work week;

(3) exceed 12-hours a day for more than three consecutive days, or

(4) exceed 58-hours a week for sedentary (to include office) work.

## 1.9 ACTIVITY HAZARD ANALYSIS (AHA)

### 1.9.1 General

a. The Activity Hazard Analysis (AHA) format must be in accordance with EM 385-1-1. Submit the AHA for review at least 15 calendar days prior to the start of each phase. Format subsequent AHAs as amendments to the APP. The analysis must be used during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls. Develop an AHA for every operation involving a type of work presenting hazards not experienced in previous project operations or where a new work crew or subcontractor is to perform work. The analysis must identify and evaluate hazards and outline the proposed methods and techniques for the safe completion of each phase

of work. At a minimum, define activity being performed, sequence of work, specific safety and health hazards anticipated, control measures (to include personal protective equipment) to eliminate or reduce each hazard to acceptable levels, equipment to be used, inspection requirements, training requirements for all involved, and the Competent and Qualified persons in charge of that phase of work. For work with fall hazards, include fall hazards associated with scaffold erection and removal, identify the appropriate fall arrest systems. For work with materials handling equipment, address safeguarding measures related to materials handling equipment. For work requiring excavations, include requirements for safeguarding excavations. For work with commissioning, address safeguarding measures related to commissioning.

b. An activity requiring an AHA must not proceed until the AHA has been accepted by the Contracting Officer and a meeting has been conducted by the Contractor to discuss its contents with everyone engaged in the activity, including on-site Government representatives. The Contractor must document meeting attendance at the preparatory, initial, and follow-up phases of quality control inspection.

c. The AHA must be continuously reviewed and, when appropriate, modified to address changing site conditions or operations.

d. Develop the activity hazard analyses using the project schedule as the basis for the activities performed. Any activities listed on the project schedule will require an AHA. The AHAs will be developed by the Contractor, supplier, or subcontractor and provided to the Prime Contractor for submittal to the Contracting Officer.

e. Contractor may use Job Hazard Analyses, Job Safety Analyses, or similar Risk Management procedures in lieu of an AHA, provided the data collected is the same as that required by the AHA.

#### 1.9.2 Periodic AHA Review and Updating

Review the AHAs periodically (at least monthly) at the Contractor supervisory safety meeting and update when procedures, scheduling, or hazards change. The on-site superintendent, SSHO, and Competent persons used to develop the AHAs, including updates, must sign and date the AHAs before they are implemented.

#### 1.10 DISPLAY OF SAFETY INFORMATION

Within one calendar day after commencement of on-site work, erect a Safety and Health Bulletin Board at the job site. Where size, duration, or logistics of project do not facilitate a bulletin board, an alternative method, acceptable to the Contracting Officer, that is accessible and includes all mandatory information for employee and visitor review, will be deemed as meeting the requirement for a bulletin board. Include and maintain information on safety bulletin board as required by EM 385-1-1, Section 01.A.06. Additional items required to be posted include:

- a. Confined space entry permit.
- b. Hot work permit
- c. Marine Chemist Certificate (Marine Activities).

## MCR Jetty A Rehabilitation

### 1.11 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including those listed in paragraph entitled REFERENCES. Maintain applicable equipment manufacturer's manuals.

### 1.12 EMERGENCY MEDICAL TREATMENT

Contractors must arrange for their own emergency medical treatment. Government has no responsibility to provide emergency medical treatment.

### 1.13 THIRD PARTY CERTIFICATION OF BARGE-MOUNTED MOBILE CRANES AND MOBILE EQUIPMENT

Barge-mounted mobile cranes must be certified in accordance with 29 CFR 1919 and ASME B30-PKG, by an OSHA accredited person.

### 1.14 REPORTS

#### 1.14.1 Accident Notification

Notify the Contracting Officer as soon as practical, but no more than four hours, after any mishap meeting the definition of Recordable Injuries or Illnesses or High Visibility Mishap; meeting EM 385-1-1, Section 01, to include property damage equal to or greater than \$5,000. In conjunction with Section 00700 Contract Clause 52.236-13 Alt I, ACCIDENT PREVENTION - ALTERNATIVE I, and EM 385-1-1 Section 1, the Contractor must report to the Government monthly the total man-hours expended at the project site by all employees (supervisory as well as labor) together with those of all subcontractors. The reporting period will start at 12:01 a.m. the first day of each month and end as of midnight on the last day of each month. Reporting must be made by telephone to the CO and Resident Engineer's office prior to the fifth day of the following month.

#### 1.14.2 Accident or Mishap Reports

All accidents involving property damage, fires, personal equipment, and all injuries to the public, regardless of degree, must be reported to the CO and Resident Engineer on ENG Form 3394 and according to the schedule which follows:

##### a. Investigation and Reporting

(1) Conduct a mishap investigation for recordable injuries and illnesses, for Medical Treatment as defined in paragraph DEFINITIONS, property damage accidents resulting in at least \$5,000 in damages, and near misses as defined in EM 385-1-1, to establish the root cause(s) of the accident. Complete the accident or mishap reports form, ENG Form 3394, and provide the report to the CO within five calendar days of the accident.

(2) Conduct an accident investigation for any of the following High Visibility Mishap: (1) Electrical, (2) Load Handling Equipment or Rigging, (3) Fall-from-Height, (4) Underwater Diving to establish the root cause(s) of the accident. Initial report must be made within four hours, and a , completed ENG Form 3394 must be provide to the Contracting Officer within five calendar days of the accident. Do not proceed with further operations until cause is determined and corrective actions have been

implemented to the satisfaction of the CO.

(3) The CO and Resident Engineer must be notified by the most expeditious means available of all fatal and permanent total disability injuries, three or more persons hospitalized, all property damage of \$500,000 or more, and structural damage involving a question of structural adequacy. All incidents involving disabling injury or an injury which may result in an employee's lost time, or property damage of \$5,000 or more must be reported to the CO and Resident Engineer by telephone as soon as possible and in all cases within four hours.

(4) In all accidents enumerated in sub-item (3), investigate the circumstances before the scene of the accident is changed, take corrective action, and within 48 hours forward to the CO and Resident Engineer four copies of ENG Form 3394.

(5) In the event of an accident involving a fatality, permanent total disability, hospitalization of one or more persons, or property damage of \$500,000 or more, the Contractor must promptly suspend all operations at the scene of the accident and notify the CO and Resident Engineer of the occurrence. Immediately provide for the rescue and/or care of the injured. Except in situations where safety may be compromised, access to the area must be restricted and the scene left undisturbed until investigated by a Government appointed board of investigation and until the Contractor is authorized to resume operations.

(6) If property damage and injury result from the same accident, the consequence may be noted on the same ENG Form 3394. If more than one person is injured in a single accident, ENG Form 3394 must be submitted for each person injured. The Resident Office staff will provide the required forms and assist in their preparation immediately upon notification of an accident.

b. Types of Accidents and Reports. For each accident that results in a consequence or combination of the consequences listed below, a complete report on ENG Form 3394 must be furnished to the CO and Resident Engineer. Please note that these reports cannot be used for any purpose other than accident reporting.

(1) Disabling injury (including death) is an injury that renders a person unable to perform a regularly established job on the day following the injury or on any subsequent day. Known suicide or deaths from natural causes are not reportable.

(2) Damage of \$5,000 or more to the Contractor's property or equipment, including motor vehicles and fire and/or damage to other property caused by the Contractor while executing the Contract.

(3) Accidents occasioned by flood, hurricane, tornado, fire, navigation, wind, ice, etc., and structural failure in excess of \$5,000.

#### 1.14.3 Crane Testing Reports

Submit crane inspection reports required in accordance with Section 16 and Appendix I of EM 385-1-1, ASME B30-PKG, and as specified herein with the

daily reports of inspections.

1.14.4 Certificate of Compliance

Provide a Certificate of Compliance for each crane entering an activity under this Contract (see Contracting Officer for a blank certificate). State within the certificate that the crane and rigging gear meet applicable OSHA regulations (with the Contractor citing which OSHA regulations are applicable, e.g., cranes used in construction, demolition, or maintenance comply with 29 CFR 1926 and EM 385-1-1 Section 16 and Appendix I. Certify on the Certificate of Compliance that the crane operator(s) is qualified and trained in the operation of the crane to be used. Also certify that all of its crane operators have been trained in the proper use of all safety devices (e.g., anti-two block devices). Post certifications on the crane.

1.15 HOT WORK

a. Submit and obtain a written permit prior to performing "Hot Work" (i.e. welding or cutting, etc.) or operating other flame-producing/spark producing devices. Contractors are required to meet all criteria before a permit is issued. In accordance with EM 385-1-1, provide at least two 20 pound 4A:20 BC rated extinguishers for normal "Hot Work". All extinguishers must have current inspection tag, approved safety pin, and tamper resistant seal. It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done. The Fire Watch must be trained in accordance with NFPA 51B and remain on-site for a minimum of 60 minutes after completion of the task or as specified on the hot work permit.

b. For floating plant, obtain services from a NFPA Certified Marine Chemist for "HOT WORK" within or around flammable materials (such as fuel systems, welding/cutting on fuel pipes) or confined spaces (such as sewer wet wells, manholes, vaults, etc.) that have the potential for flammable or explosive atmospheres.

1.16 FACILITY OCCUPANCY CLOSURE

Streets, walks, and other facilities occupied and used by the Government must not be closed or obstructed without written permission from the CO.

1.17 INCLEMENT WEATHER AND HEAT/COLD STRESS MANAGEMENT

In the event of a severe storm warning, the Contractor must:

a. Secure outside equipment and materials and place materials that could be damaged in protected areas.

b. Check surrounding area for loose material, equipment, debris, and other objects that could be blown away or against existing work.

c. Ensure that temporary erosion controls are adequate. d. Provide a INCLEMENT WEATHER AND HEAT/COLD STRESS MANAGEMENT PLANS for removing or securing plant and evacuation of personnel for floating plants in emergencies. This plan must be part of the AHA and meet the requirements of EM 385-1-1, Section 19.

## MCR Jetty A Rehabilitation

### PART 2 PRODUCTS - NOT USED

### PART 3 EXECUTION

#### 3.1 CONSTRUCTION AND OTHER WORK

##### 3.1.1 General

Comply with EM 385-1-1, NFPA 241, ASME B30-PKG, the APP, the AHA, Federal and/or State OSHA regulations, and other related submittals and activity fire and safety regulations. The most stringent standard will prevail.

##### 3.1.2 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this Contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocyanates, and lead-based paint are prohibited. The Contracting Officer, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials.

##### 3.1.3 Unforeseen Hazardous Material

If material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to Section 00700 Contract Clauses 52.243-4, CHANGES, and 52.236-2, DIFFERING SITE CONDITIONS.

#### 3.2 FALL HAZARD PROTECTION AND PREVENTION PROGRAM

##### 3.2.1 General

Designate a Competent or Qualified Person for Fall Protection to establish, prepare, and sign a fall protection and prevention (FP&P) plan for the protection of all employees exposed to fall hazards in accordance with ASSE/SAFE Z359-PKG and EM 385-1-1. Establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. The plan will include: company policy, identify responsibilities, qualifications, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment, and rescue and evacuation procedures; and must be submitted in the APP. Definitions and nomenclature must be used in accordance with ASSE/SAFE Z359-PKG. Identify Competent/Qualified persons, as required, for fall protection and must maintain a list of current certificates and completed training courses for each person. Qualified and Competent persons (See EM 385-1-1, Appendix Q) requirements are as follows:

- a. A Qualified person must have a recognized degree or professional certificate that relates to fall protection and rescue and with



extensive knowledge, training, and experience in the fall protection and rescue field and must be capable of designing, analyzing, evaluating, specifying, inspecting, and assembling fall protection and rescue equipment and systems. The Qualified person must also have working knowledge of current fall protection regulations and standards, physical sciences, engineering principles, and meet the qualifications of a Competent person.

b. A Competent person, designated in writing by the Contractor, will be responsible for the immediate supervision, implementation, and monitoring of the Contractor's managed Fall Hazard Protection and Prevention Program, who through training and knowledge in the fall protection and rescue field, is capable of identifying, evaluating, and addressing existing and potential fall hazards, and who has the authority to take necessary corrective measures. To be qualified as a Competent Person for Fall Protection, the individual must have a minimum of 24 hours of Competent Person for Fall Protection training, with a combination of formal classroom and practical documented training. Training will be performed by a competent person training or a qualified person trainer conforming to the requirements of ANSI/ASSE Z490.1, Criteria for Accepted Practices in Safety, Health and Environmental Training. In addition, Competent Person refresher training must be conducted at least every two years to stay current with fall protection and rescue educational industry requirements, or when new fall protection systems are used or installed, or new fall hazards are encountered per ASSE/SAFE Z359-PKG. A Qualified person may perform the duties and responsibilities of a Competent person if their training meets the above minimum training requirements.

### 3.2.2 Fall Protection Equipment and Systems

#### 3.2.2.1 General

Enforce use of the fall protection equipment and systems designated for each specific work activity in the Fall Protection and Prevention Plan and/or AHA at all times when an employee is exposed to a fall hazard. Protect employees from fall hazards as specified in EM 385-1-1, Section 21. In addition to the required fall protection systems, safety skiff, personal floatation devices, and life rings etc., are required when working above or next to water in accordance with EM 385-1-1, Section 05 and 21. Personal fall arrest systems are required when working from an articulating or extendible boom, swing stages, or suspended platforms. Safety requirements for work platforms suspended from cranes or derricks must comply with ASSE/SAFE A10.28. In addition, personal fall restraint systems are required when operating other equipment such as scissor lifts. Fall protection must comply with EM 385-1-1, and ASSE/SAFE Z359-PKG.

#### 3.2.2.2 Personal Fall Arrest Equipment

Personal fall arrest equipment, systems, subsystems, and components must meet ASSE/SAFE Z359-PKG. Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest body support device. Body belts are prohibited, to include use in Fall Restraint. Harnesses must have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Only locking snap hooks and carabiners must be used meeting the 3,600 lb. gate strength requirement. Webbing, straps, and ropes must be made of synthetic fiber. The maximum free fall distance when using fall arrest equipment must not exceed 6

## MCR Jetty A Rehabilitation

feet. The total fall distance and any swinging of the worker (pendulum-like motion) that can occur during a fall shall always be taken into consideration when attaching a person to a fall arrest system. All harnesses must be equipped with Trauma Suspension Straps or similar to provide short-term relief from the effects of orthostatic intolerance. Effective July 2016, all energy absorbers must be equipped with a deployment indicator.

### 3.2.3 Work Over Water

Prepare and provide a fall prevention and protection plan. The plan must comply with EM 385-1-1, Section 21.

### 3.2.4 Personal Flotation Devices (PFD's)

Personal flotation devices are required for any personnel not in a vehicle on the jetty. PFD's must meet all requirements in accordance with EM 385-1-1

### 3.2.5 Guardrails and Safety Nets

Design, install, and use guardrails and safety nets in accordance with EM 385-1-1, Section 21 and 19 (Marine).

### 3.2.6 Rescue and Evacuation Procedures

When personal fall arrest systems are used, ensure that the mishap victim can self-rescue or can be rescued promptly should a fall occur. Prepare a Rescue and Evacuation Plan and include a detailed discussion of the following: methods of rescue; methods of self-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility. Include the Rescue and Evacuation Plan within the AHA for the phase of work, in the FP&P Plan, and the APP.

### 3.2.7 Aerial Lift Equipment and Movable Work Platforms

In addition to the guardrail provided, the equipment must be equipped with anchorages meeting ASSE/SAFE Z359-PKG. A restraint system must be used in addition to guardrails and the lanyards must be sufficiently short to prohibit workers from climbing out of, or being ejected from the platform.

### 3.2.8 Safety Monitoring System

The use of a safety monitoring system as a fall protection method is prohibited.

### 3.2.9 Controlled Access Zones

The use of Controlled Access Zones as a fall protection method is prohibited.

## 3.3 EQUIPMENT

### 3.3.1 Load Handling Equipment (LHE)

Load Handling Equipment (LHE) must comply with ASME B30-PKG and the following:

## MCR Jetty A Rehabilitation

- a. Load Handling Equipment such as forklifts must not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions.
- b. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions.
- c. Operators of forklifts or power industrial trucks must be licensed in accordance with OSHA.

### 3.3.2 Cranes, Hoists, and Rigging

- a. LHE as specified in EM 385-1-1, Section 16.
- b. Comply with the LHE manufacturer's specifications and limitations for erection and operation of LHE used in support of the work. Perform erection under the supervision of a designated person (as defined in ASME B30-PKG). Perform all testing in accordance with the manufacturer's recommended procedures.
- c. Comply with ASME B30-PKG, OSHA and the EM 385-1-1 for all cranes.
- d. When operating in the vicinity of overhead transmission lines, operators and riggers must be alert to this special hazard and follow the requirements of EM 385-1-1, Sections 11, and ASME B30-PKG.
- e. Do not use personnel work platforms (man-baskets) unless the Contractor proves that using any other access to the work location would provide a greater hazard to the workers or is impossible. Hoisting personnel must be allowed by the LHE Manufacture, this activity is a critical lift and a critical lift plan is required.
- f. Inspect, maintain, and recharge portable fire extinguishers as specified in NFPA 10, Standard for Portable Fire Extinguishers.
- g. All employees must keep clear of loads about to be lifted and of suspended loads.
- h. Use cribbing when performing lifts on outriggers.
- i. The LHE hook/block must be positioned directly over the load. Side loading of LHE is prohibited unless allowed by the manufacture.
- j. Position a physical barricade to prevent personnel from entering the counterweight swing (tail swing) area of the crane.
- k. Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the LHE that was inspected must always be available onsite.
- l. Written reports listing the load test procedures used along with any repairs or alterations performed on the crane must be available onsite.
- m. Certify that all LHE operators have been trained in proper use of the equipment they are authorized by type, class and capacity.
- n. Certify that all LHE meet the manufactures requirements by completing and submitting the certification of compliance (COC) for in

the EM 385-1-1 prior to the start of work.

o. All LHE operators must have a physical if required by the EM 385-1-1, and must be signed by a Medical Doctor (MD) or Doctor of Osteopathy (DO).

p. All lifts with LHE must be planned in advance by developing a Standard lift plan (SLP) per the EM 385-1-1.

### 3.4 ELECTRICAL

#### 3.4.1 Conduct of Electrical Work

Underground electrical spaces must be certified safe for entry before entering to conduct work. Cables that will be cut must be positively identified and de-energized prior to performing each cut. Positive cable identification must be made prior to submitting any outage request for electrical systems. Arrangements are to be coordinated with the Contracting Officer and Station Utilities for identification. The Contracting Officer will not accept an outage request until the Contractor satisfactorily documents that the circuits have been clearly identified. Perform all high voltage cable cutting remotely using hydraulic cutting tool. When racking in or live switching of circuit breakers, no additional person other than the switch operator will be allowed in the space during the actual operation. Plan so that work near energized parts is minimized to the fullest extent possible. Use of electrical outages clear of any energized electrical sources is the preferred method. When working in energized substations, only qualified electrical workers shall be permitted to enter. When work requires Contractor to work near energized circuits as defined by the NFPA 70, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves with leather protective sleeves, fire retarding shirts, coveralls, face shields, and safety glasses. In addition, provide electrical arc flash protection for personnel as required by NFPA 70E. Insulating blankets, hearing protection, and switching suits may also be required, depending on the specific job and as delineated in the Contractor's AHA.

#### 3.4.2 Portable Extension Cords

Size portable extension cords in accordance with manufacturer ratings for the tool to be powered and protected from damage. Immediately remove from service all damaged extension cords. Portable extension cords must meet the requirements of EM 385-1-1, NFPA 70E, and OSHA electrical standards.

### 3.5 WORK IN CONFINED SPACES

Comply with the requirements in Section 34 of EM 385-1-1, OSHA 29 CFR 1915 (marine works), OSHA Directive CPL 2.100, and OSHA 29 CFR 1926. Any potential for a hazard in the confined space requires a permit system to be used.

a. Entry Procedures - Prohibit entry into a confined space by personnel for any purpose, including hot work, until the Qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented. See EM 385-1-1, Section 34, for entry procedures.) All hazards pertaining to the space must be reviewed with each employee during review of the AHA.

## MCR Jetty A Rehabilitation

b. Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained to ensure exposure to any hazardous atmosphere is kept below its' action level.

c. Ensure the use of rescue and retrieval devices in confined spaces greater than 5 feet in depth. Conform to Section 34 of EM 385-1-1.

d. Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.

e. Include training information for employees who will be involved as entrants and attendants for the work. Conform to Section 34 of EM 385-1-1.

f. Post the confined space entry permit in a conspicuous place close to the confined space entrance.

### 3.6 HOUSEKEEPING

#### 3.6.1 Clean-Up

All debris in work areas shall be cleaned up daily or more frequently if necessary. Construction debris may be temporarily located in an approved location; however garbage accumulation must be removed each day.

#### 3.6.2 Dust control

In addition to the dust control measures required elsewhere in the Contract documents, dry cutting of brick or masonry must be prohibited. Wet cutting must address control of water runoff.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 35 27.00 25

DIVING

PART 1 GENERAL

- 1.1 GENERAL INFORMATION
- 1.2 REFERENCES
- 1.3 SUBMITTALS
- 1.4 PRE-QUALIFIED DIVE COMPANIES AND DIVE TEAM PERSONNEL
- 1.5 DIVING ENVIRONMENT
- 1.6 DIVE PLAN AND SCHEDULE
- 1.7 RESOLUTION OF CONFLICT

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

- 3.1 DIVE TEAM COMPOSITION AND DIVE EQUIPMENT
- 3.2 CONTRACTOR-PROVIDED DIVING SUPPORT EQUIPMENT
- 3.3 CONTRACTOR-PROVIDED SPECIAL UNDERWATER EQUIPMENT
- 3.4 SAFE CLEARANCE PROCEDURES
- 3.5 DIVING WORK DESCRIPTION

-- End of Section Table of Contents --

SECTION 01 35 27.00 25

DIVING

PART 1 GENERAL

1.1 GENERAL INFORMATION

This Section covers the general requirements for Contract diving operations to be performed as specified within this Contract. Diving must be performed in accordance with the latest edition of the U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1 referenced in Section 00700 Contract Clause 52.236-13 Alt I, ACCIDENT PREVENTION - ALTERNATE I; the Portland District Diving Regulation, NWPR 385-1-93; the U.S. Navy Diving Manuals, NAVSEA 0994-LP001-0910 and NAVSEA 0994-LP001-0920; 29 CFR 1910, Subpart T; and ADCI Consensus Standards inclusive of all other references listed therein. All diving operations must be considered incidental to the work specified elsewhere herein. No separate payment for diving work will be made.

1.2 REFERENCES

The latest editions of the publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ASSOCIATION OF DIVING CONTRACTORS INTERNATIONAL (ADCI)

ADCI (2004) Consensus Standards for Commercial Diving and Underwater Operations, 5th Edition

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2014) Safety and Health Requirements Manual

U.S. ARMY CORPS OF ENGINEERS - PORTLAND DISTRICT (NWP)

NWPR 385-1-93 (2009) Engineering Regulation, Diving Operation by Contract

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910, Subpart T Commercial Diving Operations (OSHA)

U.S. NAVAL SEA SYSTEMS COMMAND (NAVSEA)

NAVSEA 0994-LP001-0910 U.S. Navy Diving Manual

NAVSEA 0994-LP001-0920 U.S. Navy Diving Manual

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The

MCR Jetty A Rehabilitation

following must be submitted in accordance with Sections 01 33 00, SUBMITTAL PROCEDURES, and 01 35 26.00 25, GOVERNMENTAL SAFETY REQUIREMENTS.

SD-01 Preconstruction Submittals

Dive Team Personnel; G

Dive Plan and Schedule; G

Equipment Certification; G

Emergency Management Plan; G

Activity Hazard Analysis; G

1.4 PRE-QUALIFIED DIVE COMPANIES AND DIVE TEAM PERSONNEL

a. Effective 1 May 2008, the U.S. Army Corps of Engineers Portland District will no longer utilize its Dive Pre-Qualification Program.

b. As a result, any domestic commercial dive Contractor meeting the minimum standards set forth in the most recent edition of the USACE Safety and Health Requirements Manual, EM 385-1-1, and in the Portland District's Dive Safety Regulation, NWPR 385-1-93 (see Attachment A12), will be eligible to compete for routine diving work. The Dive Contractor must have no State or Federal OSHA safety violations within the 12 months preceding the due date of the bid or proposal.

c. Once awarded, Contract performance is contingent upon the Contractor's submission of an acceptable Dive Plan, Activity Hazard Analysis, and Emergency Management Plan for the specific diving operation to be conducted. It is the Contractor's responsibility to ensure that all diver credentials and equipment certifications meet the standards outlined in the most recent edition of EM 385-1-1 and NWPR 385-1-93.

1.5 DIVING ENVIRONMENT

a. The estimated maximum working depth is approximately 10 feet below water surface.

b. The estimated maximum depth (distance from water surface to bottom) the diver(s) will be exposed to is approximately 20 feet below water surface.

c. Turbidity may limit visibility to 5-10 feet or less.

d. The current water velocity through the work area is estimated to be approximately 1-2 knots.

e. Water temperature(s) are estimated to vary between 35 and 40 degrees F.

f. Underwater operations will not require diver(s) to perform work within confined spaces and/or enclosed areas or areas with an overhead.

g. The overall work site is a restricted access area and is not open to commercial and private vessels.



## 1.6 DIVE PLAN AND SCHEDULE

No later than 21 working days prior to the first planned diving operation, the Dive Plan and Schedule must be submitted to coordinate unit outages at the Project and other concurrent work. The Dive Plan and Schedule must detail dive locations and must be flexible enough to accommodate conflicts with allowable unit outages. Personnel and equipment certification must be included in the plan. A site specific Emergency Management Plan must be included in the Dive Plan in accordance with NWPR 385-1-93. A job specific Activity Hazard Analysis (AHA) must be prepared in accordance with NWPR 385-1-93 and EM 385-1-1, paragraph 01.A.09, and must be included in the the Dive Plan. Adjustments must be coordinated with the Contracting Officer (CO). Dive locations and schedules must be submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, for approval.

## 1.7 RESOLUTION OF CONFLICT

EM 385-1-1 and NWPR 385-1-93, as applied by the USACE Portland District Office of Dive Safety, or supplemental waiver or applicable Memorandum of Agreement (MOA) must be the controlling authority(s) for implementation of all Contract diving policy.

## PART 2 PRODUCTS - NOT USED

## PART 3 EXECUTION

### 3.1 DIVE TEAM COMPOSITION AND DIVE EQUIPMENT

Minimum dive team staffing must, unless a waiver is approved by the Portland District Office of Dive Safety, be comprised of personnel levels as required by EM 385-1-1 and NWPR 385-1-93: a single diver requires a 5-man crew as defined in this reference and for two in-water working divers, a 7-man crew must be required, which includes the addition of one stand-by diver and one tender. For depths exceeding 100 feet, a 6-man crew is required. Any use of breathing gas with oxygen content more than 21 percent is considered mixed gas diving. A minimum 6-man crew is required for all mixed gas diving. SCUBA Diving is allowable only with prior permission obtained from the USACE Portland District Office of Dive Safety. In addition to the dive team personnel addressed in the above references, minimum required certified chamber crew personnel must be provided as diving operations dictate. If a crane is used, a certified crane operator who must not be included as a dive-team member must be exclusively dedicated to crane operations. Surface-supplied air diving equipment with 2-way voice communication must be used by divers and standby divers. An independent reserve air system (bailout bottle) for all divers is required as specified by EM 385-1-1. As a minimum, all diver surface air supply compressors, tanks, helmets, and other related equipment must comply with the requirements of EM 385-1-1. All dive team members must meet the requirements as listed in EM 385-1-1, Section 30.A.06 through 10, and NWPR 385-1-93.

### 3.2 CONTRACTOR-PROVIDED DIVING SUPPORT EQUIPMENT

A dual lock recompression chamber(s) capable of recompression to a minimum of 165 FSW must be provided on-site and available for immediate use for divers working at all depths unless a waiver is granted by the Portland Office of Dive Safety. Sufficient on-site chamber facilities must be provided to service multiple divers working simultaneously on differing

recompression schedules. All recompression treatment tables must comply with the most recent edition of the U.S. Navy Dive Manual. Unless waived by the Portland Office of Dive Safety, diving in water less than 46 degrees F for bottom times exceeding 45 minutes of accumulated bottom time or less than 36 degrees F for bottom times exceeding 20 minutes of accumulated bottom time must require hot water diving systems. Unless waived by the Portland District of Dive Safety, variable-volume dry suits with appropriate thermal protection must be utilized by divers working in waters 60 degrees F, or less. A dive vessel, or a floating or suspended dive platform from which diving operations will be staged, must at all times provide a portable toilet unit and a heated shelter for all dive team members when temperature and/or wind-chill factor is below 60 degrees F. Man-basket(s) must be provided for each working diver as needed. All necessary top-side equipment such as cranes, trucks, personnel vehicles, and appropriately-powered underwater hand and power tools must be furnished by the Contractor to enable accomplishment of all required dive work.

### 3.3 CONTRACTOR-PROVIDED SPECIAL UNDERWATER EQUIPMENT

Provide all appropriate tools, equipment, and materials needed to accomplish the tasks as stated in paragraph DIVING WORK DESCRIPTION.

### 3.4 SAFE CLEARANCE PROCEDURES

A safe clearance Lock-out/Tag-out system is used by USACE Portland District project personnel to insure continuity of service and safety to personnel and equipment in accordance with Section 01 35 26.00 25, GOVERNMENTAL SAFETY REQUIREMENTS. Any work performed which requires taking Project operating equipment out of service must be done only after formal clearance is obtained from the Government. Clearances will be issued only by the Project Control Room and the Chief of Operations. The Government will furnish a checklist of clearance lock-out/tag-out items implemented for each clearance action and the Contractor dive supervisor must accompany Government personnel during the verification of the lock-out/tag-out process. The Government Diving Safety Inspector will keep the Project control room informed of all diving activity underway. Clearances violated by Contractor personnel will be cause to immediately and permanently ban the person(s) from the project site. See NWPR 385-1-93, portion E of Appendix A, for Procedures for Corrective Actions.

### 3.5 DIVING WORK DESCRIPTION

A description of the various diving tasks to be accomplished is as follows: survey, harvesting, and installation of eel grass within Baker Bay.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 42 00

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES

1.2 ORDERING INFORMATION

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section Table of Contents --

SECTION 01 42 00

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other Sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization (e.g. ASTM B564 Standard Specification for Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other Sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the standards producing organization should be ordered from the source by title rather than by number.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS  
(AASHTO)  
444 North Capital Street, NW, Suite 249  
Washington, DC 20001  
Ph: 202-624-5800  
Fax: 202-624-5806  
E-Mail: [info@aaashto.org](mailto:info@aaashto.org)  
Internet: <http://www.aashto.org>

AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)  
1800 East Oakton Street  
Des Plaines, IL 60018-2187  
Ph: 847-699-2929  
Fax: 847-768-3434  
E-mail: [customerservice@asse.org](mailto:customerservice@asse.org)  
Internet: <http://www.asse.org>

ASME INTERNATIONAL (ASME)  
Three Park Avenue, M/S 10E  
New York, NY 10016-5990  
Ph: 800-854-7179 or 800-843-2763  
Fax: 212-591-7674  
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Internet: <http://www.asme.org>

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Ph: 281-893-8388  
Fax: 281-893-5118  
Internet: <http://adc-int.org/>

ASTM INTERNATIONAL (ASTM)  
100 Barr Harbor Drive, P.O. Box C700  
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Fax: 610-832-9555  
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Internet: <http://www.astm.org>

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)  
1 Batterymarch Park  
Quincy, MA 02169-7471  
Ph: 617-770-3000 or 800-344-3555  
Fax: 617-770-0700  
E-mail: [webmaster@nfpa.org](mailto:webmaster@nfpa.org)  
Internet: <http://www.nfpa.org>

NOAA FISHERIES  
Office of Protected Resources (F/PR)  
National Marine Fisheries Service  
1315 East-West Highway  
Silver Spring, MD 20910  
Phone: 301-427-8400  
Fax: 301-713-0376  
Email: [PR.Webmaster@noaa.gov](mailto:PR.Webmaster@noaa.gov)  
Internet: <http://www.nmfs.noaa.gov/>

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REVISED CODE OF WASHINGTON (RCW)  
P. O. Box 40551  
Olympia, WA 98504-0551  
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Fax: 360.786.1529  
Internet: <http://apps.leg.wa.gov/rcw/>

TREE CARE INDUSTRY ASSOCIATION (TCIA)  
136 Harvey Road, Suite 101  
Londonderry, NH 03053  
Ph: 603-314-5380  
Fax: 603-314-5386  
Internet: <http://www.treecareindustry.org>

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<http://www.hnc.usace.army.mil/Missions/Engineering/TECHINFO.aspx>

U.S. ARMY CORPS OF ENGINEERS - PORTLAND DISTRICT (NWP)  
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U.S. Army Corps of Engineers  
PO Box 2946  
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Internet: <http://www.nwp.usace.army.mil/>  
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U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)  
Ariel Rios Building  
1200 Pennsylvania Avenue, N.W.  
Washington, DC 20004  
Ph: 202-272-0167  
for Fax and E-mail see below  
Internet: <http://www.epa.gov>  
--- Some EPA documents are available only from:  
National Technical Information Service (NTIS)  
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Alexandria, VA 22312  
Ph: 703-605-6050 or 1-688-584-8332  
Fax: 703-605-6900  
E-mail: [info@ntis.gov](mailto:info@ntis.gov)  
Internet: <http://www.ntis.gov>

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)  
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College Park, MD 20740-6001  
Ph: 866-272-6272  
Fax: 301-837-0483  
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Internet: <http://www.gpoaccess.gov>

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Commander Naval Sea Systems Command  
1333 Isaac Hull Ave., SE

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WASHINGTON DEPARTMENT OF ECOLOGY (WDOE)  
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Lacey, WA 98503  
Ph: 360-407-6000  
Fax: 360-407-6989  
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WASHINGTON STATE ADMINISTRATIVE CODE (WAC)  
Kyle Thiessen, Code Reviser  
P.O. Box 40581  
Olympia, WA 98504-0466  
Ph: 360-782-6777  
Fax: 360-786-1529  
E-mail: Via internet address and prompt at "Title 1: Code Reviser"  
Internet: <http://apps.leg.wa.gov/wac>

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT)  
310 Maple Park Avenue SE  
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Ph: 360-705-7000  
Email: [hqcustomerservice@wsdot.wa.gov](mailto:hqcustomerservice@wsdot.wa.gov)

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 45 00.00 25

QUALITY CONTROL

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 SUBMITTALS
- 1.3 LABORATORY VALIDATION
- 1.4 PAYMENT

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

- 3.1 GENERAL REQUIREMENTS
  - 3.1.1 Quality Control System
  - 3.1.2 Project Superintendent
- 3.2 CONTRACTOR QUALITY CONTROL PLAN
  - 3.2.1 Content of the CQC Plan
  - 3.2.2 Acceptance of CQC Plan
  - 3.2.3 Notification of Changes
- 3.3 MUTUAL UNDERSTANDING MEETING
- 3.4 QUALITY CONTROL ORGANIZATION
  - 3.4.1 Personnel Requirements
  - 3.4.2 CQC System Manager Qualifications
  - 3.4.3 CQC Specialized Personnel
  - 3.4.4 Construction Quality Management for Contractors
  - 3.4.5 Organizational Changes
- 3.5 SUBMITTALS AND DELIVERABLES
- 3.6 QUALITY CONTROL
  - 3.6.1 Preparatory Phase
  - 3.6.2 Initial Phase
  - 3.6.3 Follow-up Phase
  - 3.6.4 Additional Preparatory and Initial Phases
- 3.7 TESTS
  - 3.7.1 Testing Procedure
  - 3.7.2 Testing Laboratories
  - 3.7.3 Onsite Laboratory
  - 3.7.4 Furnishing or Transportation of Samples for Testing
- 3.8 COMPLETION INSPECTION
  - 3.8.1 Punch-Out Inspection
  - 3.8.2 Pre-Final Inspection
  - 3.8.3 Final Acceptance Inspection
- 3.9 DOCUMENTATION
- 3.10 NOTIFICATION OF NONCOMPLIANCE

-- End of Section Table of Contents --



SECTION 01 45 00.00 25

QUALITY CONTROL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM C1077	(2014) Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation
ASTM C1093	(2009) Standard Practice for Accreditation of Testing Agencies for Masonry
ASTM D3666	(2013) Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials
ASTM D3740	(2012a) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM E329	(2014a) Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following must be submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Contractor Quality Control Plan; G

Construction Quality Management for Contractors

The Contractor must furnish documentation that the Contractor Quality Control System Manager has completed the Corps of Engineers course titled "Construction Quality Management for Contractors."

SD-06 Test Reports

Daily CQC Report

1.3 LABORATORY VALIDATION

For tests performed under this Contract, use a testing laboratory validated by the Corps of Engineers Material Testing Center (MTC). See paragraph entitled TESTS.

1.4 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control system, and all associated costs will be included in the applicable unit prices or lump-sum prices contained in the Price Schedule.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

3.1.1 Quality Control System

Establish and maintain an effective quality control (QC) system in compliance with Section 00700 Contract Clause 52.246-12, INSPECTION OF CONSTRUCTION. The quality control system must consist of plans, procedures, and organization necessary to produce an end product which complies with the Contract requirements. The QC system must cover all construction operations, both onsite and offsite, and be keyed to the proposed construction sequence.

3.1.2 Project Superintendent

Identify an individual, within the onsite work organization, as Project Superintendent. The Project Superintendent must be a Journeyman with a minimum of five years experience in a verifiable Project Superintendent role on jobs similar to this Contracts. The designated Project Superintendent must be acceptable to the CO. The Project Superintendent must be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer (CO) for non-compliance with the quality requirements specified in the Contract. In this context the highest level manager responsible for the overall construction activities at the site, including quality and production is the Project Superintendent. The Project Superintendent must maintain a physical presence at the site at all times, except as otherwise acceptable to the CO, and must be responsible for all construction and construction related activities at the site. The Project Superintendent must have no other duties; they may not perform the duties of an equipment operator, flagger, laborer, or any other position. Identify an alternate for the Project Superintendent to serve in the event of the Project Superintendent's absence and/or to cover work performed on additional shift. The requirements for the alternate are the same as the designated Project Superintendent.

3.2 CONTRACTOR QUALITY CONTROL PLAN

Submit no later than 21 days after receipt of Notice to Proceed, the Contractor Quality Control (CQC) Plan proposed to implement the

requirements of Section 00700 Contract Clause 52.246-12, INSPECTION OF CONSTRUCTION. The Government will consider an interim plan for the first 10 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work.

### 3.2.1 Content of the CQC Plan

Include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff must implement the three phase control system for all aspects of the work specified. Include in the staff a CQC System Manager.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function; see paragraph entitled QUALITY CONTROL ORGANIZATION.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the Contract. Letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities must be issued by the CQC System Manager. Copies of these letters must be furnished to the Government.
- d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures must be in accordance with Section 01 33 00, SUBMITTAL PROCEDURES.
- e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Use laboratory facilities approved by the CO.)
- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. Establish verification procedures that identified deficiencies have been corrected.
- h. Reporting procedures, including proposed reporting formats.
- i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a

different environment. Although each Section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

### 3.2.2 Acceptance of CQC Plan

Acceptance of the CQC plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in the CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

### 3.2.3 Notification of Changes

After acceptance of the CQC Plan, notify the CO in writing of any proposed change. Proposed changes are subject to acceptance by the CO.

## 3.3 MUTUAL UNDERSTANDING MEETING

After the Preconstruction Conference, before start of construction and prior to acceptance by the Government of the CQC Plan, the Contractor must meet with the CO and discuss the Contractor's quality control system. Submit the CQC Plan for review a minimum of 10 calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details must be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management, and control with the Government's Quality Assurance. Minutes of the meeting will be prepared by the Government and signed by both the Contractor and the CO and will become a part of the Contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

## 3.4 QUALITY CONTROL ORGANIZATION

### 3.4.1 Personnel Requirements

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure Contract compliance. Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly must be included as part of the CQC organization. The Contractor's CQC staff must maintain a presence at the site at all times during progress of the work and have complete authority and responsibility to take any action necessary to ensure Contract compliance. All CQC staff members must be subject to acceptance by the CO. Promptly complete and furnish all letters, material submittals, shop drawing submittals, schedules, and all other project documentation to the CQC organization. The CQC organization must maintain these documents and records at the site at all times, except as otherwise acceptable to the CO.

### 3.4.2 CQC System Manager Qualifications

Identify an individual, within the onsite work organization, as CQC System Manager who must be responsible for writing and executing a complete CQC

plan, overall management of CQC, and have the authority to act in all CQC matters for the Contractor. The CQC System Manager must be a graduate engineer with a minimum of five years experience in a verifiable CQC role on jobs similar to this Contract. This CQC System Manager must be on the site at all times during construction and be employed by the prime Contractor. The CQC System Manager must be assigned no other duties. Identify in the plan an alternate for the CQC System Manager to serve in the event of the CQC System Manager's absence and/or to cover work performed on additional shifts. The requirements for the alternate are the same as the designated CQC System Manager.

#### 3.4.3 CQC Specialized Personnel

In addition to CQC personnel specified elsewhere in the Contract, provide as part of the CQC organization specialized personnel to assist the CQC System Manager for the following areas: civil, structural, environmental, if the CQC manager is not qualified to cover these areas. These individuals must be directly employed by the prime Contractor and may not be employed by a supplier or subcontractor on this project; must be responsible to the CQC System Manager; be physically present at the construction site during work on their areas of responsibility; and meet the same experience/education qualifications in their own discipline as for the CQC Manager. These individuals may perform other duties but must be allowed sufficient time to perform their assigned quality control duties as described in the Quality Control Plan. A single person may cover more than one area provided that they are qualified to perform QC activities in each designated and that workload allows.

#### 3.4.4 Construction Quality Management for Contractors

In addition to the above experience and/or education requirements, the CQC System Manager and Alternate CQC System Manager must have successfully completed the course entitled "Construction Quality Management For Contractors." This course is periodically offered by the Associated Builders and Constructors, Inc., or Associated General Contractor, Inc. and must be retaken every five years. The course has been coordinated with the Navy and certificates from the Navy will be accepted. For further information regarding courses in the Portland area contact: Associated General Contractors, Oregon-Columbia Chapter at (503) 682-3363 or <http://www.agc-oregon.org/education-and-training/army-corps-of-engineers/>.

#### 3.4.5 Organizational Changes

Maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, revise the CQC Plan to reflect the changes and submit the changes to the CO for acceptance.

#### 3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, must comply with the requirements in Section 01 33 00, SUBMITTAL PROCEDURES. The CQC organization must be responsible for certifying that all submittals and deliverables are in compliance with Contract requirements.

#### 3.6 QUALITY CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the Contract. At least three phases

## MCR Jetty A Rehabilitation

(Preparatory, Initial, and Follow-up) of control must be conducted by the CQC System Manager for each definable feature of the construction work as follows:

### 3.6.1 Preparatory Phase

This phase must be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase includes:

- a. Review each paragraph of applicable specifications, reference codes, and standards. Make available during the preparatory inspection a copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field. Maintain and make available in the field for use by Government personnel until final acceptance of the work.
- b. Review of the Contract drawings.
- c. Check to assure that all materials and/or equipment have been tested, submitted, and approved.
- d. Review of provisions that have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the Contract.
- f. Physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. Review of the appropriate activity hazard analysis to assure safety requirements are met.
- h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
- i. Check to ensure that the portion of the plan for the work to be performed has been accepted by the CO.
- j. Discussion of the initial control phase.
- k. Notify the Government at least 24 hours in advance of beginning the preparatory control phase. Include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The CQC System Manager must prepare and document the results of the preparatory phase actions by separate minutes, and attach to the daily CQC report. The Contractor must instruct applicable workers as to the acceptable level of workmanship required in order to meet Contract specifications.

### 3.6.2 Initial Phase

This phase must be accomplished at the beginning of a definable feature of work. Accomplish the following:

- a. Check work to ensure that it is in full compliance with Contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full Contract compliance. Verify required control inspection and testing.
- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. Notify the Government at least 24 hours in advance of beginning the initial phase. Document separate minutes of this phase, prepared by the CQC System Manager, and attach to the daily CQC report. Indicate exact location of initial phase for future reference and comparison with follow-up phases.
- g. Repeat the initial phase for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

### 3.6.3 Follow-up Phase

Perform daily checks to assure control activities, including control testing, are providing continued compliance with Contract requirements, until completion of the particular feature of work. Record the daily checks in the CQC documentation. Conduct final follow-up checks and correct all deficiencies prior to the start of additional features of work which may be affected by the deficient work. The Contractor must not build upon nor conceal non-conforming work.

### 3.6.4 Additional Preparatory and Initial Phases

Conduct additional preparatory and initial phases on the same definable features of work if: the quality of on-going work is unacceptable; if there are changes in the applicable CQC staff, onsite production supervision, or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

## 3.7 TESTS

### 3.7.1 Testing Procedure

Perform specified or required tests to verify that control measures are adequate to provide a product that conforms to Contract requirements. Report all test results using industry standard forms at the frequency specified in the Contract. Upon request, furnish to the Government duplicate samples of test specimens for QA verification testing by the Government. Procure the services of a Corps of Engineers approved testing laboratory, as described in subparagraph entitled Testing Laboratories, or establish an approved testing laboratory at the project site. Perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with Contract requirements.

- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- e. Record results of all tests taken, both passing and failing, on the CQC report for the date taken. Include Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test. If approved by the CO, actual test reports may be submitted later with a reference to the test number and date taken. Provide an information copy of tests performed by an offsite or commercial test facility directly to the CO. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this Contract.

### 3.7.2 Testing Laboratories

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the Contract specifications and to check the laboratory technician's testing procedures and techniques.

a. Validation. The validation of a testing laboratory is site-specific and cannot be transferred to a facility at a different location. Costs for validation by the Corps of Engineers MTC must be borne by the laboratory and/or the Contractor. Validation is granted only for the specific testing procedures requested to be validated. The laboratory may select the testing procedures to be validated, except for the Quality Assurance requirements of the applicable ASTM standards listed in this paragraph.

b. Validation Procedures. Validation of a testing laboratory consists of either an inspection or audit, as defined below:

(1) Inspection must be performed by the MTC to verify compliance with the applicable provisions of ASTM C1077, ASTM C1093, ASTM D3666, ASTM D3740, and ASTM E329.

(2) An audit would be performed by the MTC in lieu of an inspection for laboratories holding a current AASHTO accreditation. Inspection by the MTC may be required after auditing if critical testing procedures required in the Contract were not included in the applicable CCRL or AMRL inspections.

c. Validation Schedule. For aggregate, concrete, bituminous materials, soil, rock, riprap, and metal components, the frequency of validation inspections or audits is once every two years. For water quality and sediment testing the validation schedule is every 18 months. When conditions change substantially from the time of the last validation, laboratories must be re-validated.

d. Validation Process. For information on the validation process and costs contact the MTC at (601) 634-2496 or fax at (601) 634-3242.



Procedures for validation, including forms requesting validation may be obtained from the MTC web site at:

[www.erd.c.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/6289/materials-testing-center.aspx](http://www.erd.c.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/6289/materials-testing-center.aspx).

The Contractor is cautioned that the validation process is lengthy and that it requires immediate action. Keep the CO informed about the validation process as it proceeds in a timely manner.

### 3.7.3 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

### 3.7.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials must be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government must be delivered to the Portland District contract commercial Laboratory in the District area. Coordination for each specific test, exact delivery location, and dates must be made through the Portland District Resident Office.

## 3.8 COMPLETION INSPECTION

### 3.8.1 Punch-Out Inspection

The CQC Manager must conduct an inspection of the work near the end of the work, or any increment of the work established by a time stated in the specifications, or the Section 00700 Contract Clause 52.211-10, COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK. As required by paragraph DOCUMENTATION, prepare and include in the CQC documentation a punch list of items which do not conform to the approved drawings and specifications. Include within the list of deficiencies the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff must make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, notify the Government that the facility is ready for the Government Pre-Final inspection.

### 3.8.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the work is complete. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager must ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Correct any items noted on the Pre-Final inspection in a timely manner. These inspections and any deficiency corrections required by this paragraph must be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

### 3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the CO must be in attendance at the final acceptance inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil

Facility Engineer user groups and major commands may also be in attendance. The final acceptance inspection will be formally scheduled by the CO based upon results of the Pre-Final inspection. Notify the CO at least 14 days prior to the final acceptance inspection and include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the Contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all Contract work acceptably complete for this inspection will be cause for the CO to bill the Contractor for the Government's additional inspection cost in accordance with Section 00700 Contract Clause 52.246-12, INSPECTION OF CONSTRUCTION.

### 3.9 DOCUMENTATION

#### Daily CQC Report:

a. Maintain current records providing factual evidence that required quality control activities and/or tests have been performed. Include in these records the work of subcontractors and suppliers on an acceptable form that includes, as a minimum, the following information:

- (1) Contractor/subcontractor and their area of responsibility.
- (2) Operating plant/equipment with hours worked, idle, or down for repair.
- (3) Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- (4) Test and/or control activities performed with results and references to specifications/drawings requirements. Identify the control phase (Preparatory, Initial, or Follow-up). List of deficiencies noted, along with corrective action.
- (5) Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
- (6) Submittals and deliverables reviewed, with Contract reference, by whom, and action taken.
- (7) Offsite surveillance activities, including actions taken.
- (8) Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- (9) Instructions given/received and conflicts in plans and/or specifications.
- (10) Contractor's verification statement.
- (11) Deficiency Tracking System. Maintain a cumulative list of deficiencies identified for the duration of the project. Deficiencies to be listed include those failures, Government oral observations, and Notifications of Noncompliance. Maintain the list at the project site. Submit copies of updated listings to the Government at least every 30 days.

(12) Daily dredging report - daily production rates, quantities, effective work time, placement location, ect.

(13) Daily pile driving reports - locations, number of piles, blow count, ect.

b. Indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. Cover both conforming and deficient features and include a statement that equipment and materials incorporated in the work and workmanship comply with the Contract. Electronically submit daily reports and a signed, printed copy of these records to the Government within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, prepare and submit one report for every seven days of no work and on the last day of a no work period. All calendar days must be accounted for throughout the life of the Contract. The first report following a day of no work must be for that day only. Reports must be signed and dated by the CQC System Manager. Include copies of test reports and copies of reports prepared by all subordinate quality control personnel within the Daily CQC Report.

### 3.10 NOTIFICATION OF NONCOMPLIANCE

The CO will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor must take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, must be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the CO may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor must make no part of the time lost due to such stop orders the subject of claim for extension of time or for excess costs or damages.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 45 00.10 25

QUALITY CONTROL SYSTEM (QCS)

PART 1 GENERAL

- 1.1 CONTRACT ADMINISTRATION
  - 1.1.1 General Information
  - 1.1.2 Correspondence and Electronic Communications
  - 1.1.3 Other Factors
- 1.2 QCS SOFTWARE
- 1.3 SYSTEM REQUIREMENTS
- 1.4 RELATED INFORMATION
  - 1.4.1 QCS User Guide
  - 1.4.2 Quality Control System (QCS) Training
- 1.5 CONTRACT DATABASE
- 1.6 DATABASE MAINTENANCE
  - 1.6.1 Administration
    - 1.6.1.1 Contractor Information
    - 1.6.1.2 Subcontractor Information
    - 1.6.1.3 Correspondence
    - 1.6.1.4 Equipment
    - 1.6.1.5 Management Reporting
    - 1.6.1.6 Request For Information (RFI)
  - 1.6.2 Finances
    - 1.6.2.1 Pay Activity Data
    - 1.6.2.2 Payment Requests
  - 1.6.3 Quality Control (QC)
    - 1.6.3.1 General
    - 1.6.3.2 Daily Contractor Quality Control (CQC) Reports
    - 1.6.3.3 Deficiency Tracking
    - 1.6.3.4 QC Requirements
    - 1.6.3.5 Three-Phase Control Meetings
    - 1.6.3.6 Labor and Equipment Hours
    - 1.6.3.7 Accident/Safety Tracking
    - 1.6.3.8 Features of Work
    - 1.6.3.9 Hazard Analysis
  - 1.6.4 Submittal Management
  - 1.6.5 Schedule
  - 1.6.6 Import/Export of Data
- 1.7 IMPLEMENTATION
- 1.8 DATA SUBMISSION VIA CD-ROM
  - 1.8.1 File Medium
  - 1.8.2 CD-ROM Labels
  - 1.8.3 File Names
- 1.9 MONTHLY COORDINATION MEETING
- 1.10 NOTIFICATION OF NONCOMPLIANCE

PART 2 PRODUCTS - NOT USED

MCR Jetty A Rehabilitation

PART 3 EXECUTION - NOT USED

-- End of Section Table of Contents --

SECTION 01 45 00.10 25

QUALITY CONTROL SYSTEM (QCS)

PART 1 GENERAL

1.1 CONTRACT ADMINISTRATION

1.1.1 General Information

The Government will use the Resident Management System for Windows (RMS) to assist in its monitoring and administration of this Contract. The Contractor shall use the Government-furnished Construction Contractor Module of RMS, referred to as QCS, to record, maintain, and submit various information throughout the Contract period. The Contractor module, user manuals, updates, and training information can be downloaded from the RMS web site at <http://rms.usace.army.mil/qcs>. This joint Government-Contractor use of RMS and QCS will facilitate electronic exchange of information and overall management of the Contract. QCS provides the means for the Contractor to input, track, and electronically share information with the Government in the following areas:

- Administration
- Finances
- Quality Control
- Submittal Monitoring
- Scheduling
- Import/Export of Data

1.1.2 Correspondence and Electronic Communications

For ease and speed of communications, both the Government and Contractor are required, to the maximum extent feasible, exchange correspondence, and other documents in electronic format. Correspondence, pay requests, and other documents comprising the official Contract record shall also be provided in paper format, with signatures and dates where necessary. Paper documents govern in the event of discrepancy with the electronic version.

1.1.3 Other Factors

Particular attention is directed to Section 00700 Contract Clauses 52.236-15, SCHEDULES FOR CONSTRUCTION CONTRACTS, and 52.232-5, PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS; Sections 01 32 01.00 25, PROJECT SCHEDULE, 01 33 00, SUBMITTAL PROCEDURES, and 01 45 00.00 25, QUALITY CONTROL, which have a direct relationship to the reporting to be accomplished through QCS. Also, there is no separate payment for establishing and maintaining the QCS database; all costs associated therewith shall be included in the Contract pricing for the work.

1.2 QCS SOFTWARE

QCS is a Windows-based program that can be run on a stand-alone personal computer or on a network. The Government will make available the QCS software to the Contractor after award of the construction Contract. Prior to the Pre-Construction Conference, the Contractor shall be responsible to download, install, and use the latest version of the QCS software from the

## MCR Jetty A Rehabilitation

Government's RMS Internet Website. Upon specific justification and request by the Contractor, the Government can provide QCS on CD-ROM (CD). Any program updates of QCS will be made available to the Contractor via the Government RMS Website as they become available.

### 1.3 SYSTEM REQUIREMENTS

The following is the minimum configuration that the Contractor shall have to run QCS and QAS System:

#### a. Hardware

- (1) IBM-compatible PC with 1000 MHz Pentium or higher processor
- (2) 256+ MB RAM for workstation / 512+ MB RAM for server
- (3) 1 GB hard drive disk space for sole use by the QCS system
- (4) Compact Disk (CD) Reader (CD-R, 8x speed or higher)
- (5) Color monitor (1024x768, 256 colors)
- (6) Mouse or other pointing device
- (7) Windows compatible printer (Laser printer must have 4 MB+ of RAM)
- (8) Connection to the Internet (Minimum 56k BPS).

#### b. Software

- (1) MS Windows 2000 or higher
- (2) QAS-Word Processing software: MS Word 2000 or newer
- (3) Latest version of: Netscape Navigator, Microsoft Internet Explorer, or other browser that supports HTML 4.0 or higher
- (4) Virus protection software that is regularly upgraded with all issued manufacturer's updates
- (5) Electronic mail (E-mail) compatible with MS Outlook.

### 1.4 RELATED INFORMATION

#### 1.4.1 QCS User Guide

After Contract award, download instructions for the installation and use of QCS from the Government RMS Internet Website (see paragraph General Information). In case of justifiable difficulties, the Government will provide the Contractor with a CD-ROM containing these instructions.

#### 1.4.2 Quality Control System (QCS) Training

The use of QCS will be briefly discussed with the Contractor's QC System Manager during the mandatory CQM Training course. The QCS training course is periodically offered through the Associated General Contractors (AGC). For further information regarding courses in the Portland, Oregon area, contact: Associated General Contractors. Oregon-Columbia Chapter at (503)

682-3363 or

<http://www.agc-oregon.org/education-and-training/army-corps-of-engineers/>.

#### 1.5 CONTRACT DATABASE

Prior to the pre-construction conference, the Government will provide the Contractor with basic Contract award data to use for QCS. The Government will provide data updates to the Contractor as needed, generally by using the Government's SFTP repository built into QCS import/export function. These updates will generally consist of submittal reviews, correspondence status, QA comments, and other administrative and QA data.

#### 1.6 DATABASE MAINTENANCE

Establish, maintain, and update data in the QCS database throughout the duration of the Contract at the Contractor's site office. Submit data updates to the Government (e.g., daily reports, submittals, RFI's, schedule updates, payment requests, etc.) using the Government's SFTP repository built into QCS export function. If permitted by the Contracting Officer, email or CD-R discs may be used (see paragraph entitled DATA SUBMISSION VIA CD-ROM). The QCS database typically shall include current data on the following items:

##### 1.6.1 Administration

###### 1.6.1.1 Contractor Information

Contain within the database the Contractor's name, address, telephone numbers, management staff, and other required items. Within 14 calendar days of receipt of QCS software from the Government, deliver Contractor administrative data in electronic format via E-mail.

###### 1.6.1.2 Subcontractor Information

Contain within the database the name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor shall be listed separately for each trade to be performed. Assign each subcontractor/trade a unique Responsibility Code, provided in QCS. Within 14 calendar days of receipt of QCS software from the Government, deliver subcontractor administrative data in electronic format via E-mail.

###### 1.6.1.3 Correspondence

Identify all Contractor correspondence to the Government with a serial number. Prefix correspondence initiated by the Contractor's site office with "S". Prefix letters initiated by the Contractor's home (main) office with "H". Letters shall be numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C".

###### 1.6.1.4 Equipment

Contain within the database a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

###### 1.6.1.5 Management Reporting

QCS includes a number of reports that Contractor management can use to



## MCR Jetty A Rehabilitation

track the status of the project. The value of these reports is reflective of the quality of the data input, and is maintained in the various sections of QCS. Among these reports are: Progress Payment Request worksheet, Daily CQC Report, QA/QC comments, Submittal Register Status, and Three-Phase Inspection checklists.

### 1.6.1.6 Request For Information (RFI)

Exchange all Requests For Information (RFI) using the Built-in RFI generator and tracker in QCS.

## 1.6.2 Finances

### 1.6.2.1 Pay Activity Data

Include within the database a list of pay activities that the Contractor shall develop in conjunction with the construction schedule. The sum of all pay activities shall be equal to the total Contract amount, including modifications. Group pay activities by Contract Line Item Number (CLIN); the sum of the activities shall equal the amount of each CLIN. The total of all CLINs equals the Contract Amount.

### 1.6.2.2 Payment Requests

Prepare all progress payment requests using QCS. Complete the payment request worksheet, prompt payment certification, and payment invoice in QCS. Update the work completed under the Contract, measured as percent or as specific quantities, at least monthly. After the update, generate a payment request report using QCS. Submit the payment request, prompt payment certification, and payment invoice with supporting data using the Government's SFTP repository built into QCS export function. If permitted by the Contracting Officer, email or a CD-R may be used. A signed paper copy of the approved payment request is also required, which shall govern in the event of discrepancy with the electronic version.

## 1.6.3 Quality Control (QC)

### 1.6.3.1 General

a. QCS provides a means to track implementation of the 3-phase QC Control System, prepare daily reports, identify and track deficiencies, document progress of work, and support other Contractor QC requirements. Maintain this data on a daily basis. Entered data will automatically output to the QCS generated daily report.

b. Provide the Government a Contractor Quality Control (CQC) Plan within the time required in Section 01 45 00.00 25, QUALITY CONTROL. Within seven calendar days of Government acceptance, the Contractor shall submit a QCS update reflecting the information contained in the accepted CQC Plan: schedule, pay activities, features of work, submittal register, QC requirements, and equipment list.

### 1.6.3.2 Daily Contractor Quality Control (CQC) Reports

QCS includes the means to produce the Daily CQC Report. The Contractor may use other formats to record basic QC data. However, the Daily CQC Report generated by QCS shall be the Contractor's official report. Data from any supplemental reports by the Contractor shall be summarized and consolidated onto the QCS-generated Daily CQC Report. Submit daily CQC Reports as

## MCR Jetty A Rehabilitation

required by Section 01 45 00.00 25, QUALITY CONTROL. Electronically submit reports to the Government within 24 hours after the date covered by the report. In addition, provide the Government a signed, printed copy of the Daily CQC Report.

### 1.6.3.3 Deficiency Tracking

Use QCS to track deficiencies. Deficiencies identified by the Contractor shall be numerically tracked using QC punch list items. Maintain a current log of its QC punch list items in the QCS database. The Government will log the deficiencies it has identified using its QA punch list items. The Government's QA punch list items will be included in its export file to the Contractor. Regularly update the correction status of both QC and QA punch list items.

### 1.6.3.4 QC Requirements

Develop and maintain a complete list of QC testing, transferred and installed property, required structural and life safety special inspections required by the International Code Council (ICC), and user training requirements in QCS. Update all data on these QC requirements as work progresses, and promptly provide this information to the Government via QCS.

### 1.6.3.5 Three-Phase Control Meetings

Maintain scheduled and actual dates and times of preparatory and initial control meetings in QCS and provide documentation per Section 01 45 00.00 25, QUALITY CONTROL.

### 1.6.3.6 Labor and Equipment Hours

Log labor and equipment exposure hours on a daily basis. This data shall be rolled up into a monthly exposure report.

### 1.6.3.7 Accident/Safety Tracking

The Government will issue safety comments, directions, or guidance whenever safety deficiencies are observed. The Government's safety comments will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of the safety comments. In addition, utilize QCS to advise the Government of any accidents occurring on the jobsite. This brief supplemental entry is not to be considered as a substitute for completion of mandatory reports, e.g., ENG Form 3394 and OSHA Form 300.

### 1.6.3.8 Features of Work

Include a complete list of the features of work in the QCS database. A feature of work may be associated with multiple pay activities. However, each pay activity (see subparagraph entitled Pay Activity Data) shall only be linked to a single feature of work.

### 1.6.3.9 Hazard Analysis

Use QCS to develop a hazard analysis for each feature of work included in the CQC Plan. Address any hazards, or potential hazards, that may be associated with the work.

## MCR Jetty A Rehabilitation

### 1.6.4 Submittal Management

The Government will provide the initial submittal register, ENG Form 4288, SUBMITTAL REGISTER, in electronic format. Thereafter, maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Government will be included in its export file to the Contractor. Use QCS to track and transmit all submittals. ENG Form 4025, submittal transmittal form, and the submittal register update shall be produced using QCS. QCS and RMS shall be used to update, store, and exchange submittal registers and transmittals, but shall not be used for storage of actual submittals.

### 1.6.5 Schedule

Develop a construction schedule consisting of pay activities, in accordance with Section 00700 Contract Clause 52.236-15, SCHEDULES FOR CONSTRUCTION CONTRACTS, or Section 01 32 01.00 25, PROJECT SCHEDULE, as applicable. Input and maintain this schedule in the QCS database by using the Standard Data Exchange Format (SDEF) (see Section 01 32 01.00 25, PROJECT SCHEDULE). Include the updated schedule data with each progress payment request.

### 1.6.6 Import/Export of Data

QCS includes the ability to export Contractor data to the Government and to import submittal register and other Government-provided data from RMS, and schedule data using SDEF.

## 1.7 IMPLEMENTATION

Contractor use of QCS as described in the preceding paragraphs is mandatory. Ensure that sufficient resources are available to maintain the QCS database and to provide the Government with regular database updates. QCS shall be an integral part of the Contractor's management of quality control.

## 1.8 DATA SUBMISSION VIA CD-ROM

The Government-preferred method for Contractor's submission of QCS data is by using the Government's SFTP repository built into QCS export function. Other data shall be submitted using E-mail with file attachment(s). For locations where this is not feasible, the CO may permit use of CD-ROM, CD-R discs only, for data transfer. Export data onto CD-Rs using the QCS built-in export function. If used, CD-Rs shall be submitted in accordance with the following:

### 1.8.1 File Medium

Submit in English two CD-R copies of the required data conforming to industry standards used in the United States.

### 1.8.2 CD-ROM Labels

Affix a permanent label to each CD-R submitted. Indicate on the label in English, the QCS file name, full Contract number, Contract name, project location, data date, name, and telephone number of person responsible for the data.

MCR Jetty A Rehabilitation

1.8.3 File Names

The files will be automatically named by the QCS software. The naming convention established by the QCS software must not be altered.

1.9 MONTHLY COORDINATION MEETING

a. Update the QCS database each workday. At least monthly, generate and submit an export file to the Government with schedule update and progress payment request. As required in Section 00700 Contract Clause 52.232-5, PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS, at least one week prior to submittal, meet with the Government representative to review the planned progress payment data submission for errors and omissions.

b. Make all required corrections prior to Government acceptance of the export file and progress payment request. Payment requests accompanied by incomplete or incorrect data submittals will be returned. The Government will not process progress payments until an acceptable QCS export file is received.

1.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the requirements of this Specification. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 57 20.00 25

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

- 1.1 GENERAL INFORMATION
- 1.2 PUBLICATIONS
  - 1.2.1 Applicable Regulations
  - 1.2.2 Referenced Publications and Regulations
- 1.3 SUBMITTALS
- 1.4 DEFINITIONS
  - 1.4.1 Environmental Pollution and Damage
  - 1.4.2 Environmental Litigation
  - 1.4.3 Environmental Protection
  - 1.4.4 Contractor Generated Hazardous Waste
  - 1.4.5 Land Application for Discharge Water
  - 1.4.6 Pesticide
  - 1.4.7 Pests
  - 1.4.8 Surface Discharge
  - 1.4.9 Waters of the United States
  - 1.4.10 Wetlands
- 1.5 GENERAL REQUIREMENTS
- 1.6 SUBCONTRACTORS
- 1.7 PAYMENT
- 1.8 NONCOMPLIANCE
- 1.9 ENVIRONMENTAL LITIGATION
- 1.10 ENVIRONMENTAL PROTECTION PLAN
  - 1.10.1 Compliance
  - 1.10.2 Contents
- 1.11 PROTECTION FEATURES
- 1.12 SPECIAL ENVIRONMENTAL REQUIREMENTS
- 1.13 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS
- 1.14 NOTIFICATION

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

- 3.1 ENVIRONMENTAL PERMITS AND COMMITMENTS
  - 3.1.1 General
  - 3.1.2 National Pollution Discharge Elimination System (NPDES) Permit Associated with Construction Activities
  - 3.1.3 Water Quality Certification
  - 3.1.4 Incidental Harassment Authorization (IHA)
- 3.2 LAND RESOURCES
  - 3.2.1 Work Area Limits
  - 3.2.2 Landscape
  - 3.2.3 Erosion and Sediment Controls

MCR Jetty A Rehabilitation

- 3.2.4 Contractor Facilities and Work Areas
- 3.3 WATER RESOURCES
  - 3.3.1 Erosion Control
  - 3.3.2 In Water Work Requirements
  - 3.3.3 Wastewater
  - 3.3.4 Excess Material Deposits
  - 3.3.5 Wetlands
  - 3.3.6 Monitoring
  - 3.3.7 Dredging Requirements
    - 3.3.7.1 Ballast Water Management For Control Of Non-Indigenous Species
    - 3.3.7.2 Invasive Species Prevention Measures For Boat Operations
- 3.4 AIR RESOURCES
  - 3.4.1 Particulates
  - 3.4.2 Odors
  - 3.4.3 Sound Intrusions
  - 3.4.4 Burning
- 3.5 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL
  - 3.5.1 Solid Wastes
  - 3.5.2 Chemicals and Chemical Wastes
  - 3.5.3 Contractor Generated Hazardous Wastes and Excess Hazardous Materials
  - 3.5.4 Disposal of Hazardous Waste
  - 3.5.5 Fuel and Lubricants
- 3.6 RECYCLING AND WASTE MINIMIZATION
- 3.7 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES
- 3.8 BIOLOGICAL RESOURCES
  - 3.8.1 Streaked Horn Lark and Snowy Plover
  - 3.8.2 Seals and Stellar Sea Lions
- 3.9 PREVIOUSLY USED EQUIPMENT
- 3.10 MAINTENANCE OF POLLUTION FACILITIES
- 3.11 TRAINING OF CONTRACTOR PERSONNEL
- 3.12 CONTAMINATED MEDIA MANAGEMENT
- 3.13 POST CONSTRUCTION CLEANUP

-- End of Section Table of Contents --

SECTION 01 57 20.00 25

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 GENERAL INFORMATION

This Section covers preventing environmental pollution and minimizing environmental degradation during and as a result of construction operations. Other requirements in the Technical Sections may also contain specific requirements for environmental protection. Those specific requirements are in addition to or modify the requirements in this Section. The control of environmental pollution requires consideration of sound levels, air, water, and land resources.

1.2 PUBLICATIONS

1.2.1 Applicable Regulations

Prevent, abate, and control all environmental pollution, and minimize environmental degradation by complying with all applicable Federal, State, and local laws and regulations, as well as specific requirements of this Contract. Where conflicting or duplicate regulations apply, the most stringent requirement must govern. Comply with the most current version of the following list of environmental regulations where applicable. This list is not inclusive of all environmental laws and regulations with which the Contractor must comply, but represents those that are most likely to apply to work under this Contract:

a. Clean Air Act

As implemented by regulations including, but not limited to:  
40 CFR 61-94

b. Solid Waste Disposal Act (as amended by the Resource Conservation and Recovery Act)

As implemented by regulations including, but not limited to:  
40 CFR 260, 263-268

c. Comprehensive Environmental Response, Compensation and Liability Act

As implemented by regulations including, but not limited to:  
40 CFR 300, 302, and 310-311

d. Clean Water Act/Federal Water Pollution Control Act

(1) Section 401 as implemented by regulations including, but not limited to: 40 CFR 121 and applicable State regulations

(2) Section 402 as implemented by regulations including, but not limited to: 40 CFR 110-113, 116-117, and 121-131

(3) Section 404 as implemented by regulations including, but not limited to: 33 CFR 320-330, 332, 335-338

MCR Jetty A Rehabilitation

e. Rivers and Harbors Act of 1899, Section 10

As implemented by regulations including, but not limited to:  
33 CFR 320, 322, and 325

f. Marine Protection, Research, and Sanctuaries Act

As implemented by regulations including, but not limited to:  
40 CFR 220-239

g. Emergency Planning and Community Right-to-Know Act

As implemented by regulations including, but not limited to:  
40 CFR 355, 370, and 372

h. Endangered Species Act

As implemented by regulations including, but not limited to:  
50 CFR 10-24

i. Magnuson-Stevens Fishery Conservation and Management Act

As implemented by regulations including, but not limited to:  
50 CFR 600

j. Toxic Substances Control Act

As implemented by regulations including, but not limited to:  
40 CFR 700-799

k. Noise Control Act of 1972

As implemented by regulations including, but not limited to:  
40 CFR Parts 201-209

l. Coastal Zone Management Act

As implemented by regulations including but not limited to : 15  
CFR 923-30

m. National Environmental Policy Act

As implemented by regulations, including but not limited to: 40  
CFR 1500-1518

n. Executive Order 13514: Federal Leadership in Environmental, Energy,  
and Economic performance

o. Executive Order 11990: Protection of Wetlands

p. Marine Mammal Protection Act of 1972

As implemented by regulations including, but not limited to: 50  
CFR parts 18 and 26.

1.2.2 Referenced Publications and Regulations

The publications and regulations listed below form a part of this



## MCR Jetty A Rehabilitation

specification to the extent referenced. The publications are referred to in the text by basic designation only.

### U.S. Army Corps of Engineers (USACE)

EM 385-1-1 (2014) Safety and Health Requirements Manual

WETLANDS DELINEATION MANUAL (1987) Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1

### U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 800-R-11-002 (2011) Environmentally Acceptable Lubricants

### U.S. National Archives and Records Administration (NARA)

33 CFR 328 Definition of Waters of the United States

40 CFR 112 Oil Pollution Prevention

40 CFR 122.26 Storm Water Discharges (Applicable to State NPDES Programs, see section 123.25)

49 CFR 171-178 Hazardous Materials Regulations

40 CFR 260 Hazardous Waste Management System: General

40 CFR 261 Identification and Listing of Hazardous Waste

40 CFR 262 Standards Applicable to Generators of Hazardous Waste

40 CFR 264 Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities

40 CFR 279 Standards for the Management of Used Oil

40 CFR 302 Designation, Reportable Quantities, and Notification

40 CFR 355 Emergency Planning and Notification

40 CFR 68 Chemical Accident Prevention Provisions

## 1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following, within 10 days after Notice to Proceed (NTP) and prior to commencing work, as stated in accordance with Sections 01 10 00.00 25, CONTRACT ADMINISTRATION DATA, and 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Environmental Protection Plan; G ECDC

SD-06 Test Reports

Turbidity Monitoring Reporting Forms; G

Marine Mammal Monitoring and Reporting Information; G

#### 1.4 DEFINITIONS

##### 1.4.1 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally, and/or historically.

##### 1.4.2 Environmental Litigation

The term "environmental litigation," as used herein, means a lawsuit alleging that the work will have an adverse effect on the environment or that the Government has not duly considered, either substantively or procedurally, the effect of the work on the environment.

##### 1.4.3 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

##### 1.4.4 Contractor Generated Hazardous Waste

Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

##### 1.4.5 Land Application for Discharge Water

The term "Land Application" for discharge water implies that the Contractor must discharge water at a rate which allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" must occur. Land Application must be in compliance with all applicable Federal, State, and local laws and regulations.

##### 1.4.6 Pesticide

Pesticide is defined as any substance or mixture of substances intended for

## MCR Jetty A Rehabilitation

preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant.

### 1.4.7 Pests

The term "pests" means arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds and other organisms (except for human or animal disease-causing organisms) that adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

### 1.4.8 Surface Discharge

The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers, creeks, and/or "waters of the United States" and would require a permit to discharge water from the governing agency under 40 CFR 122.26.

### 1.4.9 Waters of the United States

All waters which are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328.

### 1.4.10 Wetlands

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs. Official determination of whether or not an area is classified as a wetland must be done in accordance with the U.S. Army Corps of Engineers WETLANDS DELINEATION MANUAL.

## 1.5 GENERAL REQUIREMENTS

Minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work must be protected during the entire duration of this Contract. Comply with all applicable environmental Federal, State, and local laws and regulations. Any delays resulting from failure to comply with environmental laws and regulations must be the Contractor's responsibility.

## 1.6 SUBCONTRACTORS

Ensure compliance with this Section by subcontractors.

## 1.7 PAYMENT

No separate payment will be made for work covered under this Section. Payment of fees associated with environmental permits, application, and/or notices obtained by the Contractor, and payment of all fines and fees for violation or non-compliance with Federal, State, Regional and local laws and regulations must be the Contractor's responsibility. Include all costs associated with this Section in the Contract price.

#### 1.8 NONCOMPLIANCE

An order may be issued stopping all or part of the work for failure to comply with the provisions of this Section until corrective action has been taken. No time lost due to such stop orders must be the subject of a claim for extension of time or for costs or damages unless it is later determined that the Contractor was in compliance.

#### 1.9 ENVIRONMENTAL LITIGATION

If the performance of all or any part of the work is suspended, delayed, or interrupted due to an order of a court of competent jurisdiction as a result of environmental litigation, as defined below, the Government at the request of the Contractor will determine whether the order is due in any part to the acts of omissions of the Contractor or a subcontractor at any tier not required by the terms of this Contract. If it is determined that the order is not due in any part to acts or omissions of the Contractor or a subcontractor at any tier other than as required by the terms of this Contract, such suspension, delay, or interruption must be considered as if ordered by the Government in the administration of this Contract under the terms of Section 00700 Contract Clause 52.242-14, SUSPENSION OF WORK. The period of such suspension, delay, or interruption will be considered unreasonable, and an adjustment will be made for any increase in the cost of performance of this Contract (excluding profit) as provided in this clause, subject to the provisions thereof.

#### 1.10 ENVIRONMENTAL PROTECTION PLAN

In accordance with the requirements of this Section prior to commencing construction activities or delivery of materials to the site, submit an Environmental Protection Plan for review and approval by the Contracting Officer (CO). The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor must address during construction. Define issues of concern within the Environmental Protection Plan as outlined in this Section. Address each topic at a level of detail commensurate with the environmental issue and required construction task(s). Identify and discuss topics or issues which are not identified in this Section, but which the Contractor considers necessary, after those items formally identified in this Section. Prior to submittal of the Environmental Protection Plan, meet with the CO for the purpose of discussing the implementation of the initial Environmental Protection Plan; possible subsequent additions and revisions to the plan including any reporting requirements; and methods for administration of the Contractor's Environmental Plans. The Environmental Protection Plan must be current and maintained on site by the Contractor.

##### 1.10.1 Compliance

No requirement in this Section must relieve the Contractor of any applicable Federal, State, and local environmental protection laws and regulations. During Construction, identify, implement, and submit for approval any additional requirements to be included in the Environmental Protection Plan.

##### 1.10.2 Contents

The environmental protection plan must include, but not be limited to, the following:

- a. Name(s) and phone numbers of individual(s) within the Contractor's organization responsible for ensuring adherence to the Environmental Protection Plan.
- b. Name(s), phone numbers, and qualifications of individual(s) responsible for manifesting hazardous waste to be removed from the site, if applicable.
- c. Name(s), phone numbers, and qualifications of individual(s) responsible for training the Contractor's environmental protection personnel.
- d. Description of the Contractor's environmental protection personnel training program in accordance with paragraph TRAINING OF CONTRACTOR PERSONNEL.
- e. A Storm Water Pollution and Prevention Plan for the United States Environmental Protection Agency (EPA) has been prepared by the Government. Update or modify this plan as necessary to identify the type and location of the erosion and sediment controls to be provided and submitted to the CO for review and approval. Implement the storm water pollution prevention measures to prevent sediment from entering streams or water bodies as specified in Section 01 57 23.00 25, TEMPORARY STORM WATER POLLUTION CONTROL and, in conformance with the requirements of the National Pollution Discharge Elimination System (NPDES) permit.
- f. Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on the site.
- g. Traffic control plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather. Include measures to minimize the amount of mud transported onto paved public roads by vehicles or runoff.
- h. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Include measures for marking the limits of use areas, including methods for protection of features to be preserved, within or affected by authorized work areas. Also include location of refueling areas and potential hazardous material storage areas, and measures for protection and containment in the event of a release.
- i. Include in the Spill Control Plan the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 112, 40 CFR 302, 40 CFR 355, and/or regulated under State or Local laws and regulations. The Spill Control Plan supplements the requirements of EM 385-1-1. This plan must include as a minimum:
  - (1) Name of the individual who must report any spills or hazardous substance releases and who must follow up with complete documentation. This individual must immediately notify the CO and Facility Response Personnel in addition to the legally required Federal, State, and local reporting channels (including the

National Response Center (NRC) 1-800-424-8802) if a reportable quantity is released to the environment. The plan must contain a list of the required reporting channels and telephone numbers:

(a) Name(s) and qualifications of the individual(s) responsible for implementing and supervising the containment and cleanup.

(b) Training requirements for Contractor's personnel and methods of accomplishing the training.

(c) List of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified. For all work in or adjacent to water, a sufficient amount with a minimum of 200-foot-long containment boom, skimming equipment, and a cleanup kit must be available at the job-site. Consider the logistics and time required to begin containment and cleanup of a spill, accessibility, number of remote work areas, number and location of floating plants on the river, etc. Materials and equipment for other cleanup work must be tailored to the potential hazards involved.

(d) Names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.

(e) Methods and procedures to be used for expeditious contaminant cleanup.

(2) The 24-hour spill notification telephone numbers including NRC, State, County, and local police and/or Emergency Response organization as appropriate and required. The plan must include 24-hour emergency number for the Government Quality Assurance Representative (GQAR), Project Engineer, and Resident Engineer. Refer to the Water Quality Protection and Monitoring Plan (WQPMP - Attachment A6) for emergency response contacts.

(3) Include a hazardous material Spill Emergency Initial Report Form, similar to Attachment A4. Ensure that all of the elements shown on the sample form are provided and submitted within 24 hours of a spill.

j. Non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris and schedules for disposal. This plan must include as a minimum:

(1) Identify any subcontractors responsible for the transportation and disposal of solid waste. Submit licenses or permits for solid waste disposal sites that are not a commercial operating facility.

(2) Include recycling and solid waste minimization plan with a list of measures to reduce consumption of energy and natural resources. Detail in the plan the Contractor's actions to comply with and participate in Federal, State, Regional, and local Government sponsored recycling programs to reduce the volume of solid waste at the source.

(3) Attach evidence of the disposal facility's acceptance of the solid waste to this plan during the construction. Attach a copy

of each of the Non-hazardous Solid Waste Diversion Reports to the disposal plan. Submit the report for the previous quarter on the first working day after the first quarter that non-hazardous solid waste has been disposed and/or diverted (e.g. the first working day of January, April, July, and October).

(4) Indicate in the report the total amount of waste generated and total amount of waste diverted in cubic yards or tons along with the percent that was diverted.

k. Air pollution control plan detailing provisions to assure that dust, debris, materials, trash, etc., do not become air borne and travel off the project site.

l. Contaminant prevention plan that identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, and local laws and regulations for storage and handling of these materials. In accordance with EM 385-1-1, include a copy of the Safety Data Sheets (SDS) and the maximum quantity of each hazardous material to be on site at any given time in the contaminant prevention plan. Update the plan as new hazardous materials are brought on site or removed from the site.

m. Wastewater management plan that identifies the methods and procedures for management and/or discharge of wastewaters which are directly derived from construction activities, such as concrete curing water, clean up water, dewatering of ground water, disinfections water, hydrostatic test water, and water used in flushing of lines.

(1) If a settling/retention pond is required, include the design of the pond including drawings, removal plan, and testing requirements for possible pollutants.

(2) If land application will be the method of disposal for the wastewater, include a sketch showing the location for land application along with a description of the pretreatment methods to be implemented.

(3) If surface discharge will be the method of disposal, include a copy of the permit and associated documents as an attachment prior to discharging the wastewater.

(4) If disposal is to a sanitary sewer, include documentation that the Wastewater Treatment Plant Operator has approved the flow rate, volume, and type of discharge.

n. Historical, archaeological, cultural resources biological resources and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands known to be on the project site: and/or identifies procedures to be followed if historical archaeological, cultural resources, biological resources and wetlands not previously known to be on site or in the area are discovered during construction. Include in the plan methods to assure the protection of known or discovered resources and identify lines of communication between Contractor personnel and the CO. An Inadvertent Discovery Plan for the project has been prepared by the Government and is attached in

Attachment A10.

o. Attach copies of all environmental permits, permit application packages, approvals to construct, notifications, certifications, reports, and termination documents as an appendix.

#### 1.11 PROTECTION FEATURES

This paragraph supplements Section 00700 Contract Clause 52.236-9, PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Prior to start of any on-site construction activities, the Contractor and the CO must make a joint condition survey. Immediately following the survey, prepare a brief report including a plan describing the features requiring protection under the provisions of the Contract Clauses, which are not specifically identified on the drawings as environmental features requiring protection along with the condition of trees, shrubs, and grassed areas immediately adjacent to the site of work and adjacent to the Contractor's assigned storage area and access route(s), as applicable. This survey report must be signed by both the Contractor and the CO upon mutual agreement as to its accuracy and completeness. Protect those environmental features included in the survey report and any indicated on the drawings, regardless of interference which their preservation may cause to the Contractor's work under the Contract.

#### 1.12 SPECIAL ENVIRONMENTAL REQUIREMENTS

Comply with the special environmental requirements listed in this Section and with Certified Erosion and Sediment Control Lead (CESCL).

a. Install portable spill containment for all crane setups and monitor daily for leakage. The containments must be larger in length and width than the vehicle dimensions.

b. Operate equipment from the top of the bank, outside the waterway to the maximum extent practicable.

c. Limit the number and location of equipment on beach.

d. Haul trucks traveling through Cape Disappoint and the Coast Guard must not stop until they reach the work area.

e. Reduce noise impacts during the Marbled Murrelet nesting season (April 1 to September 15) with the following requirements:

(1) Haul trucks must only use roads during daylight hours;

(2) Compression brakes (Jake-brakes) are prohibited through the City of Ilwaco as well as through the project area..

#### 1.13 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations, requested by the Contractor, from the drawings, plans, and specifications which may have an environmental impact will be subject to approval by the CO and may require an extended review, processing, and approval time. The CO reserves the right to disapprove alternate methods, even if they are more cost effective, if the CO determines that the proposed alternate method will have an adverse environmental impact.



#### 1.14 NOTIFICATION

The CO will notify the Contractor in writing of any observed noncompliance with Federal, State, or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection Plan. After receipt of such notice, inform the CO of the proposed corrective action and take such action when approved by the CO. The CO may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions will be granted or equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the CO may take under the Contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

#### PART 2 PRODUCTS - NOT USED

#### PART 3 EXECUTION

##### 3.1 ENVIRONMENTAL PERMITS AND COMMITMENTS

###### 3.1.1 General

Provide an electronic copy of each permit or license critical to project control and execution during project construction to the Government. These may include inter-agency coordination agreements and subsequent compliance requirements. Comply with all environmental permits and commitments required by Federal, State, Regional, and local environmental laws and regulations.

###### 3.1.2 National Pollution Discharge Elimination System (NPDES) Permit Associated with Construction Activities

The Government has obtained a NPDES permit for storm water discharges associated with construction activities, issued by the EPA for this Contract. Comply with general NPDES Construction General Permit for construction activities. The NPDES permit can be found at [http://www.epa.gov/npdes/pubs/cgp2012\\_finalpermit.pdf](http://www.epa.gov/npdes/pubs/cgp2012_finalpermit.pdf). The permit is also attached as an appendix of the SWPPP (Attachment A9).

###### 3.1.3 Water Quality Certification

The Government has obtained the Water Quality Certification for mandatory Contract items. Comply with certification conditions (Attachment A7) and the Water Quality Protection and Monitoring Plans (Attachment A6).

###### 3.1.4 Incidental Harassment Authorization (IHA)

National Marine Fisheries has issued a Draft Incidental Harassment Authorization for the protection of Marine Mammals during work on Jetty A. After the 30-day public comment period closes, the Corps anticipates receiving a final IHA from NMFS prior to contract award. The IHA will take effect May 1, 2016 at the start of the first available pile installation window. The IHA provides pile installation and removal coverage for one year. A Letter of Authorization will also be obtained to provide permit coverage to the project for work that exceeds 1 year. Pile installation and removal must only occur with permit coverage. Comply with the conditions and recommendations of the IHA (Attachment A11).

### 3.2 LAND RESOURCES

Confine all activities to areas defined by the Drawings and Specifications. Prior to the beginning of any construction, identify any land resources to be preserved within the work area. Do not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and landforms without approval, except in areas indicated on the Drawings or specified to be cleared. Do not fasten or attach ropes, cables, or guys to any trees for anchorage unless specifically authorized. Provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs. Remove stone, soil, or other materials displaced into uncleared areas.

#### 3.2.1 Work Area Limits

Prior to commencing construction activities, mark the areas that need not be disturbed under this Contract. Mark or fence isolated areas within the general work area which are not to be disturbed. Protect monuments and markers before construction operations commence. Where construction operations are to be conducted during darkness, any markers must be visible in the dark. Contractor's personnel must be knowledgeable of the purpose for marking and/or protecting particular objects.

#### 3.2.2 Landscape

Trees, shrubs, vines, grasses, land forms, and other landscape features indicated and defined on the Drawings to be preserved must be clearly identified by marking, fencing, wrapping with boards, or any other approved techniques. Restore landscape features damaged or destroyed during construction operations outside the limits of the approved work area.

#### 3.2.3 Erosion and Sediment Controls

Provide erosion and sediment control measures in accordance with Federal, State, and local laws and regulations. Select and maintain the erosion and sediment controls such that water quality standards are not violated as a result of the Contractor's construction activities. The area of bare soil exposed at any one time by construction operations must be kept to a minimum. Construct or install temporary and permanent erosion and sediment control best management practices (BMPs) as specified in Section 01 57 23.00 25, TEMPORARY STORM WATER POLLUTION CONTROL. BMPs may include, but not be limited to, vegetation cover, slope stabilization and silt fences. The Contractor's BMPs must also be in accordance with the National Pollutant Discharge Elimination System (NPDES) and Storm Water Pollution Prevention Plan (SWPPP). Remove any temporary measures after the area has been stabilized. The SWPPP and NPDES permit must be available on the job-site upon request and must be updated for changes as specified.

#### 3.2.4 Contractor Facilities and Work Areas

Place field offices, staging areas, stockpile storage, and temporary buildings in areas designated on the Drawings or as directed by the CO. Temporary movement or relocation of Contractor facilities must be made only when approved. Provide erosion and sediment controls for on-site borrow and spoil areas to prevent sediment from entering nearby waters. Control temporary excavation and embankments for plant and/or work areas to protect adjacent areas.

### 3.3 WATER RESOURCES

Monitor all water areas affected by construction activities to prevent pollution of surface and ground water. Do not apply toxic or hazardous chemicals to soil or vegetation unless otherwise indicated. No water courses must be polluted by or have existing pollution contributed to with any petroleum products, fuels, oils, lubricants, bitumen, sandblast grit, paint chips, calcium chloride, insecticides, herbicides, or other toxic materials harmful to life. Chemical emulsifiers, dispersants, coagulants, or other cleanup compounds must not be used without prior written approval. Compliance with State water quality standards and conditions of any permits and clearances obtained for the work must be the Contractor's responsibility.

#### 3.3.1 Erosion Control

Hold surface drainage from cuts and fills, whether or not completed, and from borrow and material deposit areas in sedimentation ponds or grade the areas to control erosion within acceptable limits. Provide and maintain temporary erosion and sediment control measures such as seeding, mulching, ditches, dikes, drains, sedimentation basins, or silt fences or curtains. Hold the area of bare soil exposed at any time by construction to a minimum.

#### 3.3.2 In Water Work Requirements

During in-water work, use the following BMPs to minimize in-water turbidity:

- a. Sequence/Phasing of work - Schedule work activities to minimize in-water disturbance and duration of in-water disturbances.
- b. Vehicle staging, cleaning, maintenance, refueling, and fuel storage must take place in a vehicle staging area placed 150 feet or more from any water, wetland, and mean higher high water (MHHW).
- c. Diaper any stationary power equipment (e.g. generators, cranes) operated within 150 feet of any stream, water body, wetland, or MHHW to prevent leaks, unless otherwise approved in writing by the Contracting Officer in consultation with NOAA Fisheries. The elevation of jurisdiction waters of the U.S. is 11.2 feet NAVD88.
- d. At least daily inspect all vehicles operated within 150 feet of any stream, water body, wetland, or MHHW for fluid leaks before leaving the vehicle staging area. Repair any leaks detected in the vehicle staging area before the vehicle resumes operation. Document inspections in a record that is available for review on request by the CO, Washington Department of Ecology and NOAA Fisheries.
- e. Fasten a permanent spill kit to equipment within 150 feet of the water. Inspect this equipment at least daily.
- f. Consider wave surge/splash and wind and store materials in a manner that they will not enter water.
- g. Refer to Section 35 20 23.13 25, DREDGING for in-water work requirements specific to dredging activities.

#### 3.3.3 Wastewater

Disposal of wastewater must be as specified below:

## MCR Jetty A Rehabilitation

- a. Do not allow wastewater from construction activities (such as equipment washing, on-site material processing, etc.) to enter water ways or to be discharged prior to being treated to remove pollutants and without approval.
- b. Dispose of the construction related wastewater by collecting and placing it in a retention pond where suspended material can be settled out and/or the water can evaporate to separate pollutants from the water.
  - (1) The site for the retention pond must be coordinated with and approved by the CO.
  - (2) Prior to completion of the project, test, remove, and dispose of residue left in the pond off-Government property in accordance with Federal, State, and local laws and regulations.
  - (3) The water in the retention pond must not be allowed to enter water ways until testing shows it to meet all pertinent regulations, and results are reviewed and approved by the CO prior to being discharged or disposed off-Government property.
  - (4) Backfill the retention area to the original grade, provide topsoil, and seed/sod as approved by the CO.

### 3.3.4 Excess Material Deposits

Do not allow deposit of any materials, effluents, trash, garbage, oil, grease, chemicals, or other contaminants in areas adjacent to waters of the U.S. If any unwanted material is dumped in unauthorized areas, remove the material and restore the area to a condition approximating the adjacent undisturbed area. Excavate, remove, and restore the contaminated ground area as directed.

### 3.3.5 Wetlands

Do not enter, disturb, destroy, or allow discharge of pollutants into any wetlands except as authorized herein and properly permitted prior to construction.

### 3.3.6 Monitoring

Perform visual monitoring of the area:

- a. Look for either a plume or a visible difference in turbidity between the background site (500 feet upstream or upcurrent of the discharge point) and the compliance site (150 feet downstream/down current of the discharge point).
- b. Flag the 150 foot radius both up and downcurrent of construction activity to identify the compliance site from the viewpoint.
- c. Comply with narrative water quality standards, including but not limited to the following:
  - (1) No visible petroleum sheen on water observed at the construction site.

## MCR Jetty A Rehabilitation

(2) No distressed or dying fish observed at the construction site are attributed to site activities.

(3) Meet these narrative criteria at the project location with no dilution.

d. Once per week, submit Turbidity Monitoring Reporting Forms with photo documentation included in the Water Quality Protection and Monitoring Plan (Attachment A6).

### 3.3.7 Dredging Requirements

#### 3.3.7.1 Ballast Water Management For Control Of Non-Indigenous Species

The following must apply to the management of ballast water for control of non-indigenous species:

a. Comply with all Federal and State laws pertaining to the management and reporting requirements for ballast water for control of non-indigenous species.

b. Furnish a copy of all reports submitted to the U.S. Coast Guard and the State of Oregon and Washington to the GQAR.

c. The following references are provided for Contractor information, but may not be inclusive of all applicable regulations:

(1) Federal: Title 33, Chapter I, Part 151, Subpart D, Sections 151.2000 through 151.2035

(2) Oregon: ORS 783.620-783.992

(3) Washington: RCW 77.120

#### 3.3.7.2 Invasive Species Prevention Measures For Boat Operations

Prevent contaminating coastal ports with invasive species, particularly zebra mussels. Zebra mussels can be transported by boats, trailers, outboard motors and other equipment such as tractors, bulldozers, water pumps, ropes and nets that are used in areas that zebra mussels inhabit. Zebra mussels have been found in several lakes and river systems. If equipment is not properly inspected and treated to prevent the spread of zebra mussels and other aquatic nuisance species, they can be introduced into areas not currently infested. To assist in preventing the introduction and spread of aquatic nuisance species, the following precautions must be taken:

a. Prior to transporting to site, visually inspect all equipment for zebra mussels and other aquatic nuisance species. Remove all trash, mud, vegetation, and suspected zebra mussels, place in plastic bags, and properly dispose of in land-based receptacles.

b. All construction equipment and supplies intended for use in OR and WA waters that has been exposed to other lake or stream water must be thoroughly washed with a power washer or be allowed to dry an appropriate length of time. Water being used for power washing must be at least 160 degrees F when leaving the spray nozzle and 140 degrees F when contacting the equipment being decontaminated. All contaminated runoff must be adequately contained and disposed of

properly. The appropriate length of drying time is dependant upon weather conditions when the equipment is drying. Use the following link to determine the number of drying days required for drying prior to the beginning of work. <http://www.100thmeridian.org/emersion.asp>.

c. Treat pumps, equipment, and supplies that cannot be thoroughly drained, cleaned, and dried with a 200 ppm bleach solution for 20 minutes, deactivate with sodium thiosulfate, and rinse according to Table 1 below.

d. Conduct an onsite inspection of all vessels, equipment, pumps, and supplies to be used in or around the water before work begins. Coordinate the date and time of this onsite inspection with the CO seven days in advance of inspection.

e. Inspect vessels and equipment upon removal from any body of water. Clean hulls, anchors, moorings, trailers, etc. of all mud, vegetation, and any noticeable attached zebra mussels before leaving the site. Remove any suspected zebra mussels, report to the CO, and contain them for verification.

f. Wash or appropriately dry all vessels and construction equipment removed from OR waters currently infested with zebra mussels or other aquatic invasive species as described above.

Table 1:

Disinfectant Amounts to Make Needed Concentrations					
Disinfectant	1 gallon	2 gallons	5 gallons	20 gallons	100 gallons
200 ppm Chlorine (household bleach, 5.25% Chlorine)	0.5 ounce (15 ml)	1.0 ounce (30 ml)	2.5 ounces (75 ml)	11.0 ounces (300 ml)	6 1/3 cups (1.5 L)
800 ppm Sodium Thiosulfate	0.1 ounce (3 g)	0.2 ounce (6 g)	0.5 ounce (15 g)	2.1 ounces (60 g)	10.6 ounces (300 g)

Notes:

(1) Zebra mussel juveniles, called veligers are microscopic and invisible to the naked eye.

(2) Air drying and hot water are most effective when used in conjunction with each other because their effectiveness is highly dependent upon ambient temperatures and contact times.

(3) Household bleach (5.25 percent chlorine) and vinegar can be purchased from grocery or convenience stores. Sodium Thiosulfate can be purchased at pool supply stores or chemical companies.

(4) All bilges and hidden areas under boat decks must be thoroughly treated as described above.

(5) For instructions on cleaning and decontaminating specific types of equipment use the following link to access the Inspection and Cleaning Manual for Equipment and Vehicles to Prevent the Spread of Invasive Species:

<http://www.usbr.gov/mussels/prevention/docs/EquipmentInspectionandCleaningManual2010.pdf>

### 3.4 AIR RESOURCES

Equipment operation, activities, or processes performed must be in accordance with all Federal and State air emission and performance laws and standards.

#### 3.4.1 Particulates

Control dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials at all times, including weekends, holidays, and hours when work is not in progress. Maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling or other approved methods will be permitted to control particulates in the work area. To be efficient, repeat sprinkling to keep the disturbed area damp at all times. Have the proper equipment available to accomplish these tasks. Perform particulate control as the work proceeds and whenever a particulate nuisance or hazard occurs. Comply with all State and local visibility regulations.

#### 3.4.2 Odors

Control odors from construction activities at all times. The odors must be in compliance with State regulations and/or local ordinances and must not constitute a health hazard.

#### 3.4.3 Sound Intrusions

Keep construction activities under surveillance and control to minimize environment damage by noise. Comply with the provisions of the State of Washington rules.

#### 3.4.4 Burning

Burning is prohibited on the Government premises.

### 3.5 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

Dispose of wastes as directed below, unless otherwise specified in other Sections and/or shown on the Drawings:

#### 3.5.1 Solid Wastes

Provide waste receptacles. Place solid wastes (excluding clearing debris) in Contractor-provided containers which are emptied or removed from the job site on a regular schedule. Conduct handling, storage, and disposal to prevent contamination. Employ segregation measures so that no hazardous or toxic waste will become co-mingled with solid waste. Transport solid waste off Government property and dispose of it in compliance with Federal,

State, and local requirements for solid waste disposal. A Subtitle D Resource Conservation and Recovery Act (RCRA) permitted landfill must be the minimum acceptable off-site solid waste disposal option. Verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate. Comply with Federal, State, and local laws and regulations pertaining to the use of landfill areas.

### 3.5.2 Chemicals and Chemical Wastes

Dispense chemicals ensuring no spillage to the ground or water. Perform and document periodic inspections of dispensing areas to identify leakage and initiate corrective action. This documentation will be periodically reviewed by the Government. Collect chemical waste in corrosion resistant, compatible containers. Monitor collection drums and remove to a staging or storage area when contents are within 6 inches of the top. Classify, manage, store, and dispose of wastes in accordance with Federal, State, and local laws and regulations.

### 3.5.3 Contractor Generated Hazardous Wastes and Excess Hazardous Materials

Hazardous wastes are defined in 40 CFR 261, or are as defined by applicable State and local regulations. Hazardous materials are defined in 49 CFR 171-178. At a minimum, manage and store hazardous waste in compliance with 40 CFR 262. Take sufficient measures to prevent spillage of hazardous and toxic materials during dispensing. Segregate hazardous waste from other materials and wastes, protect it from the weather by placing it in a safe covered location, and take precautionary measures such as berming or other appropriate measures against accidental spillage. Manage, store, describe, package, label, mark, and placard hazardous waste and hazardous material in accordance with 40 CFR 260, 40 CFR 262, 40 CFR 264, 49 CFR 171-178, State, and local laws and regulations. Immediately report spills of hazardous or toxic materials to the CO. Cleanup and cleanup costs due to spills must be the Contractor's responsibility. The disposition of Contractor generated hazardous waste and excess hazardous materials must be the Contractor's responsibility.

### 3.5.4 Disposal of Hazardous Waste

The following must apply to disposal of any hazardous waste:

- a. Use, or propose for use, materials which may be considered environmentally friendly in that waste from such materials is not regulated as a hazardous waste or is not considered harmful to the environment.
- b. Documentation for analysis, sampling, transportation, and disposal of all hazardous waste generated during this Contract must be in accordance with 40 CFR parts 260 through 262.
- c. Remove all Contractor hazardous wastes from the project for proper disposal within 90 days of waste generation or at the completion of on-site work. Package, label, and mark all hazardous waste in accordance with 49 CFR 172 and 40 CFR 262. Store all hazardous waste in accordance with 40 CFR 264.
- d. Transportation of Contractor hazardous material must be in accordance with 49 CFR 171-178.
- e. Use the Contractors Environmental Protection Agency (EPA)



identification number to dispose of all hazardous waste generated by the Contractor and its subcontractors under this Contract. This is construed to mean all hazardous waste the Contractor or subcontractors generate from materials brought on the site for the purpose of performing work under the terms of the Contract.

f. The Government will dispose of all hazardous waste generated from Government-owned facilities on the project. This is construed to mean hazardous wastes generated from the repair, demolition, or removal of any existing materials and buildings from the Government facilities and is not intended to include any wastes generated by the Contractor in the performance of its work.

g. The GQAR will notify the project Environmental Compliance Coordinator (ECC) when Government owned wastes are generated. The project ECC will ensure that the wastes are labeled correctly. The GQAR will notify the project ECC when waste containers are full. The project ECC will then arrange for movement of the waste to a designated Government waste collection area.

h. It is the responsibility of the Contractor to prepare hazardous waste manifests for Contractor generated hazardous waste. The Government will review the Contractor's hazardous waste manifest to ensure the use of the Contractor's own EPA identification number.

i. Recycle hazardous or dangerous waste to the maximum extent possible. Placing hazardous or dangerous waste in a permitted hazardous waste landfill must be the last resort.

### 3.5.5 Fuel and Lubricants

Conduct storage, fueling, and lubrication of equipment and motor vehicles in a manner that affords the maximum protection against spill and evaporation.

a. Manage and store fuel, lubricants, and oil in accordance with all Federal, State, Regional, and local laws and regulations.

b. Store used lubricants and used oil to be discarded in marked, corrosion-resistant containers and recycle or dispose of in accordance with 40 CFR 279, State, and local laws and regulations.

c. Storage of fuel on the project site must be in accordance with all Federal, State, and local laws and regulations and within a Government-controlled chain-link-fenced secure area and be located a minimum of 150 feet from Ordinary High Water.

d. Auxiliary fuel tanks stored at staging areas must have containment measures in place at all times.

e. Maintain spill response equipment and materials in the immediate vicinity of refueling operations that can be deployed without delay in the event of a release or spill.

f. Use Wiggins Fast Fuel System or equivalent on equipment fueled on the jetty. Implement secondary containment measures when refueling on jetty and have spill response materials available in the immediate vicinity of the refueling location.

## MCR Jetty A Rehabilitation

g. Utilize environmentally acceptable lubricants including hydraulic fluid as in accordance with EPA 800-R-11-002 when operating equipment below Ordinary High Water and work over water such as on the jetty.

### 3.6 RECYCLING AND WASTE MINIMIZATION

Participate in State and local Government sponsored recycling programs. The Contractor is further encouraged to minimize solid waste generation throughout the duration of the project.

### 3.7 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Protect and preserve these resources during the life of the Contract. If, during excavation or other construction activities, any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, temporarily suspend all activities that may damage or alter such resources. Resources covered by this paragraph include but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, paving, wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, immediately notify the CO so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. Cease all activities that may result in impact to or the destruction of these resources. Secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources. See the attached Inadvertent Discovery Plan for additional information and requirements (Attachment A10).

### 3.8 BIOLOGICAL RESOURCES

Minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. Protect threatened and endangered animal and plant species, including their habitat, in accordance with Federal, State, Regional, and local laws and regulations. In addition to species listed below, specific species of concern are referenced in project compliance documentation. Should the Contractor encounter a sick, injured, or dead specimen of a threatened or endangered species during the project (regardless of whether the Contractor is at fault), initial notification must be made to the GQAR. The Contractor must follow with verbal notification to the GQAR and include written notification on the daily CQC Report.

#### 3.8.1 Streaked Horn Lark and Snowy Plover

Report any sightings of streaked horn lark or snowy plover. If nests are discovered, immediately stop work in the vicinity and notify the CO.

#### 3.8.2 Seals and Stellar Sea Lions

The following conservation measures apply:

- a. Avoid direct approaches as much as possible.
- b. Approach in a slow and steady manner if movements are necessary.
- c. Monitoring and reporting will occur as required. Submit marine mammal monitoring and reporting information if any are observed.

Include a description of the interaction entailed and the reaction of the mammals.

### 3.9 PREVIOUSLY USED EQUIPMENT

Clean all previously used construction equipment prior to bringing it onto the project site. Ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. Consult with the USDA jurisdictional office for additional cleaning requirements.

### 3.10 MAINTENANCE OF POLLUTION FACILITIES

Maintain permanent and temporary pollution control facilities and devices for the duration of the Contract or for that length of time construction activities create the particular pollutant.

### 3.11 TRAINING OF CONTRACTOR PERSONNEL

Train all Contractor personnel in all phases of environmental protection and pollution control. Conduct environmental protection/pollution control meetings for all Contractor personnel prior to commencing construction activities. Conduct additional meetings for new personnel and when site conditions change. Include in the training and meeting agenda: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, wetlands, and endangered species and their habitat that are known to be in the area.

### 3.12 CONTAMINATED MEDIA MANAGEMENT

Manage contaminated environmental media consisting of, but not limited to, ground water, soils, and sediments. A potential exists for HTRW barrels washing ashore. Refer to Section 01 10 10.00 25, CONTRACTOR'S OPERATION REQUIREMENTS paragraph HAZARDOUS, TOXIC AND RADIOLOGICAL WASTE for instructions for handling this waste.

### 3.13 POST CONSTRUCTION CLEANUP

Clean up all areas used for construction in accordance with Section 00700 Contract Clause 52.236-12, CLEANING UP. Unless otherwise instructed in writing by the CO, obliterate all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. Grade, fill, and seed entire disturbed area, unless otherwise indicated.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 57 23.00 25

TEMPORARY STORM WATER POLLUTION CONTROL

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 SUBMITTALS
- 1.3 REQUIREMENTS
  - 1.3.1 General Requirements
  - 1.3.2 Training Requirements
- 1.4 BEST MANAGEMENT PRACTICES
  - 1.4.1 Scheduling
  - 1.4.2 Stabilization Practices
    - 1.4.2.1 Unsuitable Conditions
    - 1.4.2.2 No Activity for Less Than 21 Days
    - 1.4.2.3 Burnoff
    - 1.4.2.4 Protection of Erodible Soils
  - 1.4.3 Structural Practices
    - 1.4.3.1 Silt Fence
    - 1.4.3.2 Fiber Rolls or Wattles
    - 1.4.3.3 Straw Bales
  - 1.4.4 Wind Erosion Control
  - 1.4.5 Tracking Control
  - 1.4.6 Non-Stormwater Management BMPs
    - 1.4.6.1 Vehicle and Equipment Cleaning
    - 1.4.6.2 Vehicle and Equipment Fueling
    - 1.4.6.3 Vehicle and Equipment Maintenance

PART 2 PRODUCTS

- 2.1 COMPONENTS FOR SILT FENCES
  - 2.1.1 Filter Fabric
  - 2.1.2 Stakes and Posts
  - 2.1.3 Mill Certificate or Affidavit
- 2.2 COMPONENTS FOR STRAW BALES
- 2.3 COMPONENTS FOR FIBER ROLLS OR WATTLES

PART 3 EXECUTION

- 3.1 INSTALLATION OF SILT FENCE
- 3.2 INSTALLATION OF STRAW BALES
- 3.3 INSTALLATION OF FIBER ROLLS OR WATTLES
- 3.4 MAINTENANCE, MONITORING, AND INSPECTIONS
  - 3.4.1 SWPPP Amendments
  - 3.4.2 Monitoring and Inspections
    - 3.4.2.1 Inspection Details
    - 3.4.2.2 Inspection Reports

-- End of Section Table of Contents --

SECTION 01 57 23.00 25

TEMPORARY STORM WATER POLLUTION CONTROL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM D4439	(2014) Geosynthetics
ASTM D4491	(1999a; R 2014; E 2014) Water Permeability of Geotextiles by Permittivity
ASTM D4533	(2011) Trapezoid Tearing Strength of Geotextiles
ASTM D4632	(2008) Grab Breaking Load and Elongation of Geotextiles
ASTM D4751	(2012) Determining Apparent Opening Size of a Geotextile

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-06 Test Reports

SWPPP Amendments; G

Inspection Reports; G

SD-07 Certificates

CESCL Training Certificate; G

Mill Certificate or Affidavit

1.3 REQUIREMENTS

1.3.1 General Requirements

The work consists of implementing the storm water pollution prevention measures prevent sediment from entering streams or water bodies as specified in this Section in conformance with the requirements of Section 01 57 20.00 25, ENVIRONMENTAL PROTECTION, and the requirements of the National Pollutant Discharge Elimination System (NPDES).

### 1.3.2 Training Requirements

Ensure inspections are done by a Certified Erosion and Sediment Control Lead (CESCL). Erosion and Sediment Control Lead must have a current certificate proving attendance in an erosion and sediment control training course that meets the minimum Erosion and Sediment Control training and certification requirements established by Washington Department of Ecology or be a Certified Professional in Erosion and Sediment Control. Submit CESCL Training Certificate to the Government.

### 1.4 BEST MANAGEMENT PRACTICES

The selection and implementation of BMPs is based on the pollution risks associated with the construction activity. Maintain the BMP's installation and maintenance schedule and on-site location in the SWPPP.

#### 1.4.1 Scheduling

Develop a schedule that includes sequencing construction activities with the implementation of construction site BMPs. The purpose is to reduce the amount and duration of soil exposed to erosion by wind, rain, runoff and vehicle tracking, and to perform the construction activities and control practices in accordance with the planned schedule. Schedule work to eliminate soil disturbance activities during rain events. If work is to be done when rainfall is predicted, adjust the construction schedule to allow the implementation of erosion and sedimentation controls on all disturbed area prior to rainfall.

#### 1.4.2 Stabilization Practices

The stabilization practices to be implemented may include temporary seeding, mulching, geotextiles, sod stabilization, erosion control mats, protection of trees, preservation of mature vegetation, etc. On the daily CQC Report, record the dates when the major grading activities occur, (e.g. clearing and grubbing, excavation, embankment, and grading); when construction activities temporarily or permanently cease on a portion of the site; and when stabilization are initiated. Except as provided in paragraphs Unsuitable Conditions and No Activity For Less Than 21 Days, initiate stabilization practices as soon as practicable, but no more than 14 days, in any portion of the site where construction activities have temporarily or permanently ceased. Refer to the SWPPP (Attachment A10) Appendix B or the following link [http://water.epa.gov/polwaste/npdes/stormwater/upload/cgp2012\\_finalpermit.pdf](http://water.epa.gov/polwaste/npdes/stormwater/upload/cgp2012_finalpermit.pdf) for details of the NPDES Construction General Permit which outlines the requirements for site stabilization.

##### 1.4.2.1 Unsuitable Conditions

Where the initiation of stabilization measures by the fourteenth day after construction activity temporarily or permanently ceases or is precluded by unsuitable conditions caused by the weather, initiate stabilization practices as soon as practicable after conditions become suitable.

##### 1.4.2.2 No Activity for Less Than 21 Days

When the total time period in which construction activity is temporarily ceased on a portion of the site is 21 days minimum, stabilization practices do not have to be initiated on that portion of the site until 14 days have elapsed after construction activity temporarily ceased.

1.4.2.3 Burnoff

Burnoff of the ground cover is not permitted.

1.4.2.4 Protection of Erodible Soils

Immediately finish the earthwork brought to a final grade, as indicated or specified, and protect the side slopes and back slopes upon completion of rough grading. Plan and conduct earthwork to minimize the duration of exposure of unprotected soils.

1.4.3 Structural Practices

Implement structural practices to divert flows from exposed soils, temporarily store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Implement structural practices in a timely manner during the construction process to minimize erosion and sediment runoff. Include the following devices as applicable.

1.4.3.1 Silt Fence

Provide silt fences as a temporary structural practice to minimize erosion and sediment runoff. Properly install silt fences to effectively retain sediment immediately after completing each phase of work where erosion would occur in the form of sheet and rill erosion (e.d. clearing and grubbing, excavation, embankment, and grading). Install silt fences at the locations provided in the SWPPP. Obtain approval from the Contracting Officer (CO) prior to final removal of silt fence barriers.

1.4.3.2 Fiber Rolls or Wattles

Install fiber rolls or wattles as a substitute for silt fences if necessary. Use in disturbed areas that require immediate erosion protection, on exposed soils during the period of short construction delays, or over winter months, and on slopes requiring stabilization until permanent vegetation can be established.

1.4.3.3 Straw Bales

Use of straw bales is discouraged as they are prone to failure. When used, provide bales of native or sterile straw as a temporary structural practice to minimize erosion and sediment runoff. If bales are used, properly place the bales to effectively retain sediment immediately after completing each phase of work (e.g., clearing and grubbing, excavation, embankment, and grading) in each independent runoff area (e.g., after clearing and grubbing in a area between a ridge and drain, place the bales as work progresses, remove/replace/relocate the bales as needed for work to progress in the drainage area). Show on the drawings areas where straw bales are to be used. The CO Representative will approve the final removal of straw bale barriers.

1.4.4 Wind Erosion Control

Apply water or other dust palliatives as necessary to prevent or alleviate dust nuisance. Provide covers for haul trucks transporting materials. It is the Contractor's responsibility to provide rapid clean up of sediments deposited on paved roads

## MCR Jetty A Rehabilitation

### 1.4.5 Tracking Control

Prevent or reduce vehicle tracking from entering a storm drain or watercourse. Tracking control BMPs include: stabilized construction entrance/exit, stabilized construction roadway, and entrance/outlet tire wash. Utilize these BMPs to preclude dirt or mud from being tracked onto public roads or to adjacent water bodies.

### 1.4.6 Non-Stormwater Management BMPs

Non-storm water management BMPs are source control BMPs that prevent pollution by limiting or reducing potential pollutants at their source before they come in contact with storm water. These BMPs are also referred to as "good housekeeping practices" which involve keeping a clean, orderly construction site. The discharge of any debris (litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste) is prohibited.

#### 1.4.6.1 Vehicle and Equipment Cleaning

Minimize or eliminate the discharge of pollutants from vehicle and equipment cleaning operations to watercourses. On-site vehicle and equipment washing is discouraged; however, when it must occur onsite, insure the wash area is located away from drainage facilities or watercourses, and berm the area to contain wash waters and to prevent run-on and runoff, configured with a sump to allow collection and disposal of wash water. Wash waters must not be discharged to storm drains or watercourses.

#### 1.4.6.2 Vehicle and Equipment Fueling

Minimize or eliminate the discharge of fuel spills and leaks into watercourses. Additional requirements are detailed in Section 01 57 20.00 25, ENVIRONMENTAL PROTECTION.

#### 1.4.6.3 Vehicle and Equipment Maintenance

Minimize or eliminate the discharge of pollutants to watercourses from maintenance procedures. Use drip pans or absorbent pads during vehicle and equipment maintenance work that involves fluids, unless the maintenance work is performed over an impermeable surface in a dedicated maintenance area. Refer to the requirements detailed in Section 01 57 20.00 25, ENVIRONMENTAL PROTECTION.

## PART 2 PRODUCTS

### 2.1 COMPONENTS FOR SILT FENCES

#### 2.1.1 Filter Fabric

The geotextile must comply with the requirements of ASTM D4439, and consist of polymeric filaments which are formed into a stable network such that filaments retain their relative positions. The filament must consist of a long-chain synthetic polymer composed of at least 85 percent by weight of ester, propylene, or amide, and must contain stabilizers and/or inhibitors added to the base plastic to make the filaments resistance to deterioration due to ultraviolet and heat exposure. Synthetic filter fabric must contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six months of expected usable construction life at a temperature



range of 0 to 120 degrees F. The filter fabric must meet the following requirements:

FILTER FABRIC FOR SILT SCREEN FENCE		
PHYSICAL PROPERTY	TEST PROCEDURE	STRENGTH REQUIREMENTS
Grab Tensile Elongation (%)	ASTM D4632	100 lbs minimum 30 % maximum
Trapezoid Tear	ASTM D4533	55 lbs. min.
Permittivity	ASTM D4491	0.2 sec <sup>-1</sup>
AOS (U.S. Std Sieve)	ASTM D4751	20-100

2.1.2 Stakes and Posts

Use either wooden stakes or steel posts for fence construction. Wooden stakes utilized for silt fence construction, must have a minimum cross section of 2 by 2 inches and must have a minimum length of 5 feet. Steel posts (standard "U" or "T" section) utilized for silt fence construction, must have a minimum weight of 1.33 pounds/linear foot and a minimum length of 5 feet.

2.1.3 Mill Certificate or Affidavit

Provide a mill certificate or affidavit attesting that the fabric and factory seams meet chemical, physical, and manufacturing requirements specified above. The mill certificate or affidavit must specify the actual Minimum Average Roll Values and must identify the fabric supplied by roll identification numbers. Submit a mill certificate or affidavit signed by a legally authorized official from the company manufacturing the filter fabric.

2.2 COMPONENTS FOR STRAW BALES

If straw bales are utilized, the straw in the bales must be sterile stalks from oats, wheat, rye, barley, rice, or from grasses such as byhalia, bermuda, or native grasses, furnished in air dry condition. The bales must have a standard cross section of 14 by 18 inches. All bales must be either wire-bound or string-tied. The Contractor may use either wooden stakes or steel posts to secure the straw bales to the ground. Wooden stakes utilized for this purpose, must have a minimum dimensions of 2 by 2 inches in cross section and must have a minimum length of 3 feet. Steel posts (standard "U" or "T" section) utilized for securing straw bales, must have a minimum weight of 1.33 pounds/linear foot and a minimum length of 3 feet.

2.3 COMPONENTS FOR FIBER ROLLS OR WATTLES

If fiber rolls or wattles are utilized, they must be manufactured from biodegradable fibers (such as weed-free rice straw) that are wrapped in photo degradable netting. Fiber rolls must range from 8 to 20 inches in diameter by 25-30 feet long.

PART 3 EXECUTION

3.1 INSTALLATION OF SILT FENCE

Extend silt fences a minimum of 16 inches above the ground surface but not exceeding 34 inches above the ground surface. Filter fabric must be from a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are unavoidable, splice filter fabric together at a support post, with a minimum 6 inch overlap, and securely sealed. Excavate a trench approximately 4 inches wide and 4 inches deep on the upslope side of the location of the silt fence. Backfill the 8 by 8 inches trench and compact the soil over the filter fabric. Remove silt fences upon approval by the CO.

3.2 INSTALLATION OF STRAW BALES

Place the straw bales in a double row, lengthwise on the contour, with ends of adjacent bales tightly abutting one another. Install straw bales so that bindings are oriented around the sides rather than along the tops and bottoms of the bales in order to prevent deterioration of the bindings. Entrench and backfill the barrier. Excavated a trench the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. After the bales are staked and chinked (gaps filled by wedging with straw), backfill the excavated soil against the barrier. Backfill soil must conform to the ground level on the downhill side and must be built up to 4 inches against the uphill side of the barrier. Scatter loose straw over the area immediately uphill from a straw bale barrier to increase barrier efficiency. Securely anchor each bale by at least two stakes driven through the bale. Drive the first stake or steel post in each bale toward the previously laid bale to force the bales together. Drive stakes or steel pickets a minimum 18 inches deep into the ground to securely anchor the bales. Provide rows of bales of straw as follows:

- a. Along the downhill perimeter edge of all areas disturbed.
- b. Along the top of the slope or top bank of drainage ditches, channels, swales, etc. that traverse disturbed areas.
- c. Along the toe of all cut slopes and fill slopes of the construction areas.
- d. Perpendicular to the flow in the bottom of new drainage ditches, channels, and swales or existing drainage ditches, channels, swales, etc. that traverse disturbed areas or carry runoff from disturbed areas. Space the rows 25 feet to 300 feet apart based percent slope as follows:.

Slope greater than	Spacing
10% slope	300 ft
15% slope	150 ft
20% slope	100 ft
30% slope	50 ft

Slope greater than	Spacing
50% slope	25 ft

- e. At the entrance to culverts that receive runoff from disturbed areas.

3.3 INSTALLATION OF FIBER ROLLS OR WATTLES

Install fiber rolls or wattles perpendicular to water movement, and parallel to the slope contour. Start building trenches and installing rolls from the bottom of the slope and work up. Construct trenches at contour intervals 25-30 feet apart depending on the steepness of the slope. Lay the rolls along the trenches fitting them snugly against the soil. There must be no gaps between the soil and the rolls or wattles. Use a straight bar to drive holes through the roll and into the soil for the willow or wooden stakes. Drive the stake through the prepared hole, and into the soil. Leave only 1 to 2 inches of the stake exposed above the roll. Install stakes at least every 4 feet apart along the length of the roll or wattle.

3.4 MAINTENANCE, MONITORING, AND INSPECTIONS

3.4.1 SWPPP Amendments

The SWPPP is considered a "living" document. Amend as needed to comply with the Construction General Permit.

- a. Amendments include, but are not limited to: inspection and maintenance sheets, BMP design changes/updates, and any change of authorization.
- b. Submit SWPPP Amendments as often as needed to ensure the SWPPP reflects current site conditions.
- c. Continuously update the SWPPP to include all amendments.
- d. Upon identifying failures or other shortcomings, the QSP and/or QSD must begin implementing repairs or design changes to BMPs within 48-hours of identification. Complete repairs as soon as possible depending upon field conditions, preferably before the next likely storm event and update the SWPPP Corrective Action Form (Appendix E).
- e. Upon identifying failure that requires a design change, the CESCL must submit a SWPPP amendment no later than one week after the failure has been identified.
- f. Upon completion of construction, submit the completed and signed Notice of Termination form.

3.4.2 Monitoring and Inspections

3.4.2.1 Inspection Details

At minimum, inspect the following areas:

- a. Areas that have been cleared, graded, or excavated and that have not yet completed stabilization
- b. All stormwater controls installed to comply with the NPDES permit

- c. Material, waste, borrow, or equipment storage and maintenance areas
- d. All areas where stormwater typically flows within the site

3.4.2.2 Inspection Reports

For each inspection, complete an inspection form, using that provided in the SWPPP, or an alternative format listing the same information. For each inspection conducted, prepare a report summarizing the scope of the inspection. Submit the Inspection Reports to the CO within 24 hours of the inspection as a part of the Contractor's daily Contractor Quality Control (CQC) REPORT. A copy of the inspection reports must be maintained on the job site and kept with the SWPPP. At a minimum, carry out inspections at the following frequency:

- a. At least once every seven calendar days
- b. Within 24-hours after the occurrence of a storm event of 0.25 inches or greater.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 78 39.00 25

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

- 1.1 GENERAL INFORMATION
- 1.2 REFERENCES
- 1.3 SUBMITTALS
- 1.4 RECORD DRAWINGS EXECUTION PLAN
  - 1.4.1 General Requirements
  - 1.4.2 Project Schedule
- 1.5 SURVEYS
  - 1.5.1 Survey Methods
  - 1.5.2 Pre-Construction Survey and Post-Construction Survey Drawings
- 1.6 WORKING AS-BUILT DRAWINGS
  - 1.6.1 General
  - 1.6.2 Monthly Meeting
- 1.7 CAD STANDARDS
- 1.8 PRELIMINARY RECORD DRAWINGS
  - 1.8.1 Requirements
  - 1.8.2 Review and Approval
    - 1.8.2.1 Monthly Review
    - 1.8.2.2 Preliminary CAD Drawings
    - 1.8.2.3 Final Working As-Built Drawings
- 1.9 FINAL RECORD DRAWINGS
  - 1.9.1 General
  - 1.9.2 Electronic Copies
    - 1.9.2.1 General
    - 1.9.2.2 Drafting Standards
  - 1.9.3 Paper Copies
- 1.10 PAYMENT

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section Table of Contents --

SECTION 01 78 39.00 25

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 GENERAL INFORMATION

This Section covers record drawings, as a requirement of the Contract. Record drawings are those which are revised by the Contractor to be used for preliminary and final record drawings submittals showing as-built conditions. Record drawings showing final as-built conditions of the work are defined, but not limited to:

- a. Contract Drawings - Drawings created specifically for this Contract and provided to the Contractor upon Award. As-built drawings are copies of Contract drawings that are revised to show additions and changes occurring during construction, eventually becoming final record drawings.
- b. Contractor Drawings - Drawings must include diagrammatic and design information provided by the Contractor and the Contractor's subcontractors, vendors, or suppliers which meet requirements of and provide additional details of the work required by the Contractor drawings, eventually becoming final record drawings.
- c. Reference Drawings - Drawings provided to the Contractor upon Award for reference. Reference drawings are listed on the Reference Drawing Index sheet.
- d. Designated Reference Drawings - Project maintained drawings designated to be verified and revised by the Contractor to show final as-built conditions as part of this Contract. Designated Reference Drawings are listed on the Reference Drawing Index with Action Key.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

ERDC/ITL TR-09-2	(2009) A/E/C CAD Standard
EM 1110-2-1003	Hydrographic Surveying
EM 1110-1-1005	Control and Topographic Surveying

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following must be submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Record Drawings Execution Plan; G

Pre-Construction Survey and Post-Construction Surveys; G

Pre-Construction Survey and Post-Construction Survey Drawings; G

Volume and Tonnage Calculations; G

Working As-Built Drawings

SD-11 Closeout Submittals

Preliminary Record Drawings; G

Including Preliminary CAD Drawings and Final Working As-Built Drawings

Final Record Drawings; G

1.4 RECORD DRAWINGS EXECUTION PLAN

1.4.1 General Requirements

Submit for approval a plan detailing how the Contract requirements for Record Drawings, as set forth in this Section, will be met. Identify Contractor personnel who must be responsible for maintaining marked up as-built conditions during the prosecution of the work and identify an authorized Contractor representative who will certify the monthly review in conjunction with periodic progress payments. Identify Contractor personnel who must be responsible for meeting the the Preliminary Record Drawing submittal requirements at the time of Final Inspection(s), the Final Record Drawings submittal requirements, and describe the process of how these requirements will be met. Include the name and contact information of service providers to the Record Drawings execution process if the requirements will be partially fulfilled by outside firms. The monthly Contractor-certified working as-built drawings will be signed by the CO and the authorized representative of the Contractor and must then be attached to the periodic progress payment request.

1.4.2 Project Schedule

Time required to accomplish the requirements of this Section must be included in the Project Schedule in accordance with Section 01 32 01.00 25, PROJECT SCHEDULE.

1.5 SURVEYS

1.5.1 Survey Methods

a. Conduct a Pre-Construction Survey and Post-Construction Surveys for each construction season for documenting jetty conditions in accordance with EM 1110-2-1003 and EM 1110-1-1005. Quality check the Pre-Construction and Post-Construction surveys including the Drawings and CAD data files and deliver to the COR as soon as completed. Extend the surveys 100 feet beyond the expected repair area for pre-construction. The post-construction survey must be at least 25

feet beyond the repair area. Hydrosurveys conducted in conjunction with these surveys must be run at high tide and low wave conditions in an effort to capture the toe area. Conduct and submit the pre-construction surveys, including the jetty demonstration section to the Government for approval prior to initial placement of any materials.

b. Verify quantities by performing the pre-construction survey just prior to the construction season (and after the winter storm season). Submit revised volume and tonnage calculations for Government approval after all surveys have been completed and at least 21 days prior to scheduled placement.

c. The pattern and timing of interim condition surveys must be sufficient to control operations. Collect post-construction survey data upon completion of each set before haul road material is placed and construction equipment is advanced to the next set. Submit the post-construction surveys to the COR within one week (weather permitting) following completion of the jetty repair project. Take cross sections for each survey at 25-foot stations along the jetty centerline. Orient the cross-sections perpendicular to the jetty centerline. Each surveyed cross section must be represented by measurement of the jetty surface obtained at an interval of 5 ft, include breakpoints in jetty grade, centerline location and the intersection of water elevation on the jetty at the time of survey. Extend surveys to the lowest elevation of stone placement on each respective cross section. Survey both the west and east sides of the jetty and show in each cross section. Orient cross-section drawings with respect to the jetty centerline and clearly label each axis and include the cross section jetty station. Report surveyed elevations east of the jetty centerline as a negative offset distance from the centerline. Report surveyed elevations west of the jetty centerline as a positive offset distance from the centerline. Determine the grade of the crest by taking the average elevation of stones along the crest cross-section.

#### 1.5.2 Pre-Construction Survey and Post-Construction Survey Drawings

Pre-construction survey drawings must show the jetty centerline (dashed brown), pre-construction jetty surface (solid blue line), and repair template (solid green line). Post-construction drawings must show the same information as the pre-construction drawings with the addition of the completed repair grade for placed armor stone (solid red line). Print survey drawings such that up to 10 cross-sections are legibly shown per page. All line elements/colors for each cross section must be easily discernable. The vertical and horizontal scales must be equal and grid lines must be included at each major increment. Transmit CAD data files to the COR either electronically or on stable media (CD or DVD).

### 1.6 WORKING AS-BUILT DRAWINGS

#### 1.6.1 General

a. During the execution of the work, mark up one full-size paper set of Contract, Reference, Designated Reference, and Contractor and Shop Drawings in accordance with this Section and Section 01 33 00, SUBMITTAL PROCEDURES, subparagraph entitled Drawings, to show the current as-constructed conditions. Keep working as-built drawings current on a continuous basis and available on the job site at all



times. By means of details and notes, accurately and neatly record changes, as they occur, from the Contract and Reference drawings that are made in the work and additional information uncovered in the course of construction. Mark up the hard copy of the working as-built drawings, including details and notes, in accordance with the Project's hard copy as-built standards.

b. Working as-built drawings are part of the permanent records of this Contract and will be retained by the Government upon approval. Record drawings must include, but not be limited to:

- (1) Contract Drawings - Use working as-built Contract drawings, and additional drawings or sketches which may be required to thoroughly describe deviations or additions to the Contract Drawings, to revise the Government-provided Computer-Aided Design (CAD) Contract Drawings.
- (2) Contractor and Shop Drawings - Incorporate working as-built Contractor and Shop Drawing field conditions into the Final Record Drawing Package to ensure the ability to cross-reference between Contract, Reference, Designated Reference, and Shop Drawings.
- (3) Designated Reference Drawings - Use working as-built Designated Reference Drawings to create new or revise Government-provided CAD drawings to show as-constructed revisions.

#### 1.6.2 Monthly Meeting

Coordinate and Schedule monthly meeting with the Contracting Officer to review the current working as-built drawings for accuracy and completeness.

#### 1.7 CAD STANDARDS

a. The CAD standards mandated by US Army Corps of Engineers (USACE) and this Contract is ERDC/ITL TR-09-2. ERDC/ITL TR-09-2 is available, under the District CADD Standards, at the following web link: <http://www.nwp.usace.army.mil/About/Standards.aspx>. The web link contains the guides, libraries, and templates that must be utilized by the Contractor to produce CAD files that are compliant with the CAD standards required in this Contract. The digital support files in this web link are in .dgn format (MicroStation).

b. Computer-Aided Design (CAD) work for this Contract must be accomplished with personnel that are knowledgeable and experienced with ERDC/ITL TR-09-2. Employ proficient personnel for the creation of CAD files.

c. Additions and corrections to the Contract and designated reference drawings must be equal in quality and detail to that of the original drawings. Format, line colors, line weights, line types, lettering, level names, symbols, sheet space, title block, and drawing border must be the same as that used on the original Contract and designated reference drawings. The folder structure, CAD file names, and reference file system must remain the same as the original drawing structure, system, and file naming convention.

## 1.8 PRELIMINARY RECORD DRAWINGS

### 1.8.1 Requirements

The following requirements relate to all systems provided under this Contract including, but not limited to: connections, distances, and components that interact with one another across an interface. Interfaces can be, but are not limited to: liquid, gaseous, steel, concrete, power transmission systems, transducers, digital signal processing, communications, and electrical. Drawing modifications and revisions must be in accordance with paragraph CAD STANDARDS. The preliminary and final record drawings must show, but not be limited to:

a. Civil - Use existing benchmarks to locate subsurface utilities. Show dimensions on the drawings between the benchmarks and the utilities. Locate valves, splice boxes, and similar appurtenances by dimensioning along the utility run from a reference point. Record the minimum depth below the surface of each run. Show dimensions between the benchmarks and nearby existing structures. Correct the grade, elevations, cross section, alignment of roads, earthwork, structures, or utilities if changes were made from Contract drawings. Show the location, topography, subsurface work, invert elevations, ground improvements, and grades of permanent ditches and outlets installed or affected as a part of the Contract.

Location control must be in survey feet, include northing and easting coordinates in an identified state plane coordinate system, elevations in an identified North American Vertical Datum (NAVD), and include dimensions between existing benchmarks and alignments (i.e. dam axis, navigation lock axis, powerhouse axis, roads, railways, fish ladders), to appropriate locations of the constructed and installed elements of this Contract.

b. Modifications (include within change order price the cost to change working and final record drawings to reflect modifications).

c. Corrections related to approved RFI's and submittal variances.

d. Corrections resulting from final inspection(s).

### 1.8.2 Review and Approval

#### 1.8.2.1 Monthly Review

Hold regular meetings at the specified interval to review the current working as-built drawings for accuracy and completeness. The cover sheet must be signed and dated by authorized Contractor's representative to document and certify the review. The CO will also sign the cover sheet if attending the meeting. Discrepancies noted during the review must be amended prior to progress payment approval.

#### 1.8.2.2 Preliminary CAD Drawings

Concurrent with working as-built drawing redlines, submit electronic CAD as-built drawing files 30 calendar days after completion of each definable feature of work, as established by the QC Plan in Section 01 45 00.00 25, QUALITY CONTROL, for review and approval. Electronic files must be in accordance with paragraph CAD STANDARDS, above. The preliminary CAD drawings must incorporate as-built redlines, updated to current conditions,

for the definable feature of work. Allow 30 calendar days, exclusive of mailing time, for Government review and approval. The CO will review preliminary CAD drawings for accuracy and completeness and return them to the Contractor for required corrections, changes, additions, and deletions. If changes are required, make such revisions within 30 calendar days and re-submit to the Government for review and approval.

#### 1.8.2.3 Final Working As-Built Drawings

Final construction physical completion and within Thirty calendar days submit five complete 1/2-size sets of as-built drawing redlines, marked "Draft". Allow 30 calendar days, exclusive of mailing time, for Government review and approval. The CO will review final working as-built drawings for accuracy and completeness and return them to the Contractor for required corrections, changes, additions, and deletions. If changes are required, make such revisions within 30 calendar days, and re-submit five 1/2-size sets to the Government for review and approval. Final inspection of the jetty will not be authorized to proceed until the Government has received the preliminary record drawings for review.

### 1.9 FINAL RECORD DRAWINGS

#### 1.9.1 General

Allow 30 calendar days, exclusive of mailing time, for Government review and approval. The CO will review final record drawings for accuracy and completeness and return them to the Contractor for required corrections, changes, additions, and deletions. If revisions are required, make such revisions within 30 calendar days, and re-submit to the Government for review and approval. Paper prints, electronic CAD, and PDF files of the final record drawings and shop drawings submitted will become the property of the Government upon final approval.

#### 1.9.2 Electronic Copies

##### 1.9.2.1 General

Thirty calendar days from acceptance of the preliminary electronic CAD record drawings, submit a complete set of final electronic CAD files on permanently labeled CD-ROM, CD-R discs only. Final record drawings must be in accordance with paragraph CAD STANDARDS. Submit final record drawing files in the same format as originally provided by the Government. Electronic copies of existing Contract drawings contained in this Contract and Designated reference drawings will be made available to the Contractor. Use working as-built drawings to revise Government-provided electronic drawings to show as-constructed revisions. A list of firms capable of performing this work is available on the ACEC of Oregon website at [http://www.acecoregon.org/files/list\\_of\\_AutoCad-Microstation\\_firms.pdf](http://www.acecoregon.org/files/list_of_AutoCad-Microstation_firms.pdf). Publish final approved record drawings and shop drawings to Adobe PDF and include in the final record drawing package on CD-R with data organized identically to the complete hard copy package.

##### 1.9.2.2 Drafting Standards

a. General Drafting Standards. The drafting standards used in the provided CAD electronic files must be in accordance with paragraph CAD STANDARDS. The Government will furnish the cell and font libraries and the standard border for use in preparing the drawings. Upon request, the Government will provide documentation and specific drafting

requirements.

b. As-Built Drafting Standards:

(1) A record of revisions must remain in the title block; revision triangles are to be removed from the rest of the drawings.

(2) Add the final revision notation to the title block of "Record Drawings/As-Built Conditions" or "Revised Record Drawings/As-Built Conditions."

(3) Add as-built block to all drawings with information complete. A sample will be provided.

1.9.3 Paper Copies

Within 30 calendar days from acceptance of the preliminary record drawings, submit one complete full-size sets and three complete 1/2-size sets of all final record drawings, in accordance with this Section and Section 01 33 00, SUBMITTAL PROCEDURES, subparagraph Drawings. Amend discrepancies noted during the review and re-submit one complete full-size sets and three complete 1/2-size sets to the Government for review and approval.

1.10 PAYMENT

a. Working as-built marked prints and electronic CAD files will be jointly inspected for accuracy and completeness by the CO and an authorized representative of the Contractor prior to submission of the monthly pay estimate. Failure to keep working as-built drawings and electronic CAD files maintained on a current basis, in accordance with paragraphs WORKING AS-BUILT DRAWINGS and PRELIMINARY RECORD DRAWINGS, will be sufficient justification to withhold a percentage of the monthly pay estimate in an amount representing the estimated cost of completing the preliminary record drawings.

b. Separate payment will not be made for compliance with this Section for the preparation of the working as-built Contract, Shop, and Designated Reference drawing redlines. All costs associated with the working as-built drawing requirements of this Section are considered incidental to the work.

c. Final Record Drawings - No partial payment will be made. Full payment will be made upon acceptance of complete and final electronic and hard copy Final Record Drawings. Should the Contractor fail to provide the final record drawings as required, despite the nature of all other performance ratings, the Contractor may be issued a final unsatisfactory evaluation.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 31 - EARTHWORK

SECTION 31 11 00.00 25

CLEARING AND GRUBBING

PART 1 GENERAL

1.1 DESCRIPTION

1.2 SUBMITTALS

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 PROTECTION OF PAVEMENT

3.2 CLEARING

3.3 GRUBBING

3.4 DISPOSAL OF MATERIALS

-- End of Section Table of Contents --

SECTION 31 11 00.00 25

CLEARING AND GRUBBING

PART 1 GENERAL

1.1 DESCRIPTION

Clear and grub the portions of the designated work area as required for the Contractor's operations and stockpiling of materials. Prepare a clearing and grubbing plan showing the areas to be cleared including existing woody debris located on the jetty and the on-site wetlands. The required clearing and grubbing will include special consideration and care to effectively process and remove the onsite invasive species. Perform the required clearing and grubbing when these invasive species are dormant and not producing seeds. Include location of disposal landfill. All temporary erosion control measures must be in place prior to clearing and grubbing in accordance with the plans and specifications.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Clearing and Grubbing Plan; G

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 PROTECTION OF PAVEMENT

Keep pavement free of dirt and debris at all times. Metal-tracked equipment is prohibited from traveling on any existing and/or new bituminous pavement or restoration patches without pavement protection. Roadways through the Coast Guard Station that need to be widened must be approved by the CO prior to disturbance of those roads. Wetlands may exist along the Coast Guard road and may not be permanently impacted.

3.2 CLEARING

Clearing must consist of the felling, trimming, cutting and disposal of the trees and other vegetation designated for removal, including downed timber, snags, brush, woody debris and rubbish occurring within the areas to be cleared. Trees, stumps, roots, brush, and other vegetation in areas to be cleared must be cut off flush with or below the original ground surface. Clearing is not allowed within 20 feet of Ordinary High Water.

3.3 GRUBBING

Grubbing consists of the removal and disposal of stumps, roots larger than 3 inches in diameter, and matted roots from the designated grubbing areas. Remove material to be grubbed to a depth of not less than 18 inches below the original surface level. Fill depressions made by grubbing with

suitable material and compact to make the surface conform with the original adjacent surface of the ground.

#### 3.4 DISPOSAL OF MATERIALS

Dispose of stumps, roots, brush, woody debris removed from the jetty repair section and wood not utilized in road construction of the MDAR if the MDAR is utilized, and other refuse obtained from the clearing and grubbing operations at an approved disposal site. The woody debris on-site may be chipped and left on-site to reduce volume; relocated elsewhere on-site as shown; or off-site as approved by the CO. Following construction, spread woody debris around the site to provide habitat diversity. Burning of waste materials will not be permitted.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 32 - EXTERIOR IMPROVEMENTS

SECTION 32 12 16.00 25

HOT-MIX ASPHALT (HMA) FOR ROADS

PART 1 GENERAL

- 1.1 DESCRIPTION
- 1.2 REFERENCES
- 1.3 SUBMITTALS
- 1.4 SYSTEM DESCRIPTION
  - 1.4.1 Asphalt Mixing Plant
  - 1.4.2 Hauling and Placing Equipment

PART 2 PRODUCTS

- 2.1 ASPHALT CONCRETE MIX DESIGN
- 2.2 TACK AND PRIME COATS
- 2.3 CRACK SEALANT

PART 3 EXECUTION

- 3.1 PREPARATION OF UNDERLYING SURFACES
  - 3.1.1 Removal of Existing Asphalt
  - 3.1.2 Underlying Existing Asphalt
  - 3.1.3 Underlying Base Course
- 3.2 DIGOUT METHOD
- 3.3 RUBBELIZE/PULVERIZE METHOD
- 3.4 OVERLAY METHOD
- 3.5 WEATHER LIMITATIONS
- 3.6 APPLICATION OF TACK AND PRIME COATS
- 3.7 PREPARATION OF HOT-MIX ASPHALT MIXTURE
- 3.8 TRANSPORTING AND PLACING
  - 3.8.1 Transporting
  - 3.8.2 Placing
- 3.9 COMPACTION OF MIXTURE
- 3.10 JOINTS AND SMOOTHNESS
- 3.11 SHOULDER REPAIR
- 3.12 DISPOSAL OF WASTE MATERIAL

-- End of Section Table of Contents --



SECTION 32 12 16.00 25

HOT-MIX ASPHALT (HMA) FOR ROADS

PART 1 GENERAL

1.1 DESCRIPTION

Repair asphalt pavement damaged by construction, including damage resulting from the import and haul of materials, as described in Section 01 10 10.00 25, CONTRACTOR'S OPERATIONS AND REQUIREMENTS and in accordance with these specifications. At a minimum, the thickness of the asphalt pavement repairs must be the same as the original pavement. The pavement repairs must include the repair of the underlying aggregate base course and aggregate road shoulders as specified in this specification section. The repair sections must be of adequate size to allow for suitable compaction/paving equipment to be used. The intent of this work is to patch road beginning from the USACE property line through the Coast Guard Station as needed during construction and after the first work season and repave the road or portions of at the end of construction if necessary.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

AASHTO M 156 (2013) Standard Specification for Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures

AASHTO M 208 (2001; R 2009) Standard Specification for Cationic Emulsified Asphalt

ASTM INTERNATIONAL (ASTM)

ASTM D1461 (2011) Moisture or Volatile Distillates in Bituminous Paving Mixtures

ASTM D1557 (2012) Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup>) (2700 kN-m/m<sup>3</sup>)

ASTM D2041/D2041M (2011) Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures

ASTM D2489/D2489M (2008) Estimating Degree of Particle Coating of Bituminous-Aggregate Mixtures

ASTM D6938 (2010) Standard Test Method for In-Place Density and Water Content of Soil and

Soil-Aggregate by Nuclear Methods (mustow  
Depth)

ASTM D6690

(2012) Standard Specification for Joint  
and Crack Sealants, Hot Applied, for  
Concrete and Asphalt Pavements

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT)

WSDOT

(2014) Standard Specifications for Road,  
Bridge, and Municipal Construction

### 1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

#### SD-03 Product Data

Asphalt Concrete Mix Design; G

The name and location of the proposed asphalt plant and aggregate sources and the manufacturer's job mix design and test results.

#### SD-06 Test Reports

Contractor Quality Control Tests; G

Provide test report for the asphalt mix in accordance with WSDOT Section 5.04 including aggregate gradation, asphalt content, temperatures, aggregate moisture, moisture in the asphalt mixture, laboratory air voids analysis, in-place density, grade and smoothness.

#### SD-07 Certificates

Asphalt Concrete Mix Design; G

Certificate of compliance certifying that the asphalt cement, any additives, aggregate, and mix design comply with the requirements of the WSDOT Standard Specifications.

Tack and Prime Coats; G

Certificate of compliance certifying that the tack coat and prime coat comply with AASHTO M 208.

### 1.4 SYSTEM DESCRIPTION

Perform the work consisting of pavement courses composed of mineral aggregate and asphalt material heated and mixed in a central mixing plant and placed on a prepared course. HMA designed and constructed in accordance with this section must conform to the lines, grades, and thicknesses in accordance with the drawings and specifications. Construct each course to the required depth, section, or elevation and roll, finish, and approve it before the placement of the next course.

## MCR Jetty A Rehabilitation

### 1.4.1 Asphalt Mixing Plant

Plants used for the preparation of hot-mix asphalt must conform to the requirements of AASHTO M 156 and WSDOT Section 5-04.3(1).

### 1.4.2 Hauling and Placing Equipment

All hot-mix asphalt hauling and placing equipment must be in accordance with WSDOT Sections 5-04.3(2), 5-04.3(3), and 5-04.3(4).

## PART 2 PRODUCTS

### 2.1 ASPHALT CONCRETE MIX DESIGN

The work must be done using a hot laid asphalt plant mix. The asphalt mix must conform to WSDOT Standard Specifications for HMA Class 1/2-inch bituminous pavement. The mix design must be made by the asphalt manufacturer and submitted to the Contracting Officer a minimum of 14 days prior to scheduled placement of asphalt. Commercial HMA Evaluation in accordance with WSDOT Section 5-04.3(7) will be used for acceptance. The asphalt submittal must include the Contractor quality control tests in accordance with WSDOT Section 5.04 including aggregate gradation, asphalt content, and void analysis.

### 2.2 TACK AND PRIME COATS

Tack coat must be Grades CSS-1, CSS-1h, CMS-2, CMS-2S, CMS-2h, CRS-1, CRS-2, HFRS-2, or HFMS-2 in accordance with AASHTO M 208. Prime coat must be Grades CSS-1, CSS-1h, or CMS-2 in accordance with AASHTO M 208.

### 2.3 CRACK SEALANT

Sealing material for sealing cracks must be a hot-applied material conforming to ASTM D6690.

## PART 3 EXECUTION

### 3.1 PREPARATION OF UNDERLYING SURFACES

#### 3.1.1 Removal of Existing Asphalt

In areas where repair of existing pavement is required, the existing pavement must be removed to prepare a foundation for placing new surfacing. All areas to be repaired shall be cut and/or trimmed with a pavement saw. All saw cuts shall be made to produce straight runs with vertical faces for the patched areas. Areas where pavement raveling occurs shall be corrected by cutting square or rectangular shaped patches with one pair of cut faces at right angles to the direction of the repair. All objectionable pavement base rock shall be removed to the depth necessary to permit thorough compaction of all replaced materials below final surface grade. Leveling course and asphalt concrete shall be placed within a tolerance of plus or minus 0.02 feet. Repair areas shall uniformly tie into surrounding grades and slope to drain.

#### 3.1.2 Underlying Existing Asphalt

When preparing underlying existing asphalt, skin patch depressions less than 1-1/2 inches deep and remove pavement and repair subgrade for depressions more than 1-1/2 inches deep. At edges with existing structures

(i.e. pavement, curbs, manholes), reshape existing paving a minimum of 5 feet from structure so that overlay pavement connects smoothly to established grades. Immediately before placing the asphalt, clean the underlying existing pavement of dust and debris.

### 3.1.3 Underlying Base Course

Before placing the hot-mix asphalt, the underlying base course must be cleaned of loose and foreign matter and inspected for adequate compaction, smoothness, grade, and cross section. The underlying base course must provide sound structural support for the asphalt pavement repair, must be compacted to a minimum of 95 percent of the laboratory maximum density, and must be a minimum of 4 inches thick or as currently exists, whichever is greater. If portions are found to not meet these requirements, such portions must be repaired prior to the pavement installation. If additional base course is required, the material must be in accordance with WSDOT Section 9-03.9(3). Base course must not be placed on soft, muddy, or frozen subgrade. A mist spray of water must be applied as needed to replace moisture lost by evaporation. The laboratory and field density tests for the base course must be in accordance with ASTM D1557, Method D and ASTM D6938, respectively.

### 3.2 DIGOUT METHOD

Sawcut to a clean edge and remove asphalt. Restore subgrade to original elevation with approved compacted subgrade material (crushed well graded rock minimum 20% fines). Assume 4 inches of subgrade repair, including removal and replacement of failing subgrade, will be required in addition to restoring the subgrade to the original elevation. If the depth of the dig out is 4 inches or less, measured from the existing road surface, the use of asphalt instead of subgrade material is allowed. Reuse of pulverized asphalt may be acceptable as subgrade material if it can be reduced to an acceptable size and adequate compaction can be achieved. Machine spread approved HMA mix and vibratory roller compact to a minimum design depth of 2 inches. Final HMA thickness shall not exceed 4 inches when used as a subgrade material replacement. Install approved shoulder rock as necessary to provide a one-foot wide shoulder at the same elevation as the edge of the edge of the asphalt.

### 3.3 RUBBELIZE/PULVERIZE METHOD

Rubbelize the remains of the asphaltic road surface so that no particle exceeds 4 inches in diameter. Grade rubbelized surface to provide positive drainage and roller compact. Place 2 inches of ¾" minus (or approved equal) rock on top of the rubbelized/compacted surface, grade, and compact. Machine spread approved HMA mix to a depth of 0.2 feet (2.5 inches). Vibratory Roller Compact to a minimum design depth of 2 inches. Install approved shoulder rock as necessary to provide a one-foot wide shoulder at the same elevation as the edge of the edge of the asphalt.

### 3.4 OVERLAY METHOD

Clean existing asphalt surface. Machine spread approved HMA mix to a depth of 0.2 feet (2.5 inches). Vibratory Roller Compact to a minimum design depth of 2 inches. Install approved shoulder rock as necessary to provide a one-foot wide shoulder at the same elevation as the edge of the edge of the asphalt.

### 3.5 WEATHER LIMITATIONS

Asphalt courses must be constructed only when the leveling course is dry and when the weather is not rainy. Asphalt courses must not be constructed when the surface temperature is below 50 degrees F.

### 3.6 APPLICATION OF TACK AND PRIME COATS

Apply a prime coat to underlying aggregate base coarse at a rate of 0.20 to 0.75 gallons per square yard of surface. Apply a tack coat to underlying and abutting existing asphalt at a rate of 0.05 to 0.10 gallons per square yard.

### 3.7 PREPARATION OF HOT-MIX ASPHALT MIXTURE

The aggregates and the asphalt cement must be weighed or metered and introduced into the mixer in the amount specified by the job mix formula. Heat and dry the aggregate for the mixture prior to mixing. No damage must occur to the aggregates due to the maximum temperature and rate of heating used. The temperature of the aggregate and mineral filler must not exceed 350 degrees F when the asphalt cement is added. The temperature must not be lower than is required to obtain complete coating and uniform distribution on the aggregate particles and to provide a mixture of satisfactory workability. Heat the asphalt cement material avoiding local overheating and providing a continuous supply of the asphalt material to the mixer at a uniform temperature. The temperature of unmodified asphalts must be no more than 325 degrees F when added to the aggregates. Mix the combined materials until the aggregate obtains a uniform coating of asphalt binder and is thoroughly distributed throughout the mixture. Wet mixing time must be the shortest time that will produce a satisfactory mixture, but no less than 25 seconds for batch plants. Establish the wet mixing time for all plants based on the procedure for determining the percentage of coated particles described in ASTM D2489/D2489M, for each individual plant and for each type of aggregate used. The wet mixing time will be set to at least achieve 95 percent of coated particles. The moisture content of all hot-mix asphalt upon discharge from the plant must not exceed 0.5 percent by total weight of mixture as measured by ASTM D1461.

### 3.8 TRANSPORTING AND PLACING

#### 3.8.1 Transporting

Transport the hot-mix asphalt from the mixing plant to the site in clean, tight vehicles. Schedule deliveries so that placing and compacting of mixture is uniform and continuous. Hauling over freshly placed material will not be permitted until the material has been compacted as specified, and allowed to cool to 140 degrees F.

#### 3.8.2 Placing

Place and compact the mix in accordance with WSDOT Section 5-04.3(9) at a temperature suitable for obtaining density, surface smoothness, and other specified requirements. Asphalt must be placed in layers between 2 and 3 inches thick. Upon arrival, place the mixture to the full width of the repair section; it must be struck off in a uniform layer of such depth that, when the work is completed, it will have the required thickness, conform to the grade and contour indicated, and slope to drain with a tolerance of plus or minus 0.02 feet. Regulate the placement rate to eliminate pulling and tearing of the asphalt mat. Unless otherwise

permitted, placement of the mixture must begin along the centerline of a crowned section or on the high side of areas with a one-way slope. Joints in one course must offset the joint in the course immediately below by at least 1 foot; however, the joint in the surface course must be at the centerline of the pavement. On isolated areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the mixture may be spread and luted by hand tools.

### 3.9 COMPACTION OF MIXTURE

After placing, the mixture must be thoroughly and uniformly compacted in accordance with WSDOT Section 5-04.3(10). Compact the mixture to a minimum of 91 percent maximum density per ASTM D2041/D2041M for lower lifts and compact the final (surface) lift to a minimum of 92 percent maximum density per ASTM D2041/D2041M. Compaction must be completed before the mix temperature falls below 180 degrees F. An asphalt thermometer must be provided by the Contractor for the Government's use. Compact the surface as soon as possible without causing displacement, cracking or shoving. The sequence of rolling operations and the type of rollers used must be at the discretion of the Contractor. The speed of the roller must, at all times, be sufficiently slow to avoid displacement of the hot mixture and be effective in compaction. Any displacement occurring as a result of reversing the direction of the roller, or from any other cause, must be corrected at once. Continue rolling until the surface is of uniform texture, true to grade and cross section, and the required field density is obtained. To prevent adhesion of the mixture to the roller, keep the wheels properly moistened but excessive water will not be permitted. In areas not accessible to the roller, the mixture must be thoroughly compacted with hand tampers. Any mixture that becomes loose and broken, mixed with dirt, contains check-cracking, or is in any way defective must be removed full depth, replaced with fresh hot mixture and immediately compacted to conform to the surrounding area. This work must be done at the Contractor's expense. Skin patching will not be allowed.

### 3.10 JOINTS AND SMOOTHNESS

The formation of joints must be performed ensuring a continuous bond between the courses and to obtain the required density. All joints must have the same texture as other sections of the course and meet the requirements for smoothness and grade. The asphalt pavement joints and surface smoothness must meet WSDOT Sections 5-04.3(12) and 5-04.3(13).

### 3.11 SHOULDER REPAIR

Repair and re-establish the aggregate shoulders damaged during construction to the pre-construction lines, grades, and surface condition. Place aggregate base course material conforming to WSDOT Sections 9-03.9(3) with appropriate equipment to produce a uniform surface. Compact shoulder material by rolling with a steel-wheeled roller weighing at least 8 tons.

### 3.12 DISPOSAL OF WASTE MATERIAL

All waste material from the pavement repair work must be disposed at an approved off-site disposal site.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 32 - EXTERIOR IMPROVEMENTS

SECTION 32 90 00.00 25

SITE RESTORATION

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 SUBMITTALS
- 1.3 DEFINITIONS
  - 1.3.1 Planting Areas
  - 1.3.2 Woody Debris
- 1.4 DESCRIPTION
  - 1.4.1 Summary
  - 1.4.2 Planting
- 1.5 REVEGETATION CONTRACTOR QUALIFICATIONS
  - 1.5.1 Qualifications
  - 1.5.2 Certified Growers
  - 1.5.3 Revegetation Plan
- 1.6 DELIVERY, STORAGE, AND HANDLING
- 1.7 WEED MANAGEMENT
  - 1.7.1 Transport
  - 1.7.2 Mulch
- 1.8 MONITORING
- 1.9 PLANT TIMING

PART 2 PRODUCTS

- 2.1 HYDROSEED
- 2.2 WATER
- 2.3 BONDED FIBER MATRIX (BFM)
- 2.4 TACKIFIER

PART 3 EXECUTION

- 3.1 EXTENT OF WORK
- 3.2 SITE PREPARATION
  - 3.2.1 Soil Preparation
  - 3.2.2 Woody Debris Areas
- 3.3 HYDROSEEDING
  - 3.3.1 Hydroseeding Dates
  - 3.3.2 Hydroseeding Process
  - 3.3.3 Application
  - 3.3.4 Hydromulch Timing
  - 3.3.5 BROADCAST SEEDING
- 3.4 WWHAM-CERTIFIED WEED-FREE STRAW
- 3.5 IRRIGATION
  - 3.5.1 Irrigation Establishment Period
  - 3.5.2 Water Supply From Offsite Fire Hydrants
- 3.6 CLEAN UP
- 3.7 MAINTENANCE
  - 3.7.1 Watering
  - 3.7.2 Hydroseeded Estimated Survival Requirements
  - 3.7.3 Bare Soil
  - 3.7.4 Noxious Weeds

MCR Jetty A Rehabilitation

3.8 ESTABLISHMENT PERIOD

3.9 FINAL INSPECTION

-- End of Section Table of Contents --



SECTION 32 90 00.00 25

SITE RESTORATION

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

REVISED CODE OF WASHINGTON (RCW)

15.49 RCW Seeds

TREE CARE INDUSTRY ASSOCIATION (TCIA)

TCIA Z133.1 2006 American National Standard for  
Arboricultural Operations - Pruning,  
Repairing, Maintaining, and Removing  
Trees, and Cutting Brush - Safety  
Requirements

WASHINGTON STATE ADMINISTRATIVE CODE (WAC)

WAC 16-301 General Seed Regulations

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Revegetation Plan; G

SD-07 Certificates

Revegetation Contractor Qualifications; G

Wwham; G

Certification for weed free straw (if straw is to be used on-site).

1.3 DEFINITIONS

1.3.1 Planting Areas

A Planting Area is defined as an area containing one or a combination of the following plant types: shrubs, trees, grasses, and perennial forbs

1.3.2 Woody Debris

A habitat treatment within a desired area to promote the natural

## MCR Jetty A Rehabilitation

enhancement of flora and fauna by retention and/or placement of pieces of woody debris or salvaged logs measuring a minimum of 4 inches in diameter at the largest end and a minimum of 4 feet in length. Evenly distribute woody debris as individuals, clumps or small piles not to exceed 3 feet high.

### 1.4 DESCRIPTION

#### 1.4.1 Summary

This Section covers the requirements for permanent revegetation of the site. Specific requirements include site preparation, seeding, planting, and mulching of areas to be permanently revegetated. Provide all materials, labor, and equipment necessary to complete the work as specified herein, to apply specified treatments to all areas designated for permanent revegetation. Perform all work in accordance with applicable requirements of TCIA Z133.1

#### 1.4.2 Planting

Approximately 7 acres of area is available for contractor staging and storage. The disturbed area must be seeded or hydroseeded with native seed mix approved by CO.

### 1.5 REVEGETATION CONTRACTOR QUALIFICATIONS

#### 1.5.1 Qualifications

A Landscape Contractor licensed to conduct business in the State of Washington must complete the revegetation work. The Landscape Contractor must have a minimum of five years of relevant experience actively and directly developing and installing native habitat restoration plans in western Washington/western Oregon, including documented, successful experience with native plant grass seeding, noxious weed control, livestock collection and installation, and installation of upland container-grown stock.

#### 1.5.2 Certified Growers

Refer to the following link for WSDA - 2013 WWHAM Certified Growers.  
<http://agr.wa.gov/PlantsInsects/WWHAM/docs/WWHAMCertifiedGrowers.pdf>

#### 1.5.3 Revegetation Plan

a. Replant where disturbance occurs within the construction limits due to construction activities for this project. Submit a Revegetation Plan to the CO for approval prior to the disturbance or removal of vegetation. Retain the services of a Washington licensed Landscape Architect to prepare the plan. Disturbed areas include but are not limited to haul roads, turnouts, staging areas, and other areas disturbed by construction activities.

b. Submit Revegetation Plan for review at least 30 days Prior to any proposed plantings.

c. Revegetation Plan must include the following which are described throughout this Section:

- (1) Revegetation Contractor Qualifications

## MCR Jetty A Rehabilitation

- (2) Mulches and Topdressing
- (3) Proposed Seed Mix, sprigs, and/or rooted stock and Seed Source
- (4) Include a diverse palette of native forbs and shrubs endemic to this location. Identify an appropriate reference site and include plant densities of forbs and shrubs similar to the selected reference site. Include appropriate plant species, planting location and densities in order to successfully establish in existing site conditions, which includes but is not limited to artificial fill materials, potential exposure to brackish/salt water spray, and estuarine exposure.
- (4) Proposed Water Source
- (5) Bonded Fiber Matrix
- (6) Tackifier
- (7) Time restrictions
- (8) Maintenance Data
- (9) Irrigation during warranty period

### 1.6 DELIVERY, STORAGE, AND HANDLING

Protect materials from drying out and from contamination during delivery, on-site storage, and handling.

### 1.7 WEED MANAGEMENT

#### 1.7.1 Transport

Control transport of weeds to and from the Project Site. Weed management includes the prevention of introduction of weeds to the site, plus the removal of specified weeds from the site. Construction equipment, including excavators and trucks, hydroseeding equipment, personal vehicles, and hand tools used on-site must be kept free of weed seed and propagules prior to entering and leaving the site to reduce transport of seeds and plant material to and from weed infested areas.

#### 1.7.2 Mulch

All straw (bales or loose), wood fiber hydromulch, or other plant fiber mulch used on the Project Site, access road and construction areas must be certified in writing by the supplier as weed-free.

### 1.8 MONITORING

Develop a water monitoring program for surface and groundwater on the project site and consistent with the water management program utilized during construction operations. Using local NOAA Reporting Station record daily rainfall as a required entry for the Quality Control Report.

### 1.9 PLANT TIMING

Do not conduct seeding when wind velocity exceeds 7 mph or when soils are

## MCR Jetty A Rehabilitation

frozen or such that seeds cannot germinate and survive.

### PART 2 PRODUCTS

#### 2.1 HYDROSEED

Perform hydroseeding on all disturbed areas due to construction for revegetation. Seed mix must be native and tolerant of existing conditions. Protect seed from heating, drying, and contamination during transport, storage and handling on-site. Store seed in a cool, dry location.

- a. All seed must be of western Washington or western Oregon genetic source. Submit proposed seed source(s) prior to the start of construction for approval by the CO. Commercially-grown seed used on this project must be in conformance with the Washington State Seed regulations (15.49 RCW, WAC 16-301). Provide State-certified endophyte-enhanced seed of the latest season's crop delivered in original sealed packages, bearing producer's guaranteed, analysis for percentages of mixtures, purity, germination, weed seed content, and inert material. Wet, moldy, or otherwise damaged seed will be rejected.
- b. For collected seed, or other non-commercially grown seed, provide the name of the seed collector, location of collection, and the dates of collection. Field mixes will be acceptable when field mix is performed on site in the presence of the CO.

#### 2.2 WATER

Submit proposed water source for approval by the CO, and be of suitable quality for irrigation. Use collected stormwater or graywater when available.

#### 2.3 BONDED FIBER MATRIX (BFM)

BFM will be "SoilGuard", "EcoAegis", "HydroBlanket", or approved equivalent and contain all ingredients including tackifier, crosslinkers and other proprietary ingredients.

#### 2.4 TACKIFIER

Use Stockpam, SoilBinder or approved equivalent as tackifier for hydroseeding. For the PAM use a long chain, water-soluble or linear, non-crosslinked, anionic (>20 percent hydrolysis) or nonionic. PAM tackifier will be certified for compliance with ANSI/NSF Standard 60 for drinking water treatment and have a 0.05 percent maximum and an average 0.02 percent AMD concentration. The PAM anionic charge density may vary from 2-30 percent; a value of 18 percent is typical.

### PART 3 EXECUTION

#### 3.1 EXTENT OF WORK

Provide landscape construction maintenance to include a water tank truck with pump, irrigation equipment, hoses, nozzles, cleaning and adjustments, watering, weeding, pruning, stake and guy adjusting and other tools and equipment for all landscape areas and existing plant material, unless indicated otherwise, and at all areas inside or outside the limits of the construction that are disturbed by the Contractor's operations.

### 3.2 SITE PREPARATION

#### 3.2.1 Soil Preparation

a. Areas to be seeded will be considered a satisfactory seedbed without additional treatment if it has recently been thoroughly loosened and worked to a depth of not less than 6 inches as a result of grading operations and, if immediately prior to hydroseeding, the top 3 inches of soils is loose, friable, and is shaped to the required grade.

b. Clear areas to be seeded and planted of gravel, stones, clods, rocks, roots, or other undesirable matter larger than 6 inches as a result of grading and staging operations. Place a maximum of 50 single pieces of woody debris throughout staging area to provide diversity to the landscape. Place prior to hydroseeding and a minimum of 100 feet apart and as approved by the CO.

c. Roughen all areas to be hydroseeded with equipment tracks, disc, ripper tooth, or other means approved by the CO before application of hydroseed.

d. Repair damage caused by erosion or other means after initial site preparation. This may include filling gullies, smoothing irregularities and repairing other incidental damage.

e. Seeding and hydromulching must not be done in the presence of free surface water resulting from rains, melting snow, tidal influence or other causes.

#### 3.2.2 Woody Debris Areas

Place woody debris scattered across site as shown on drawings and directed by Contractor's licensed landscape architect and approved by CO.

### 3.3 HYDROSEEDING

#### 3.3.1 Hydroseeding Dates

Temporary revegetation must be installed within 14 days of completion of site work as indicated on drawings, or as directed by CO.

#### 3.3.2 Hydroseeding Process

Hydroseeding will be accomplished as a two-stage process. Apply the seed in the first step with a light layer of wood fiber hydromulch consisting of a minimum of 500 lbs per acre (and no greater than 700 lbs per acre) of wood fiber mulch plus tackifier (5-10 percent of mulch, according to manufacturer's specification) and dye. A full layer of wood fiber hydromulch consisting of a minimum of 1,500 lbs per acre plus tackifier and dye will be applied in the second step. Do not use fertilizer for the native seed mix hydroseeding. Do not use cellulose mulch.

#### 3.3.3 Application

Apply the hydromulch slurry with or without seeds by aiming the nozzle upward rather than directly at the soil, so that the slurry does not hit the soil surface with full force. Maintain a continuous agitator action, that keeps the mulching material and tackifier in uniform suspension, throughout the distribution cycle. The pump pressure must be capable of

## MCR Jetty A Rehabilitation

maintaining a continuous non-fluctuating stream of slurry. The slurry distribution lines must be large enough to prevent stoppage and the discharge line must be equipped with a set of hydraulic spray nozzles that must provide an even distribution of the mulch slurry to the seedbed. Ensure the application is uniform and at the prescribed rate, free of misses and overlapped areas. Cover a minimum of 95 percent of the soil surface area with hydromulch. Cure a minimum of 24 hours before rain events or irrigation and install per manufacturer's instructions, modified to incorporate the above-noted requirement of two separate application stages.

### 3.3.4 Hydromulch Timing

Mulching must not be done in the presence of free surface water resulting from rains, melting snow, tidal influence or other causes.

### 3.3.5 BROADCAST SEEDING

Accomplish broadcast seeding with a rotary spreader or by hand-held broadcast seeder. Rice hulls or other organic, inert filler material may be added to the seed mix by the seed vendor to increase the bulk of the mix for more consistent broadcast application.

### 3.4 WWHAM-CERTIFIED WEED-FREE STRAW

Ensure all straw used on-site for erosion control or other purposes is Washington State Department of Agriculture WWHAM-certified weed free, as indicated by label or WSDA color-coded purple and yellow baling twine.

### 3.5 IRRIGATION

#### 3.5.1 Irrigation Establishment Period

The irrigation establishment period must commence on the date of seeding and the temporary irrigation equipment furnished under this Contract must be capable and functional to supply water and continue for a period of 170 days.

#### 3.5.2 Water Supply From Offsite Fire Hydrants

To use a fire hydrant for irrigation, obtain prior clearance from local Water Districts, Authorities and the CO and provide the tools and connections approved for use on fire hydrants. If a fire hydrant is used, or any other source, provide a water tank truck with pumping capability and discharge hoses and nozzles for watering the completed planting areas.

### 3.6 CLEAN UP

Recycle or reuse the landscape waste materials to the extent possible. Excess waste material must be removed from the installed area and must be disposed offsite at an approved landfill, recycling center, or composting center. Adjacent paved areas must be cleared.

### 3.7 MAINTENANCE

#### 3.7.1 Watering

Water the areas during the first growing season, 1 inch per week, unless the weekly natural rainfall exceeds this amount. Conduct watering so as

## MCR Jetty A Rehabilitation

not to disturb the seeded areas. Application should be at a rate of 1 inch water per event. Water is not available on-site.

### 3.7.2 Hydroseeded Estimated Survival Requirements

Grass/forb plants established at 4 per square foot; soil cover of plants, litter, mulch at least 60 percent. Record noxious weeds as estimated percent cover in all subsample plots.

### 3.7.3 Bare Soil

Areas of bare soil greater than 100 square feet must be reseeded and remulched during early fall (September 15 to October 30), or as approved by the CO.

### 3.7.4 Noxious Weeds

Control class A and B-designated noxious weeds (manually - not chemically), if observed, per state law. Manage other noxious weed within and adjacent to the Planting Areas to reduce their numbers to levels not adversely affecting the establishment of native vegetation.

## 3.8 ESTABLISHMENT PERIOD

The establishment period will commence on the date that inspection by the Contracting Officer shows that the vegetation furnished under this contract have been satisfactorily installed and must continue for a period of 365 days. Refer to Section 2.2.2 of the NPDES Construction General Permit (Attachment A9 Appendix B) for how to meet the vegetative stabilization criteria.

## 3.9 FINAL INSPECTION

Final inspection will be made upon written request from the Contractor at least 10 days prior to the last day of the establishment period. Final inspection will be based upon the following: in seeded areas, grass or vegetation must cover at least 90 percent of exposed bare soil over a 10 foot by 10 foot area to be considered permanently established. Plantings must have an 80 percent survivability by the end of the monitoring period. Replace components from the revegetation plan that did not meet the survivability criteria by the end of the monitoring period.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 32 - EXTERIOR IMPROVEMENTS

SECTION 32 92 29.00 25

EELGRASS PLANTINGS

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 SUBMITTALS
- 1.3 QUALITY CONTROL
  - 1.3.1 Qualifications
  - 1.3.2 Planting Plan
  - 1.3.3 Monitoring and Reporting Plan

PART 2 PRODUCTS

- 2.1 PLANT TYPE
- 2.2 ANCHORS AND FASTENERS

PART 3 EXECUTION

- 3.1 SURVEY
- 3.2 HARVESTING OF DONOR PLANTS
- 3.3 REFERENCE SITE SELECTION
- 3.4 INSTALLATION
- 3.5 MAINTENANCE
- 3.6 PLANT ESTABLISHMENT PERIOD

-- End of Section Table of Contents --



SECTION 32 92 29.00 25

EELGRASS PLANTINGS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

NOAA FISHERIES

CEMP

2014 California Eelgrass Mitigation Policy  
and Implementing Guidelines

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Qualifications; G

Survey; G

SD-02 Shop Drawings

Planting Plan; G

SD-06 Test Reports

Monitoring and Reporting Plan; G

monitoring reports; G

1.3 QUALITY CONTROL

1.3.1 Qualifications

Provide qualified individuals with expertise in seagrass restoration who have successfully planted eelgrass (*Zostera Marina*) on the Pacific Coast. Include past experience and location of experience.

1.3.2 Planting Plan

Retain the services of a professional seagrass scientist to prepare the planting plan and who is familiar with CEMP. Include the following:

- a. Descriptions of eelgrass donor sites, reference sites and proposed locations of transplanted material. Sections 3.2 and 3.3 provide additional information on harvest of donor plants and selection of reference sites.

- b. Delineate methods, dates, and times for survey of potential donor beds, removing, storing, transporting, planting and maintenance details;
- c. Planting depths, tide levels, plot locations and size, description of monitoring and equipment used;
- d. Document methods of planting eelgrass and the density of newly transplanted eelgrass. The optimum time for transplanting would be early in the growing season (April-June) so that plants have a longer period of time to establish themselves.

### 1.3.3 Monitoring and Reporting Plan

- a. Mitigation acreage less than 0.4 acres will not require test plots. Mitigation acreage greater than 0.4 acres will require test plots which will be monitored for one year prior to planting the full mitigation area.
- b. Conduct eelgrass monitoring in the summer (June 1 - October 1) when biomass is at its greatest and can give the best estimates of population area and structure.
- c. Performance metrics are specific quantitative or observable parameters used to evaluate whether or not the project goals are being met. The performance metrics for this project will be areal coverage of eelgrass and eelgrass shoot density by the end of the monitoring period, as described below:
  - (1) Performance Metric 1: Areal Coverage of Eelgrass. The mitigation planting may be at a single site or distributed among multiple sites, but the total planted acreage should be equal to or exceed the target acreage as specified in the final mitigation plan (up to a maximum of 0.50 acres).
  - (2) Performance Metric 2: Eelgrass Shoot Density. Conduct statistical tests to compare mean eelgrass shoot density at the mitigation sites relative to the reference sites. Shoot density is sampled by counting individual eelgrass shoots within a (minimum) 0.25 m<sup>2</sup> area quadrat. Samples can be larger than 0.25 m<sup>2</sup>, but all samples need to reference the area from which they were taken so that the data can be converted to shoot densities (shoots/m<sup>2</sup>).
- d. Monitoring must include surveys of the mitigation and reference sites at intervals of 6 and 12 months during the first year following planting and annual surveys thereafter for a period of up to five years following installation.
- e. Eelgrass shoot density in the mitigation planting and reference areas will be measured annually for a period of up to five years. It is advantageous to place short sections of PVC pipe or other markers at the corners of the plots to facilitate identification of the planted plots in subsequent monitoring surveys.
- f. Collect data on the physical environment, including photosynthetically active radiation (PAR), temperature, salinity, and depth at the mitigation site(s) and the reference site(s) in order to understand the conditions contributing to the success or failure of the planting.

g. Analysis of the performance metric data should include the following statistical considerations:

(1) Low probability of a Type I error - concluding there is difference between the mitigation sites and the reference sites when, in fact, there is not. This issue is addressed by selecting a small value for alpha in statistical analyses, usually 0.10.

(2) Low probability of a Type II error - failing to detect a difference between the mitigation sites and the reference sites when, in fact, there is one. Selecting a small value for beta (applying high statistical power, (1-beta)) ensures this. Power set at 0.90 provides low probability of a Type II error.

h. Use statistical procedures to determine the required number of samples, which will vary according to the size of the areas and the variability of the measured shoot density. Since seagrass shoot density naturally varies along the depth gradient, the data analysis must also recognize any issues with comparing restoration sites to reference sites if the reference plots were at depths slightly different than the planted plots and effects to meeting performance metrics.

i. Prepare monitoring reports each time a survey is conducted to document eelgrass conditions within the mitigation, reference and donor areas. The monitoring reports must be cumulative with each successive year being added to the data from the prior years in order to allow reviewers to examine trends over time.

## PART 2 PRODUCTS

### 2.1 PLANT TYPE

Install *Zostera Marina* only. Other species of eelgrass including *Zostera Japonica* is not allowed.

### 2.2 ANCHORS AND FASTENERS

Methods of anchoring bare-root planting units (PUs) include using metal turf staples or washers to anchor the shoots, tying plants to landscape anchors, and tying mature shoots to solid frames with biodegradable cord and staking the frames in the sediment.

## PART 3 EXECUTION

### 3.1 SURVEY

Develop and conduct survey in conformance to the Water Quality Certificate mitigation plan and related survey provided by the Government. Data must be comparable such as using the same transects as used in the 2015 survey.

Complete all *Zostera Marina* mapping efforts during the active growth phase for the vegetation (April - June) or as approved by the CO. Surveys must consist in the following format:

a. Bounding Coordinates.

Horizontal datum - Universal Transverse Mercator (UTM), NAD 83, Zone 11

is the preferred projection and datum. If another projection or datum is used, the map and spatial data must include metadata that accurately defines the projection and datum.

Vertical datum - Mean Lower Low Water (MLLW), depth in meters.

b. Units.

Transects and grids in meters.

Area measurements in square meters/hectares.

c. File format.

Provide a spatial data layer compatible with readily available geographic information system software. Also provide a table giving the bounding x,y coordinates of the eelgrass areas. The projection and datum should be clearly defined in the metadata and/or an associated text file.

### 3.2 HARVESTING OF DONOR PLANTS

a. Harvest donor material from within Baker Bay.

b. Harvest no more than 10 percent of an existing bed for transplanting purposes. Plants harvested must be taken in a manner to thin an existing bed without leaving any noticeable bare areas.

c. Keep eelgrass cool, shaded, and submerged (or at least very moist). It is acceptable to store eelgrass shoots by placing the material in sediment in large flowing seawater tanks or in baskets anchored in water near the site until planting occurs.

d. Alternatively, establishment of an eelgrass aquaculture facility could be considered to supply eelgrass stocks for future planting and reduce the impacts to donor beds. Adult shoots would be harvested from donor beds and placed in some type of 'seagrass nursery' facility to increase the number of shoots available for transplant purposes. A land-based eelgrass nursery facility would require a series of large outdoor aquaculture tanks with a volume sufficient to contain the required number of eelgrass plants; the tanks would need to be supplied with recirculating seawater. A third alternative would be to harvest donor plants and plant them in a suitable in-water "nursery area" where they could expand and produce additional plants for subsequent use as mitigation planting stock.

### 3.3 REFERENCE SITE SELECTION

In order to help evaluate transplant success, reference sites of naturally existing eelgrass will be selected within Baker Bay. The reference sites should be similar to the mitigation sites in depth profile, substrate, exposure, turbidity, and disturbance regimes. Reference sites must not include specific areas harvested as donor sites.

### 3.4 INSTALLATION

a. Techniques for the construction and planting of the eelgrass mitigation site must be consistent with the best available technology at the time of the project.

b. Plantings should consist of bare-root bundles consisting of 3-6 individual turions. Specific spacing of transplant units must be approved by the CO. Harvested, counted and trimmed shoots must be processed into PUs. Secure the PUs in the sediment by an anchor of some sort to hold the plants in place until the roots and rhizomes have time to develop enough to stabilize the plants.

c. Based on surveys conducted in 2007-2008, the average depth of the eelgrass beds in Baker Bay was approximately -0.98 m MLLW + 0.73 m. Install transplants within the same depth range as existing eelgrass beds (determined by the latest surveys). Survey data is also available from 2015.

d. To minimize disturbance to existing eelgrass, avoid planting eelgrass transplants within 10 meters of any existing eelgrass beds. Avoid planting in known navigation channels, dredge disposal sites and areas of known recurring disturbance.

e. If test plots are used, planting of the test plots will be implemented in such a way to include planting at various densities, and varying patch sizes (1m, 3m, and 5m, for example). Different transplanting or anchoring methods could also be incorporated into the test plot planting design. The corners of the test plots should be marked with short pipes, sections of rebar, screw-in sand anchors, small floats, or other means to facilitate finding the plots at a later date. The results of the test plots will be used to determine the optimum planting design for the final mitigation planting.

### 3.5 MAINTENANCE

a. If test plots are used, conduct additional planting after one year at those sites where test plots exhibited the highest rates of planting survival to bring up the planted areas to a total of 0.5 acres. The planting may be distributed among multiple sites, but the total planted acreage should be equal to or slightly exceeding the specific target acreage.

b. Sites that have obvious problems (e.g. zero survival) during the first year following planting should not be replanted in the same location.

c. If the total areal coverage is not at least 50% of the target acreage by the end of the Year three monitoring period, then replant to achieve the target acreage and performance criteria at those sites that exhibit the best survival and growth, taking care not to disturb existing vegetation.

d. No further monitoring is required if the performance objectives for areal coverage and shoot density are met after the first year of monitoring.

e. If the performance metrics are not achieved by Year five, include in the final monitoring report recommended corrective actions for future Government use based on careful evaluation and interpretation of the monitoring data. Describe inherent reasons for not meeting performance criteria and propose and implement a corrective measure that will yield positive results. Discuss physical environmental data (e.g. PAR, salinity, temperature, depth, etc.) to identify and evaluate factors

MCR Jetty A Rehabilitation

affecting eelgrass survival. Corrective actions could include changing locations prior to replanting rather than just replanting.

3.6 PLANT ESTABLISHMENT PERIOD

The establishment period for transplanted grass is a maximum of five years.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 35 - WATERWAY AND MARINE CONSTRUCTION

SECTION 35 20 23.13 25

DREDGING

PART 1 GENERAL

- 1.1 GENERAL INFORMATION
- 1.2 REFERENCES
- 1.3 DEFINITION
- 1.4 OBSTRUCTIONS
  - 1.4.1 Hard Material
- 1.5 PERMIT

PART 2 PRODUCTS

- 2.1 CHARACTER OF MATERIAL

PART 3 EXECUTION

- 3.1 DREDGING
  - 3.1.1 General
  - 3.1.2 In-fill Areas
  - 3.1.3 Equipment
  - 3.1.4 Layout of Work
  - 3.1.5 CQC Reporting
  - 3.1.6 Detailed Procedures for Water Quality Monitoring
- 3.2 NOTIFICATION OF NONCOMPLIANCE
  - 3.2.1 Immediate Corrective Action
  - 3.2.2 Obstruction or Interference
  - 3.2.3 Coast Guard Regulations
- 3.3 POSITIONING AND CONTROL
  - 3.3.1 Positioning Equipment
  - 3.3.2 Gauge Equipment - Tidal Data, General
- 3.4 PLACEMENT OF EXCAVATED MATERIAL
  - 3.4.1 Dispersal of Material
  - 3.4.2 Daily Disposal Log
  - 3.4.3 Additional Requirements
  - 3.4.4 Miscellaneous Trash and Debris
  - 3.4.5 Provisions for Emergency Discharges
  - 3.4.6 Plant Removal

-- End of Section Table of Contents --

SECTION 35 20 23.13 25

DREDGING

PART 1 GENERAL

1.1 GENERAL INFORMATION

This Section covers furnishing suitable floating clamshell dredging plant and performing all work to remove the specified materials from within the dredging pay area limits as indicated and placement of the dredge material within the material placement sites, as shown or specified. All equipment must meet all applicable U.S. Coast Guard regulations.

1.2 REFERENCES

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ)

OAR 340-041 Water Quality Standards: Beneficial Uses,  
Policies and Criteria for Oregon

WASHINGTON DEPARTMENT OF ECOLOGY (WDOE)

Chapter 173-201A WAC Water Quality Standards for Surface Waters  
of the State of Washington

1.3 DEFINITION

Hard material is defined as material requiring the use of special equipment for economical removal, and includes boulders or fragments too large to be removed in one piece by the dredge.

1.4 OBSTRUCTIONS

a. Anchors, cables and and other equipment that may be hazardous to navigation must be adequately marked with lights, signs, and buoys as necessary to prevent accidental contact by vessels in the area. Contractor must not obstruct navigational traffic by the deployment of anchor systems that may pose a threat to safe passage as determined by the onsite Government representative.

b. The Government has knowledge of debris such as, but not limited to, metal tower structure and existing piles as shown on the drawings. The Government has no knowledge of existing wrecks, wreckage, or other material of such size or character as to require the use of explosives or special or additional plant for its economical removal. Debris removed from the dredged area must be removed from the water. Disposal must be the responsibility of the Contractor and disposal must be outside the limits of government property. In case the actual conditions differ from those stated or shown, or both, an adjustment in contract price or time of completion, or both, will be made in accordance with "FAR 52.236-2, Differing Site Conditions."

c. Stone utilized in past construction for the jetties, as shown on the project drawings, may be encountered during dredging activities. Anticipate remnant stone within the dredging prism. Any stone encountered adjacent to the toe of the jetty side slope must not be



disturbed.

d. An existing pile dike is located along Jetty A as indicated on the contract drawings. Dredging must not be permitted within 100 feet of the northern side of the pile dike or 50 feet south of the pile dike.

e. A U.S. Coast Guard tower is located along the estuary side of Jetty A as indicated on the contract drawings. The tower is located near the south end of the material off-load boundary near Sta. 86+00. The contractor must not disturb this structure.

f. For material taken to open water disposal sites, all debris larger than 2 feet in any dimension must be removed from the dredged sediment prior to disposal. Similar sized debris found floating in the dredging or disposal area must also be removed. A boat must be available on site at all times to retrieve any debris from the water.

g. Any object encountered that is too large to remove by the Contractor must be coordinated with the Government on their plan to work around the object.

h. Notify WDOE of any discovered buried chemical containers, such as drums, or any unusual conditions indicating disposal of chemicals as per the Water Quality Certificate (A7).

#### 1.4.1 Hard Material

The removal of hard material is not anticipated. Should the Government direct in writing that hard material be removed, the work must be performed and an adjustment in the contract price or time for completion, or both, will be made in accordance with "FAR 52.236-2, Differing Site Conditions." If hard material is to be removed, blasting will not be permitted.

#### 1.5 PERMIT

The Contractor must comply with conditions and requirements of the Corps of Engineers Permit and other State or Federal permits. The Contracting Officer will secure the permit for dredging and disposal of material as indicated.

### PART 2 PRODUCTS

#### 2.1 CHARACTER OF MATERIAL

Soil information regarding Coastal Projects' sediment may be obtained at the following link:  
<http://www.nwp.usace.army.mil/Missions/Environment/DMM.aspx>. Snags, logs, rocks, gravel, boulders, swifter wire, commercial fishing gear, discarded boat hardware, and miscellaneous debris may be encountered in the dredge areas.

### PART 3 EXECUTION

#### 3.1 DREDGING

##### 3.1.1 General

a. Dredging is permitted along Jetty A between approximately Stations 77+00 and 86+00 for construction of a material off-loading facility.

The total dredge volume including maintenance must not exceed 60,000 cubic yards. The maximum bottom finish depth must not exceed -25.6 feet NAVD88. The area of disturbance must not exceed 1.7 acres of dredging.

b. Weather and sea conditions on the Columbia River, and side channels can be extreme. Provide sufficient size tug(s) to ensure safe transit of material placement plant and dredge plant. Submit the name and size of tugs, and licenses of the operators prior to the start of work.

c. Dredge the area approved by the CO in the Project Work Plan, see SECTION 01 10 10.00 25, CONTRACTOR'S OPERATIONS AND REQUIREMENTS Project-Specific Management Plan. Depths must be measured in feet below Mean Lower Low Water (MLLW).

d. All available surveys are on the hydrosurvey website located at the following link:  
<http://www.nwp.usace.army.mil/Missions/Navigation/surveys.aspx>

e. Contractor must submit pre- and post-dredge survey. Total quantity removed must be submitted at the end of dredging operations.

f. Erect and maintain temporary barricades if needed to limit public access to hazardous areas. Such barricades must be required whenever safe public access to roads, parking areas, or walkways is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades must be securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

g. The ESSAYONS, YAQUINA or other Contract dredges may be working on the Columbia River during the timeframe of this Contract. These dredges will not be dredging in the same work area. Coordinate operations with all dredges working in the immediate areas.

h. Pause the bucket at the surface, after its ascent through the water column, to minimize turbidity by allowing free water to drain from the bucket prior to swinging the bucket onto the barge. Refer to the Water Quality Certificate (A7) section F.6

### 3.1.2 In-fill Areas

In-fill should be expected and maintenance dredging may be necessary. Maintenance dredge will be the responsibility of the contractor.

### 3.1.3 Equipment

a. A floating clamshell (mechanical bucket) dredge and a bottom dump scow(s) must perform all dredging work under this Contract. The tug must be twin screw, and be able to make headway in a max flood or ebb. In addition to the primary tug, the Government may require the Contractor to provide an assist tug with a minimum of 400 horsepower (main propulsion) in the event the Contractor can't control the fully loaded scow, or a replacement boat must be required. The tug must have a good field of vision beyond the scow, when the scow is being pushed ahead. The tug must have an unobstructed view to safely operate no matter what towing configuration is used or be in direct radio communication with someone that does have an unobstructed view.

b. All barges or scows used to transport material must be bottom dump

or split hull and in good working condition to prevent any loss of material during loading and transporting of dredged material. Contractor personnel will not be permitted on-board scows during transit to or from the material placement sites during the actual placement operation. The technique of "sandbagging" bottom dump seals is acceptable providing that all such sandbagging materials are of organic composition and are fully biodegradable. Failure to comply with the above conditions must be cause to require the replacement of such equipment with floating plant that can meet the requirements.

c. Equipment Certification And Inspection For Dredging Operations As Follows:

(1) Equipment Certification. In conjunction with Section 00700, Contract Clause 52.236-13 Alt I, ACCIDENT PREVENTION (Nov 1991) - Alternate I, the equipment certification done in accordance with Section 16, paragraph 16.A.02, and Section 19, paragraph 19.A.01 of the referenced USACE Safety and Health Requirements Manual, EM 385-1-1, state that the equipment has been tested by a competent person and found to be in safe operating condition and is in compliance with the Contract specifications and EM 385-1-1. Designate a competent person to be responsible for the daily inspection of the plant, machinery, and equipment as called for in Section 19, of EM 385-1-1 to assure it is kept in safe operating condition. In addition, fill out NPP Form 159 (Rev) "Floating Plant Inspection Checklist" (Attachment A2) for any floating plant intended to be utilized. Submit both the completed NPP Form 159 (Rev) and Equipment Certification to the GQAR one working day prior to the required initial joint walk-through.

(2) Joint Equipment Inspection. Notify the Government 96 hours prior to the joint equipment walk-through. The joint equipment walk-through will be held prior to beginning all work. A new walk through will not be held at each new location unless major repairs are performed while transiting to a new location. A Government representative will accompany the designated person during normal daylight working hours to view the plant and equipment intended to be utilized on this project. Any units found to be unsafe or otherwise not in compliance with the Contract clauses, specifications, and EM 385-1-1 will be deadlined and their use prohibited until the unacceptable conditions have been corrected. Mobilization payment will be delayed until the deficiencies have been corrected or replaced in an acceptable manner. The Government may elect to perform a hull inspection of the vessel through the use of a remote operated vehicle (ROV) for the purpose of inspecting for invasive species. The ROV inspection is expected to take up to eight hours and will be done concurrently with the joint equipment inspection. Any delays beyond eight hours due solely to the ROV inspection will be paid for under the bid item for Government directed stand-by.

(3) Daily Equipment Inspection. Designate a competent person to be responsible for the daily inspection, on each shift, to assure that the plant is kept in a safe operating condition. Keep record of these inspections on the plant and available for review by Government personnel.

(4) Coast Guard Inspection. All equipment must meet all applicable U.S. Coast Guard regulations. All self-propelled equipment is

subject to U.S. Coast Guard Certification.

d. Notice To Ports For Dredging Operations. Coordinate all dredging and disposal operations before dredging operations begin at each port during normal business hours within 24 hours of the start of dredging. Provide written notice to each port 48 hours prior to beginning work. State the approximate beginning and ending dates of dredging, anticipated work hours, description of anchoring system used, and anticipated tug and barge route to and from disposal site. Provide a copy of this to the Government prior to beginning work. In addition, post dredging operations at local marinas and boat launches.

Port of Ilwaco: Guy Glenn Jr. (360) 642-3143

e. U.S. Coast Guard Notice to Mariners. For each general area of operation, notify the United States Coast Guard at least ten days prior to start of dredging and material disposal operations, and weekly thereafter. The notifications must be certified and a copy attached to the Contractor's daily report. Send correspondence to 13th Coast Guard District, Office of Aids to Navigation, (OAN) Seattle, Washington. The 13th District may be contacted via phone at 206-220-7280, FAX 206-220-7265, or email address D13-PF-LNM@uscg.mil.

f. Information provided by the Contractor in this notification will subsequently be disseminated by the U. S. Coast Guard to the general maritime community through Local Notice to Mariner publications and marine band broadcasts. The following information shall be included in the notification:

- (1) Project designation (U. S. Army Corps of Engineers Contract number and Contract title), Contractor's address and day time phone number
- (2) Name and type of dredge plant used.
- (3) Dredging location (reference the navigation project name and dredging area limits)
- (4) Material disposal site(s) (site reference number and location)
- (5) Estimated beginning and ending dates of dredging and disposal operation
- (6) Terminology to be used:
  - (a) For Cautionary Areas: "Mariners are urged to use extreme caution in the area."
  - (b) For dredging and disposal operations: "Mariners are urged to transit at their slowest safe speed to minimize wake and proceed with caution after passing arrangements have been made."
- (7) Circumstances that warrant specific maritime precautions shall be handled on a case-by-case basis in coordination with the local U.S. Coast Guard representatives.

#### 3.1.4 Layout of Work

Provide a layout drawing of intended dredging and placement operations in

accordance with the plans and specifications. The most current hydrosurvey information will be displayed on the dredging layout charts. Other pertinent information to be included with each layout package will be coordinated for the material placement site, supplemental tide gauge information, horizontal control locations, and computed quantities. Government hydrographic survey personnel may be available during their normal working hours to assist the Contractor in locating various short control points and tidal gauges.

### 3.1.5 CQC Reporting

a. Submit a hard copy of the daily CQC report with all attachments to the QCAR by noon of the following day. Post an electronic copy of the daily CQC report with all attachments by noon of the following day unless otherwise specified below. Maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These CQC reports must include the work of subcontractors and suppliers and must be on an acceptable form that includes, as a minimum, the following information:

- (1) Daily report of operations must be posted by noon the morning following the end of the reporting period.
- (2) Results of automatic tide gage verification (twice daily).
- (3) Dredge operation log to include acceptance areas dredged from midnight to midnight, and gage boards used.
- (4) Notifications to Mariners and the U.S. Coast Guard (as applicable).
- (5) Dredging and Placement Quantity Summary Table: Report daily in EXCEL table format, the quantity dredged from each area and the quantity placed in each placement site. The daily quantities, as well as a cumulative job total must be reported each day work is in progress.
- (6) Contractor / subcontractor and their area of responsibility.
- (7) Operating plant / equipment with hours worked, idle, or down for repair.
- (8) Work performed each day, giving location, description, and by whom.
- (9) Test and/or control activities performed with results and references to specifications / drawings requirements. The control phase must be identified (Preparatory, Initial, Follow-up). List of deficiencies noted along with corrective actions taken.
- (10) Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications / drawings requirements.
- (11) Off-site surveillance activities, including actions taken.
- (12) Job safety evaluations stating what was checked, results, and instructions or corrective actions.

(13) Daily Equipment Inspections. Designate a competent person to be responsible for the daily inspection, on each shift, to assure that the plant is kept in safe operating condition. Document inspections in the daily report. Records of these inspections must also be kept on the plant and available for review by Government personnel.

(14) Instructions given / received and conflicts in plans and/or specifications.

(15) Contractor's verification statement.

(16) Deficiency Tracking System: Maintain a cumulative list of deficiencies and corrective actions taken identified for the duration of the project. Maintain the list at the project site. Submit copies of updated listings to the Government weekly as an attachment to the Daily CQC report.

(17) A copy of all surveys performed (electronic copy only). CD/DVD copies may be requested periodically by the Government. Failure to provide Contractor survey data in a timely manner impacts Government's ability to monitor dredging operation and may result in a suspension of work until the required survey data is provided. Provide the following survey information:

- (a) Survey Request
- (b) Daily report of hydrographic survey operations
- (c) Metadata
- (d) Multi-Beam or Single, Lead-Line Sounding
- (e) Bar check calibration
- (f) Sound velocity profile report
- (g) Survey tide file log
- (h) Lead line report
- (i) Copy of the field book (scanned)
- (j) Compressed Hypack Project (with Raw / Edited / Sorted Files)
- (k) Any other data or files used for editing

(l) Computation report: The computation report must indicate the surveys used (identified by location and date) and the program and computation method used. Post all electronic survey information on the day that the survey is processed, and no later than 24 hours after the survey was performed. Monitoring of Contractor survey data is critical to insuring a project that meets the Contract requirements as well as environmental restrictions. Failure to provide either hard copy or electronic data required in this Section within the time frames scheduled, and in the format specified, may result in an immediate suspension of dredging operations until the required

data is submitted.

(18) Daily Placement Reports: Print and provide the reports listed below to the Government. All placement reports must be generated on a load by load basis and must be posted within 24 hours of completion of each load. These reports must also be emailed to the COR or the Government's designated representatives within the same timeframe. Failure to submit all required reports will result in the immediate suspension of all dredging operations. Failure to submit accurate reports will also result in the immediate suspension of dredging operations.

(a) Placement reports must include: the Contract title and number, the load number, date and time, begin and end placement coordinates, time for start and end. The report must demonstrate the track of the placement event within the placement site, color coded at every 25 percent of material dispersed. The report must also include, in another color, the track from the dig site to the placement site. An additional chart is required showing the percentage of material within each cell in relation to the amount of material dredged per load. This report must contain a displacement versus distance chart that includes the draft while transiting from the dig site to the placement site and during placement of the material, also color coded per 25 percent.

(b) A table with the date, time, and beginning and end coordinates for each load placed in every placement area, including flow lane sites and in water sites. This report must also be posted in excel format.

(c) A table showing the number of loads placed in each cell for placement sites that have cell designations) for the current date, as well as a cumulative total of loads placed in each cell. The material must be credited to the cell in which the placement operation was started regardless of how many cells the dredge transits across during placement operations.

(d) A track plot showing the beginning and ending coordinates for the placement operation and the transit during the placement operation. Transit coordinates must be shown every 10 seconds. The boundaries of the material placement site and all cells therein must be shown on the daily placement plot. Any avoidance zones must be clearly shown.

(e) A placement plot with the previous seven days tracks through the placement site must be included for placement operation performed. This must be utilized to ensure that the dredge is not repeatedly tracking over the same location during the placement operation. Each day this cumulative track plot must be updated to include the previous day's track plots and delete the track plot from the 7th day prior.

(f) Plot the draft change over distance to ensure requirements are being met for discharge of material over the specified number of cells. During the first two days of operation at each placement site, produce these on the dredge immediately after placement. Corrections must be made in placement operations if the criteria are not being met. After two days, if criteria are

consistently not being met, check at least one load per day and attach the report to the QC log. In the event that criteria are not being met, produce the draft - distance plot for each load until there is consistent compliance with the required criteria.

(19) Results of any invasive species inspections (Section 01 57 20.00 25, ENVIRONMENTAL PROTECTION).

(20) Daily Equipment Inspection. Designate a competent person to be responsible for the daily inspection, on each shift, to assure that the plant is kept in a safe operating condition. Keep records of these inspections on the plant and available for review by Government personnel.

b. At a minimum, prepare and submit one report for every seven days of no work and on the last day of a no work period. All calendar days must be accounted for throughout the life of the Contract. The first report following a day of no work must be for that day only. Reports must be signed and dated by the CQC System Manager and on-site Superintendent. The report from the CQC System Manager must include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

c. Upon physical completion of the Contract, provide a minimum of two archival discs of all CQC reports, including all attachments. All CQC reports must be signed.

### 3.1.6 Detailed Procedures for Water Quality Monitoring

a. Keep a copy of all Water Quality Certificates on board all floating plant and in the field office(s) at all times. No work will be allowed without a copy of all Water Quality Certificates at all required locations.

b. Perform water quality monitoring in accordance with the Water Quality Monitoring Plan which has been coordinated with the State of Oregon and Washington and the National Marine Fisheries Service to ensure compliance with all applicable Water Quality Certificates and the Biological Opinion.

c. Visual observations are required for turbidity monitoring during dredging and during all in-water placement. It is expected that visual observations for dredging will be observed from the dredge and visual observations for in-water placement will be observed from the tugboat or assist vessel.

d. Reporting.

(1) Failure to monitor water quality in accordance with the Water Quality Monitoring Plan will result in the immediate suspension of all dredging and placement operations. Prior to resuming operations, develop operating procedures to prevent missed tests. A preparatory meeting will then be required with all personnel involved in water quality monitoring (including the dredge crew) and the QCAR before resuming dredging.

(2) Water quality monitoring report forms for instrument sampling and visual observations are provided. Electronic copies of the



Water Quality Monitoring Report Forms will be provided to the Contractor prior to beginning work requiring water quality monitoring. The Water Quality Monitoring Report will show the sequences of samples and observations and results for each calendar day. The Water Quality Monitoring Report will be in EXCEL Workbook format. Detailed instructions, including the required naming convention for sampling, will be provided to the Contractor prior to beginning work requiring water quality monitoring.

(3) If no dredging and/or placement activity takes place on a calendar day after start of work, but prior to completion of all work, a report must be submitted stating "No Dredging or Placement Occurred" for that day.

(4) Distance Spreadsheet or Telemetry for Monitoring with an Instrument. Distances for the following parameters must be reported either in an EXCEL spreadsheet or as screen captures using telemetry and included as an attachment to the Daily Water Quality Monitoring Report.

(a) Distance from the dredge to the monitoring point (during dredging) as determined from relative GPS positioning data of the monitoring boat and dredge. For determining position of the dredge, the end dump coordinates of the scow must be used.

(b) Distance from the original compliance test to all re-tests.

(c) Distance from the background measurement to the compliance measurement for all tests.

(d) Distance from the scow to the monitoring point (during disposal) as determined from GPS positioning data of the monitoring boat and scow.

NOTE: Field operations must be modified to ensure that testing is taken as close as possible to the locations required. In lieu of providing a distance spreadsheet, the Contractor may plot (screen shot) of the position of the monitoring boat and discharge (i.e. dredge, scow) for all testing.

(5) Report of Restricted Visibility. If monitoring is not performed as required due to an unsafe condition for the monitoring vessel, such as restricted visibility or wind/wave conditions that create an unsafe condition for the monitoring vessel but not for the dredge, a report must be prepared in accordance with the Water Quality Monitoring Plan and included as an attachment to the Daily Water Quality Monitoring Report.

(6) Failure to submit accurate and complete reports both electronically and in hard copy will result in the immediate suspension of dredging and disposal operations.

e. Anticipate that one or more GQAR's will be on board the monitoring vessel during water quality monitoring. GQAR's will perform frequent side-by-side water quality tests. Mount hardware on the downriggers to accommodate two instruments and assist the GQAR in performing side-by-side testing.

f. Conform to OAR 340-041 and Chapter 173-201A WAC.

### 3.2 NOTIFICATION OF NONCOMPLIANCE

#### 3.2.1 Immediate Corrective Action

The CO will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor must take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, must be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the CO may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor must make no part of the time lost due to such stop orders the subject of claim for extension of time or for excess costs or damages.

#### 3.2.2 Obstruction or Interference

Obstruction of or interference with Government auditors and/or the GQAR is a Federal crime under Section 7078 of Public Law 100-690 (18 USC 1516).

#### 3.2.3 Coast Guard Regulations

The Government will report violations of the U.S. Coast Guard rules, regulations, and draft limitations during dredging operations to the appropriate U.S. Coast Guard Sector Office (formerly Marine Safety Office).

### 3.3 POSITIONING AND CONTROL

#### 3.3.1 Positioning Equipment

a. General. Dredging and material placement plant must be positioned using a system that meets the required tolerances as specified below. The system must be used to ensure that dredging is performed within the designated pay area(s) and that material will be evenly distributed within the dredged material placement areas, as shown. Any delay or suspension for noncompliance of this requirement will be at no cost to the Government nor must it be considered grounds for a time extension.

b. Dredging Plant. The positioning system for the dredging plant must be differential GPS having an accuracy of +/-3 feet of true horizontal position.

c. Placement Plant. The positioning system for the placement plant must be corrected by differential or WAAS enabled GPS.

d. Positioning Equipment. A licensed surveyor must verify the accuracy of the positioning equipment on board the dredge plant, the placement plant (tug) and for any other tug, if used for material placement. The verification will be in the vicinity of each project, concurrent with the floating plant inspection described in Section 01 10 10.00 25, CONTRACTOR'S OPERATIONS AND REQUIREMENTS, before start of dredging and disposal operations. The results of the test must be included with the Contractor's daily report.

e. Depth. Submit to the Government for review and approval a method for verifying that the maximum depths specified are not exceeded. This method may be through the use of electronic or visual means. The Contractor must have an approved and functioning system in place

before dredging operations can begin. No payment will be made for material dredged where these requirements have not been met. The system must be recalibrated at least once every 14 calendar days, and whenever the accuracy of the system is in question.

f. Mechanical Dredge. Acceptable visual control must be done by placing markings on the bucket wires. These markings must be color-coded and a key of the color-coding must be posted in the operator's cab and the inspector's work station. The bucket depth indicators must be verified by actual measurement of the bucket depth in the presence of the GQAR.

### 3.3.2 Gauge Equipment - Tidal Data, General

The tide level sensing unit must have wave dampening capability and the display frequency must be at 45-second intervals or less. Check the operation of the automatic tide gage at least twice daily by comparing the readings to the specified gage board. The QC reports must reflect the time and results of these inspections.

## 3.4 PLACEMENT OF EXCAVATED MATERIAL

### 3.4.1 Dispersal of Material

a. Place dredged material within the designated disposal sites in such a manner as to avoid mounding and uneven distribution of material that would otherwise prematurely reduce the usable capacity of the site unless specifically directed to do otherwise. Prior to the start of dredging, conduct an initial meeting to specifically discuss the disposal site requirements. Placement sites for this contract will be determined at the time of dredging and will be similar to O-3.2-IW and W-4.8-IW and not to exceed a 3 mile haul distance. Placement in O-3.2-IW will be during ebb tide only, ebb does not include slack tide, the target placement is 60 percent. Placement in W-4.8-IW will be during flood and slack tides, the target placement is 40 percent.

b. Flow Lane Placement Sites: Place the material within the designated flow lane material placement areas in such a manner as to avoid mounding and uneven distribution of material, unless specifically directed to do otherwise. Maximum fill lift elevations will be specified and the Contractor will be required to closely monitor placement operations through close management and frequent surveys to ensure elevations specified are not exceeded. The maximum lift elevation refers to the layer of placed material on top of the existing river bottom and is generally 2-5 feet. Flow lane sites are defined as sites that are located within the channel boundaries, adjacent to the channel, or in designated navigation features (turning basins, anchorages, etc). The depths in these sites will be equal to or deeper than -35 feet unless mutually agreed upon. The Government may direct the Contractor to multiple sites per work area and sequence material placement within those sites.

### 3.4.2 Daily Disposal Log

a. A daily disposal log must be attached to the QC log and must contain the following:

- (1) Start and end dump coordinates.

## MCR Jetty A Rehabilitation

(2) A track plot during disposal with coordinates recorded every 10 seconds. This track plot must identify the start and end dump coordinates for each load and show the disposal site boundary.

b. Within seven calendar days of completion of each acceptance area, the Contractor must provide an ASCII-format file of the start and end dump coordinates.

### 3.4.3 Additional Requirements

a. Personnel must not be permitted on-board scows during transit to or from the material placement areas or during the actual placement operation.

b. All scows used to transport material must be in good working condition to prevent any loss of material during loading, transporting, or removal.

c. All dumping operations must be performed by remotely operated equipment.

### 3.4.4 Miscellaneous Trash and Debris

All logs, snags, trash and debris removed from the designated channel must become the property of the Contractor and must be disposed of in accordance with all applicable Federal, State, and municipal laws and regulations. Logs, snags, trash and debris must not be placed in the Government furnished material placement sites.

### 3.4.5 Provisions for Emergency Discharges

There are provisions for emergency discharges to free a grounded vessel. Any such action must be immediately reported to the Resident Engineer.

### 3.4.6 Plant Removal

Upon completion of the work, promptly remove plant, including ranges, buoys, piles, and other markers or obstructions.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 35 - WATERWAY AND MARINE CONSTRUCTION

SECTION 35 20 23.14 25

NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM

PART 1 GENERAL

- 1.1 DESCRIPTION
- 1.2 SUBMITTALS
- 1.3 PAYMENT
- 1.4 NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM CERTIFICATION
- 1.5 DREDGE PLANT INSTRUMENTATION PLAN (DPIP)

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

- 3.1 SPECIFICATIONS FOR REPORTED DATA
  - 3.1.1 General
  - 3.1.2 Scow Name
  - 3.1.3 Contract Number
  - 3.1.4 Trip Number
    - 3.1.4.1 Open Water Disposal
    - 3.1.4.2 Offloading
    - 3.1.4.3 Project Trip Number
  - 3.1.5 Horizontal Positioning
  - 3.1.6 Date and Time
  - 3.1.7 Hull Status
    - 3.1.7.1 Open Water Disposal
    - 3.1.7.2 Offloading
  - 3.1.8 Course
  - 3.1.9 Speed
  - 3.1.10 Heading
  - 3.1.11 Draft
  - 3.1.12 Displacement
- 3.2 NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM SYSTEM REQUIREMENTS
  - 3.2.1 General
  - 3.2.2 Telemetry
  - 3.2.3 Data Reporting Frequency
  - 3.2.4 Data Transmission to Web Service
  - 3.2.5 XML-Formatted Sensor Data String
  - 3.2.6 Contractor Data Backup
- 3.3 PERFORMANCE REQUIREMENTS
- 3.4 COMPLIANCE INSPECTION AND QUALITY ASSURANCE CHECKS
  - 3.4.1 General
  - 3.4.2 Position Check
  - 3.4.3 Hull Status Check
  - 3.4.4 Draft & Displacement Check
- 3.5 CONTRACTOR QUALITY CONTROL
- 3.6 LIST OF ITEMS TO BE PROVIDED BY THE CONTRACTOR

-- End of Section Table of Contents --

SECTION 35 20 23.14 25

NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM  
SCOW - MONITORING PROFILE

PART 1 GENERAL

1.1 DESCRIPTION

a. The work under this Contract requires use of the National Dredging Quality Management Program (DQM), formerly known as Silent Inspector (SI), to monitor the scow's status at all times during the Contract, and and manage data history.

b. This performance-based specifications Section identifies the minimum required output and precision and instrumentation requirements. The requirements may be satisfied using equipment and technical procedures selected by the Contractor. For purposes of this document, Contracting Officers (CO) will include the DQM Support Team personnel when on site.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office responsible for review of the submittal for the Government. The following must be submitted:

SD-01 Preconstruction Submittals

Dredge Plant Instrumentation Plan (DPIP) Revisions or Addendum; G

Contractor Quality Control Plan, paragraph CONTRACTOR QUALITY CONTROL; G

SD-06 Test Reports

Data Appropriately Archived e-mail, paragraph Contractor Data Backup; G

SD-07 Certificates

Letter of National Dredging Quality Management Program Certification, G

1.3 PAYMENT

No separate payment shall be made for installation, operation, and maintenance of the DQM certified system as specified herein for the duration of the dredging operations; all costs in connection therewith will be considered a subsidiary obligation of the Contractor and covered under the Contract unit prices for dredging in the bidding schedule.

1.4 NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM CERTIFICATION

a. The Contractor is required to have a current certification from the National Dredging Quality Management Program for the scow

instrumentation system to be used under this Contract. Certification shall be based on most recent criteria posted on the National Dredging Quality Management Program website: <http://dqm.usace.army.mil/Specifications/Index.aspx>. Compliance with these criteria shall be verified by on-site scow inspections conducted by DQM Support Center Inspection Team personnel, and by periodic review of the transmitted data. If a system is installed specifically for this Contract, the inspection should take place prior to any material being loaded into the scow to insure that it is capable of transmitting quality data to the DQM database or with prior approval of local district, during the first load for each scow, and subsequent loads as is necessary to verify compliance. A National Dredging Quality Management Program Certification is valid for one year from the date of certification and is contingent upon the systems ability to meet the performance requirements as outlined in paragraphs PERFORMANCE REQUIREMENTS and CONTRACTOR QUALITY CONTROL. If issues with data quality are not corrected within 48 hours, the system certification shall be revoked and recertification may be necessary.

Annual DQM Certification shall be based on:

- (1) A series of data quality checks as described in paragraph COMPLIANCE INSPECTION AND QUALITY ASSURANCE CHECKS.
- (2) Verification of data acquisition and transfer in paragraph PERFORMANCE REQUIREMENTS.
- (3) Review of the Dredge Plant Instrumentation Plan (DPIP) as described in paragraph DREDGE PLANT INSTRUMENTATION PLAN (DPIP).

b. The Contractor must have personnel who are familiar with the system instrumentation and who have the ability to recalibrate the sensors, on site during the inspection. Coordinate pickup times and locations and provide transportation to and from any platform with a DQM system to team personnel in a timely manner. The Contractor must also have on site for the QA checks a tug capable of towing the scow. As a general rule, Data Acquisition and Analysis Team personnel will come with PPE consisting of hardhats, steel toe boots, and life jackets. If additional safety equipment is needed, such as eye protection, safety harnesses, work gloves or personal location beacons, these items shall be provided to the team while on site. Submit a test data package to the DQM Database from the system on each scow and have it accepted by the DQM Support Center prior to scow compliance checks. Submit data collected during the QA Checks from the scow monitoring system to the DQM database and the Data Acquisition Team personnel while on site. It is the Contractor's obligation to inform the QA team if the location designated for the QA checks has any site specific safety concerns prior to their arrival on site.

c. The owner or operator of the scow must contact DQM at [DQM-AnnualQA@rpsgroup.com](mailto:DQM-AnnualQA@rpsgroup.com) on an annual basis, or at least three weeks prior to the proposed beginning of dredging, to schedule QA checks. This notification is meant to make the Data Acquisition Team aware of a target date and the Contract on which the plant will be used. At least one week prior to the target date, contact the Data Acquisition team and verbally coordinate a specific date and location. Follow-up this conversation with a written e-mail confirmation. The owner/operator must coordinate the QA checks with all local authorities, including but not limited to, the CO.

d. Re-inspection is required for any yard work which produces modification to displacement (i.e. change in scow lines, repositioning or repainting hull marks), modification to bin volume (change in bin dimensions or addition or subtraction of structure) or changes in sensor type or location; these changes shall be reported in the sensor log section of the DPIP. A system does not have to be transmitting data between jobs, however in order to retain certification during this period, the system sensors or hardware should not be disconnected or removed from the scow. If the system is powered down, calibration coefficients shall be retained.

1.5 DREDGE PLANT INSTRUMENTATION PLAN (DPIP)

a. Submit plan to Washington Department of Ecology as directed in section F.1 of the Water Quality Certification (A7). Maintain a digital copy of the DPIP on file with the National DQM Support Center. Also maintain a copy of the DPIP on a working dredge on site which is easily accessible to Government personnel at all times. This document shall describe the sensors used, configuration of the system, how sensor data will be collected, how quality control on the data will be performed, and how sensors/data reporting equipment will be calibrated and repaired if they fail. A description of computed scow specific data and how the sensor data will be transmitted to the DQM Database shall also be included. Submit to the DQM Support Center any addendum or modifications made to the plan, subsequent to its original submission, prior to start of work.

The DPIP shall include the following as a minimum:  
*(DPIP must have table of content in the following order)*

- (1) Dredging Company
  - (a) Dredge Point of Contact
  - (b) Telephone Number
  - (c) Email address
- (2) Scow Monitoring System Provider
  - (a) Scow Monitoring System Point of Contact
  - (b) Telephone Number
  - (c) Email address
- (3) Scow Name/ID
- (4) Sensor repair, replacement, installation, modification, or calibration methods
- (5) Data reporting equipment
- (6) Procedure for providing sensor data/computed data to DQM Database via e-mail
- (7) System Power Supply



MCR Jetty A Rehabilitation

- (8) System Battery Charge Method
- (9) Documentation on how the Contract number be changed if the system is left on past the end of the Contract
- (10) System telemetry
- (11) Dimensioned Drawings of the Scow
- (12) A typical plan and profile view of the scow showing:
  - (a) Bin cross sections
  - (b) Locations of required sensors referenced to:
    - (i) fore and aft perpendicular
    - (ii) bin length, depth, width, zero reference
    - (iii) external hull draft markings (latitudinal, longitudinal, keel)
    - (iv) each other
  - (c) overall scow dimensions.
- (13) Criteria and method used to increment trip number
- (14) Description of how the UTC time stamp is collected
- (15) Positioning system
  - (a) Brand name and specifications
  - (b) Sampling rates for data acquisition (standard vs. disposal)
  - (c) Instrument used to calculate COG
  - (d) Any calculation done external to the instrumentation
  - (e) Certificates of calibration and/or manufacturer certificates of compliance
  - (f) A description of how scow speed is determined.
- (16) Hull status
  - (a) Instrumentation brand name and specifications
  - (b) Certificates of calibration and/or manufacturer certificates of compliance
  - (c) Any calculation done external to the instrumentation
  - (d) Criteria for determining hull open/closed.
- (17) Heading

MCR Jetty A Rehabilitation

- (a) Instrumentation brand name and specifications
- (b) Certificates of calibration and/or manufacturer certificates of compliance.
- (c) Any calculation done external to the instrumentation
- (d) Criteria for determine heading.

(18) Drafts

- (a) Instrumentation brand name and specifications
- (b) Certificates of calibration and/or manufacturer certificates of compliance
- (c) Any calculation done external to the instrumentation
- (d) Criteria used to determine draft.

(19) Displacement

- (a) Method used by Contractor to calculate displacement based on fore and aft draft.
- (b) Tables listing (fresh and salt water) displacement as a function of draft provided by a licensed marine surveyor/ naval architect independent of the Contractor. The scaling between each interval in the table is determined by the designer of the table (which is determined by the shape of the scow), however units shall be reported, at a minimum, in ft and tenths of ft for draft and long tons for displacement.
- (c) These methods and tables must be an accurate reflection of the current configuration and displacement.

(20) Contractor Data

- (a) Backup frequency
- (b) Backup method
- (c) Post processing.

(21) Archive capability

(22) Documentation of:

- (a) Test methods used by the Contractor to provide quality control of data.
- (b) Verification that the reported values are applicable for the sensor and application.

(23) Quality Control Plan as per paragraph CONTRACTOR QUALITY CONTROL

- (a) Name of Quality Control Systems Manager

(b) Procedures for checking collected data against known values

(c) Procedures for verifying telemetry is functioning.

(24) Log of sensor performance and modifications

(25) Log of Contractor data backup per paragraph Contractor Data Backup.

b. Any changes to the computation methods shall be approved by the National Dredging Quality Management Program Support Center prior to their implementation.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 SPECIFICATIONS FOR REPORTED DATA

3.1.1 General

a. Provide, operate, and maintain all hardware and software to meet these specifications. The Contractor is responsible for replacement, repair, and calibration of sensors and other necessary data acquisition equipment needed to supply the required data.

b. Repairs shall be completed within 48 hours of any sensor failure. Upon completion of a repair, replacement, installation, modification, or calibration notify the COR. The COR may request re-calibration of sensors or other hardware components at any time during the Contract as deemed necessary.

c. Keep a log of sensor repair, replacement, installation, modification, and calibration in the on-site copy of the DPIIP. The log shall contain a 3-year history of sensor maintenance to include: the time of sensor failures (and subsequent repairs), the time and results of sensor calibrations, the time of sensor replacements, and the time that backup sensor systems are initiated to provide required data. It shall also contain the name of the person responsible for the sensor work.

d. Sensors installed shall be capable of collecting parameters within specified accuracies and resolutions indicated in the following subsections and transmit them to the DQM Database.

e. With the exception of position and any value calculated, reported sensor values should represent a weighted average with the highest and lowest values not included in the calculated average for the given interval. The averaging routine used should be consistent across all event triggers. This information should be documented in the DPIIP sections that say "Calculations done external to the instrumentation."

f. These data reporting requirements cover the collection of electronic data on a scow through the entire dredging cycle. Disposal events can consist of both open water disposal and offloading. Open water disposal is the placement of material via bottom doors or split hull. Offloading is the placement of material via either hydraulic or mechanical means.

## MCR Jetty A Rehabilitation

### 3.1.2 Scow Name

Each scow shall be assigned a unique name that will remain constant from one dredging operation to the next.

### 3.1.3 Contract Number

The USACE assigned Contract number for the project will be reported.

### 3.1.4 Trip Number

A DQM trip number shall document the end of a disposal event for a given scow.

#### 3.1.4.1 Open Water Disposal

The trip number shall be incremented at the completion of each disposal/removal of material from the scow. Each scow shall maintain a separate trip numbering sequence - i.e. each scow shall start with a trip number of one, that will be incremented by one each time that scow completes a disposal. The trip number shall be calculated and repeatable based on a given logic; it may not necessarily correspond to the trip number logged aboard the dredge or tug. Efforts shall be made to include logic that avoids false trip number increments, while also not allowing the routine to miss any disposal events.

#### 3.1.4.2 Offloading

The trip number shall be incremented at the completion of each disposal/removal of material from the scow. Each scow shall maintain a separate trip numbering sequence - i.e. each scow will start with a trip number of one, that will be incremented by one each time that scow completes a disposal. The trip number must be calculated and repeatable based on a given logic; it may not necessarily correspond to the trip number logged aboard the dredge or tug. Efforts shall be made to include logic that avoids false trip number increments, while also not allowing the routine to miss any disposal events.

#### 3.1.4.3 Project Trip Number

A project trip number is not unique to a particular dredge plant, but is unique to a Contract. Like a scow trip number the project trip number shall document the end of a disposal event. Project trip numbering will begin at number one at the start of the Contract, and will be incremented by one at the completion of each disposal event or emptying of the dredge material. The trip number must be calculated and repeatable based on a given logic. Efforts shall be made to include logic that avoids false trip number increments, while also not allowing the routine to miss any disposal events.

### 3.1.5 Horizontal Positioning

Geographic coordinates of the vessel as indicated by the location of the GPS antenna. All locations shall be obtained using a Positioning System operating with a minimum accuracy level of 1 to 3 meters horizontal Circular Error Probable (CEP). Positions shall be reported as Latitude/Longitude WGS 84 in decimal degrees. West Longitude and South Latitude values are reported as negative.

## MCR Jetty A Rehabilitation

### 3.1.6 Date and Time

The date and time shall be reported to the nearest second and referenced to UTC time based on a 24-hour format; mm/dd/yyyy hh:mm:ss.

### 3.1.7 Hull Status

Hull status is meant to reflect a condition when material could be removed or released from the scow. For this Contract, hull status shall register closed prior to leaving the disposal area.

#### 3.1.7.1 Open Water Disposal

An open split hull or open bottom door shall be indicated by reporting an "OPEN" value. A closed split hull or closed bottom door of a scow shall be indicated by reporting an "CLOSED" value. Open status shall be indicated as the bin starts to open and a closed status shall be indicated only once the bin is fully closed. For pocket scows, the Open/Closed status shall correspond to the compartment which is first to open and last to close.

#### 3.1.7.2 Offloading

For non-dumping scows, the "OPEN" value shall indicate that the bin is in the process of being unloaded, either by pumping or mechanical means.

### 3.1.8 Course

Scow course-over-ground (COG) shall be provided using industry standard equipment. Provide scow course over ground (to the nearest whole degree) with values from 000 (true north) to 359 degrees referenced to a clockwise positive direction convention.

### 3.1.9 Speed

Scow speed-over-ground shall be provided in knots using industry standard equipment with a minimum accuracy of 1.0 knots and resolution to the nearest 0.1 knot.

### 3.1.10 Heading

Scow heading shall be provided using industry standard equipment. The scow heading shall be accurate to within 5 degrees and reported to the nearest whole degree, with values from 000 (true north) to 359 degrees referenced to a clockwise positive direction convention.

### 3.1.11 Draft

All reported draft measurements shall be in feet, tenths and hundredths with an accuracy of + 0.1 foot, and reported with a resolution to the nearest 0.01 foot relative to observed physical draft readings. The measurements shall be reported at a resolution of two decimal places (hundredths of a foot). Reported forward draft value shall be equal to the sum of the visual forward port and starboard draft mark readings divided by two. Reported aft draft value shall be equal to the sum of the visual aft port and starboard draft mark readings divided by two. Forward draft, aft draft and average draft will be reported. Sensors shall be placed at an optimum location on the scow to be reflective of observed physical draft mark readings at any trim or list. The sensor value reported shall be an average of at least 10 samples per event, remove at least one maximum value

and one minimum value, and average the minimum eight remaining values. When average draft is calculated for the purpose of determining displacement, significant digits for average draft shall be maintained such that if forward draft was 0.15 and aft draft was 0.1 then the average draft would be 0.125.e draft would be 0.125.

### 3.1.12 Displacement

Scow displacement shall be reported in long tons, based on the most accurate method available for the scow. The minimum standard of accuracy for displacement is interpolation from the displacement table, based on the average draft. For each location, determine the density of water used to calculate displacement. This calculation shall be used for an additional interpolation between the fresh and salt water tables. The water density used is project/location specific. 1000 kg/m<sup>3</sup> (1g/cm<sup>3</sup>)- fresh water 1027 kg/m<sup>3</sup> - 1030 kg/m<sup>3</sup> (1.027g/cm<sup>3</sup> - 1.03g/cm<sup>3</sup>)- salt water.

## 3.2 NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM SYSTEM REQUIREMENTS

### 3.2.1 General

Contractors DQM system shall be capable of collecting, displaying, and transmitting information to the DQM Database. The parameters which shall be reported to the DQM Database include: trip number, date and time, hull status, scow course, scow speed, scow heading, draft, and displacement. An easily accessible, permanent visual display on the scow shall show in real time the parameters collected by the system in the same units as data submitted to the DQM database. In the event a reported parameter is calculated based on multiple sensors, the sensor values as used in the equation shall be able to be viewed in addition to the required parameter. If a hardware problem occurs, or if a part of the system is physically damaged, then the Contractor is responsible for repairing it within 48 hours of determination of the condition.

### 3.2.2 Telemetry

The Contractor may select any commercial satellite, cellular phone, or other data communications systems available, as long as it is capable of meeting the required minimum data transmission interval (paragraph Data Transmission to Web Service), and is able to transmit the data to the DQM Database via the Internet in the required mail message format. The data transition process from the scow to the DQM database must be automated. The data may be sent from the scow directly to the DQM database or to a shore based computer. Data transmitted to the DQM Database should be raw data; any processing of the data conducted shore side shall be done using a repeatable automated software or programming routine. A description of this process shall be included in the DPIIP.

### 3.2.3 Data Reporting Frequency

a. Disposal activities shall be logged with high temporal and spatial resolution. Data shall be logged as a series of events. Each set of measurements (i.e. time, position) will be considered an event. All required information in paragraph SPECIFICATIONS FOR REPORTED DATA, shall be collected within one second of reported time. Data shall be measured with sufficient frequency by the scow system to resolve the events to the accuracy specified in the following table. Any averaged variable must be collected and computed within this sampling interval. Event Types "Sailing", "Loading/Stationary" and "Offloading" and "Open

MCR Jetty A Rehabilitation

Water Disposal" are triggered by a time criteria; the criteria should be consistent across the "Sailing" and "Open Water Disposal" event types and should not change for the data collected on a given scow. This criterion should be documented by the Contractor in the DPIIP.

Event Type	Event Trigger Descriptions	Event Time Resolution	Event Position Resolution
Loading/ Stationary	<p><b>No change in position with hull status closed</b> An elapsed time of 1 hour since the last event.</p> <p><b>No change in position with hull status open</b></p> <p>-----NONCLOSURE-----</p> <p>In the event a scow has completed an open water disposal and transited back to a holding station without closing the hull, the sampling shall be changed to once per hour.</p>	1 minute	NA
Sailing	<p><b>Change in position with hull status closed</b> Time from the last sample equals 1 minutes.</p>	1 second	+/- 10 ft
Open Water Disposal	<p><b>Hull status open:</b> A position must be recorded within 1 second of the hull status going from closed to open and again within 1 second of the hull status going from open to close. The position shall be reported at any equal interval from 6 to 12 seconds. This interval shall always remain consistent for the dredge plant.</p>	1 second	+/- 10 feet

Event Type	Event Trigger Descriptions	Event Time Resolution	Event Position Resolution
Offloading	<b>Offloading material, hull status reported as open:</b> A position must be recorded within 1 minute of arrival at the offload location and within one second of the material starting to be removed from scow Time from the last sample equals 1 minute.	1 second	+/- 10 ft
	----- <b>STANDBY OFFLOADING</b> ----- In the event a scow is not being actively offloaded at the offload location for a time equal to one hour, sampling interval shall be equal to once an hour.	1 minute	

b. Example: Scow is stationary for 1-hour 15-minutes, and then the scow sails to the disposal area. You should have a "Loading/Stationary" event at time zero, time 1-hour, and time 1-hour 15-minutes. Then, for a Sailing, within 1-second of an elapsed time of 1-minute from the 1-hour 15-minutes event, another event occurs.

### 3.2.4 Data Transmission to Web Service

A Simple Object Access Protocol (SOAP) web service shall be used to report sensor data to the DQM Database. Data shall be transmitted as it is collected in real time and pushed to the DQM web service. If the web service is not available or returns an Error message, the data shall be stored in a queue and transmitted upon re-establishment of the connection, starting with the oldest data in the queue and continuing until real-time transmission is restored. Delays in pushing real time data to the DQM database should not exceed four hours. Exceptions to these requirements may be granted by the DQM center on a case by case basis with consideration for considering Contract specific requirements, or site specific conditions, and extreme weather events.

a. The web service provides synchronous or asynchronous calls to the Enqueue method, whose fields are:

Key	GUID string identifying the Contractor
Subject	Plant identification string
Data	Scow XML data element with one point's sensor readings

b. Please contact [dqm-support@usace.army.mil](mailto:dqm-support@usace.army.mil) to obtain the web service URL and the appropriate Key credentials.

c. Upon transmitting the Key (e.g. `12345678-90AB-CDEF-1234-567890ABCDEF`), Subject (e.g. `2099`), and Data (example in next section), the service will respond with one of



the following responses.

d. If the Key element identifying the Contractor was invalid, the service will respond with:

Error: Invalid/Expired GUID

e. If the Plant or Data elements were incorrect (e.g. if the XML string is not well-formed SCOW\_DREDGING\_DATA), the service will respond with:

Error: Invalid Format

f. If there is an error within the service itself, the service will respond with:

Error: Service Unavailable

g. If all fields were correct, the service will respond with a SHA 256 hexadecimal checksum of the Data field, e.g.:

67DE1F8FA6989415BE817D1E3ABF6A3B761624F09AE02F5DF9FC63D15196F322

h. If all fields were correct, but the Key for this Contractor will soon expire, the service will respond with the new key, as well as a SHA 256 hexadecimal checksum of the Data field. The new Key and the checksum will be separated by a pipe `|` character for simpler parsing, e.g.:

Warning: Update GUID to  
FEDCBA09-8765-4321-FEDC-BA0987654321|67DE1F8FA6989415BE817D1E3ABF6A3B76  
1624F09AE02F5DF9FC63D15196F322

i. Upon receipt of the Update GUID warning above, update the Key transmitted in further calls to the service, as the current Key will expire within a short timeframe. The new Key will be available for use immediately. After the Contractor uses the new Key for the first time, the service will immediately disable the old Key.

j. Communication with the DQM web service can be conducted either synchronously or asynchronously. For synchronous communication the system provider's web service should wait for the results before sending the next line of XML data.

### 3.2.5 XML-Formatted Sensor Data String

a. Each scow event shall be passed as a string on one continuous line of data. The example below is broken up by variable for ease of reading:

```
<?xml version="1.0"?>
<SCOW_DREDGING_DATA version="2.5">
  <SCOW_NAME>AU1994</SCOW_NAME>
  <CONTRACT>W123BA-09-D-0087_RL01</CONTRACT>
  <PROJECT_TRIP_NUMBER>102</PROJECT_TRIP_NUMBER>
  <TRIP_NUMBER>34</TRIP_NUMBER>
  <X_POSITION>-81.670632</X_POSITION>
  <Y_POSITION>41.528987</Y_POSITION>
  <DATE_TIME>2010-08-14 10:50:15</DATE_TIME>
  <SCOW_SPEED>0.0</SCOW_SPEED>
  <SCOW_COURSE>0.0</SCOW_COURSE>
  <HULL_STATUS>OPEN</HULL_STATUS>
```

```
<SCOW_HEADING></SCOW_HEADING>
<SCOW_FWD_DRAFT></SCOW_FWD_DRAFT>
<SCOW_AFT_DRAFT></SCOW_AFT_DRAFT>
<SCOW_AVG_DRAFT></SCOW_AVG_DRAFT>
<ULLAGE_FWD></ULLAGE_FWD>
<ULLAGE_AFT></ULLAGE_AFT>
<ULLAGE_AVG></ULLAGE_AVG>
<SCOW_BIN_VOLUME></SCOW_BIN_VOLUME>
<SCOW_DISPLACEMENT></SCOW_DISPLACEMENT>
<SCOW_LIGHTSHIP></SCOW_LIGHTSHIP>
<SCOW_TDS></SCOW_TDS>
<ADDITIONAL_DATA>Some more scow info, if needed</ADDITIONAL_DATA>
</SCOW_DREDGING_DATA>
```

b. It should be noted that date values shall be formatted as follows: YYYY-MM-DD HH:MM:SS, as shown above. If for any reason a field has no value, send the enclosing XML tags with nothing between them, e.g. <DRAFT\_AFT></DRAFT\_AFT>. The web service cannot handle a "null" value or any other indicators of no value collected.

### 3.2.6 Contractor Data Backup

a. Maintain an archive of all data sent to the DQM database during the dredging Contract. The COR may require, at no increase in the Contract price, that the Contractor provide a copy of these data covering specified time periods. The data shall be provided in the HTML format which would have been transmitted to the DQM database. Data submission shall be via storage medium acceptable to the COR.

b. At the end of the dredging contact, contact the National DQM Support Center prior to discarding the data to ensure it has been appropriately archived. Record in a separate section at the end of the scow's on-site copy of the DPIP the following information:

- (1) Person who made the call
- (2) The date of the call
- (3) The DQM representative who gave permission to discard.

c. The same day of the phone call and prior to discarding the data, the submit a "Data Appropriately Archived e-mail" to the COR with the above information, and Cc: the DQM Support Center representative providing permission. In addition to the above information, also include in the e-mail:

- (1) Project name and Contract number
- (2) Scow start and end dates
- (3) Name of the scow.

### 3.3 PERFORMANCE REQUIREMENTS

The Contractor's National Dredging Quality Management Program system shall be fully operational at the start of dredging operations and fully certified prior to moving dredge material on the Contract, see paragraph, NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM CERTIFICATION. To meet Contract requirements for operability, in addition to certification, the

Contractor's system shall provide a minimum an accurate data and be compliant with DPIIP requirements in paragraph, DREDGE PLANT INSTRUMENTATION PLAN (DPIIP). Quality data strings are considered to be those providing accurate values for all parameters reported when operating according to the specification. Repairs necessary to restore data return compliance shall be made within 48 hours. If the Contractor fails to report required data within the specified time window for scow measurements paragraphs entitled, Data Reporting Frequency, and paragraph Data Transmission to Web Service, or if the system has not received DQM certification prior to dredging; the system will be declared not in compliance, and the Contractor will be assessed liquidated damages equivalent to the additional oversight hours that would be required for Corps personnel to be on site from the first full day after the system is deemed not fully operational through to the time when the system is returned to operational status. For this Contract, the liquidated damages shall be the amount stated in Section 00800, Contract Clause 52.211-12, LIQUIDATED DAMAGES.

### 3.4 COMPLIANCE INSPECTION AND QUALITY ASSURANCE CHECKS

#### 3.4.1 General

a. Quality assurance checks are required prior to the commencement of dredging, and at the discretion of a COR periodically throughout the duration of the Contract. As part of the testing requirements, provide the above personnel an easily accessible visual display of measurements from the scow monitoring system in the same units that are submitted to the DQM database. These measurements shall be provided in real-time on the scow or near real-time on location. Submit data collected during the QA checks from the scow monitoring system to the DQM database at completion of the checks. Detailed instructions for performing these checks and a spreadsheet for recording the results are available at <http://dqm.usace.army.mil/Certifications/Index.aspx>. Incoming data shall be periodically reviewed to assure compliance with performance requirements outlined in paragraph PERFORMANCE REQUIREMENTS.

b. For annual instrumentation checks and compliance monitoring, the DQM Data Acquisition Team personnel attempt to be as flexible as possible in performing their checks so as not to delay work; however, in order to expedite matters as much as possible, it is necessary that they receive the support and cooperation of the local district and Contractor. Coordinate pickup times and locations and provide transportation to and from any platform with a DQM certified system in a timely manner. Calibrations to the sensors should already be performed before DQM personnel arrive on site.

#### 3.4.2 Position Check

During the QA checks, both the static position of the scow and a dynamic tracking of movement though each of the event triggers in paragraph, Data Reporting Frequency, will be monitored by an independent GPS unit. The inspector GPS data shall be compared to the data that is collected by the DQM certified system for the same period. The data should be provided to the inspector by the system provider while onsite. The inspector will confirm position of the scow, verify that data collection intervals change as each of the scow event triggers change, and will check all data reporting requirements. A Contractor furnished tug will be required to transport the scow during this check. Throughout the Contract, the COR will periodically verify reported positions by independently measuring with other equipment to verify locations.

3.4.3 Hull Status Check

The COR will document the angle at which the hull status sensor registers "OPEN" and "CLOSED".

3.4.4 Draft & Displacement Check

The COR shall periodically verify the accuracy of the fore and aft system reported draft values by comparing the vessel hull draft marks to the corresponding sensor readings indicated on the DQM screen. The vessel's hull draft reading shall be viewed from a Contractor supplied auxiliary vessel circling the dredge. The COR shall review the difference between averaged drafts recorded by the instruments and those estimated from the draft marks to insure that the system is operating within the acceptable accuracy of approximately + 0.1 ft in calm seas conditions. Reported draft values will be verified light, loaded, and at other intervals at the discretion of the COR. If sensors responsible for collecting draft values are not located on centerline, verification may be required under different trim and list conditions. If values are outside the acceptable range, re-calibrate or repair system components as necessary. This check may be performed separately or as a part of the Water Load Test. For each system provided average draft value recorded during the draft check, corresponding displacement will be verified longhand using the supplied draft/displacement tables.

3.5 CONTRACTOR QUALITY CONTROL

Designate a quality control systems manager (QCSM), who shall develop and maintain daily procedures to ensure the Contractor's Quality Control (CQC) of the DQM system. These methods shall include a procedure by which data being collected is checked against known values and the telemetry is verified to be functioning. The Contractor Quality Control Plan which describes these methods and procedures shall be included in the DPIP as stated in paragraph DREDGE PLANT INSTRUMENTATION PLAN (DPIP). This plan shall be submitted to the COR and is a required submittal prior to the start of the Contract. CQC Reports may be required at the discretion of the GQAR daily. Annotations shall be made in the CQC Report documenting all actions taken on each day of work including all deficiencies found and corrective actions taken.

3.6 LIST OF ITEMS TO BE PROVIDED BY THE CONTRACTOR

DPIP paragraph DREDGE PLANT INSTRUMENTATION PLAN (DPIP)

DQM SYSTEM

Sensor Instrumentation paragraph SPECIFICATIONS FOR REPORTED DATA

SCOW DATA

Event documentation paragraph Data Reporting Frequency

Data reports paragraph Data Transmission to Web Service

QA EQUIPMENT ON DREDGE

Clear and accurate draft marks.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 35 - WATERWAY AND MARINE CONSTRUCTION

SECTION 35 31 26.40 25

JETTY REPAIRS

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 SUBMITTALS
- 1.3 WORKING ENVIRONMENT
  - 1.3.1 Site Related Weather and Tidal Conditions
  - 1.3.2 Managing Work to Match Weather and Oceanographic Conditions
- 1.4 DELIVERY
- 1.5 QUARRY
  - 1.5.1 General
  - 1.5.2 Sampling, Testing, and Acceptance of Stones

PART 2 PRODUCTS

- 2.1 SOURCES
  - 2.1.1 General
  - 2.1.2 Stone Quality and Acceptance
  - 2.1.3 Testing Requirements
  - 2.1.4 Stone Classification
  - 2.1.5 Testing Frequency

PART 3 EXECUTION

- 3.1 STONE DISTRIBUTION
  - 3.1.1 General
  - 3.1.2 Identification of Repair Areas
  - 3.1.3 Variable Repair Areas and Re-handling Existing Jetty Armor Stone
  - 3.1.4 Transition Section, Station 46+00 to 46+50
  - 3.1.5 Jetty Repair Section, Station 46+50 to 86+50
  - 3.1.6 Transition Section, Station 86+50 to 87+50
  - 3.1.7 Head Stabilization, Station 87+50 to 89+00
- 3.2 EQUIPMENT
  - 3.2.1 Hauling Equipment
  - 3.2.2 Placing Equipment
  - 3.2.3 Equipment Operator
- 3.3 STONE PLACEMENT
  - 3.3.1 General
  - 3.3.2 Jetty Demonstration Section
- 3.4 STOCKPILING
- 3.5 JETTY CREST HAUL ROAD
- 3.6 NAVIGATION LIGHT BASE

-- End of Section Table of Contents --

SECTION 35 31 26.40 25

JETTY REPAIRS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM C88 (Modified)	(2013) Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C127 (Modified)	(2012) Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate
ASTM C131 (Modified)	(2006) Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C666/C666M (Modified)	(2003; R 2008) Resistance of Concrete to Rapid Freezing and Thawing

U.S. ARMY CORPS OF ENGINEERS (USACE)

COE CRD-C 148 (Modified)	(1969) Method of Testing Stone for Expansive Breakdown on Soaking in Ethylene Glycol
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1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section:

SD-01 Preconstruction Submittals

Quarry Documentation/Stone Testing; G

1.3 WORKING ENVIRONMENT

1.3.1 Site Related Weather and Tidal Conditions

a. Perform work with the understanding of hazards likely to arise from the weather conditions during the construction period. The following websites provide weather forecasts, records and reports and data concerning historic and oncoming storms and tides at the worksite:

<http://tidesandcurrents.noaa.gov/noaatidepredictions/NOAATidesFacade.jsp?Stationid=9440574>

<http://tides.mobilegeographics.com/locations/2743.html>

[http://www.wrh.noaa.gov/pgr/marine/bars\\_mover.php](http://www.wrh.noaa.gov/pgr/marine/bars_mover.php)

<http://tidesonline.nos.noaa.gov/geographic.html>

<http://polar.ncep.noaa.gov/waves/viewer.shtml?-multi-1-latest-hs-pacific->

[http://www.ndbc.noaa.gov/maps/Columbia\\_River.shtml](http://www.ndbc.noaa.gov/maps/Columbia_River.shtml)

b. Within open coast waters of the Pacific Northwest, the favorable work season for marine construction is during June through September. October and May can be a transition time from summer- to winter-like conditions. Marine weather and oceanographic conditions at MCR between November and April can be extremely dangerous. Even during summer, wave action along at coastal inlets and jetties can pose risks for marine construction activities, during specific tidal phases or storm sequences. This is especially the case for exposed areas like the jetty head. During winter, the coastal environment (waves, wind, rain) is generally too dangerous for conducting marine construction activities at exposed locations. Demonstrate that the work can be sequenced to account for the wave environment and tidal action at MCR. Avoid working on the southern half of the jetty during the fall-spring storm season (October to May), when wave action limits safe construction operations.

#### 1.3.2 Managing Work to Match Weather and Oceanographic Conditions

Implement prudent measures to reduce risks of damage to in-progress work elements, associated with periods of high tide, winds, waves, or storms. Protect staging areas, equipment, and vulnerable work elements during active construction periods and during non-construction periods. Do not progress beyond a vulnerable in-progress work component, without being able to secure that component before exposure to a damaging event (high tide, storm condition, etc). Maximize opportunities to perform work on vulnerable work elements when favorable conditions are available; i.e. perform relict stone rework and toe stone placement during periods of low tide and low wave action (avoid exposure to damaging events), and complete work components at higher elevations during periods of high tide. The jetty repair template extends from about -10.6 feet to +23.4 feet NAVD88. Include work tides and storm conditions into the schedule and work plan. Repair damage to any in-progress work caused by environmental processes at the expense of the Contractor.

#### 1.4 DELIVERY

If delivery is made by barge and jetty stone is put in final placement directly from the barge, then volume must be determined by on-deck measurement. If the jetty stone is not put in final placement directly from the barge, on-deck measurement will not be made.

#### 1.5 QUARRY

##### 1.5.1 General

The Contractor is responsible for arrangements of quarry permits and right-of-ways, adequate investigation and exploration, and selection,

development, and operation of the quarry to supply stones for this Contract of the weight, size, shape and quality specified herein. Ensure individual stones meet all Contract requirements. The Government may elect to inspect the stones at the quarry or at the jetty site, at any time, and may reject individual stones that don't meet all Contract requirements.

1.5.2 Sampling, Testing, and Acceptance of Stones

a. Quarry Documentation/Stone Testing. Determine the acceptability of stone by laboratory tests, geologic examination, and service records from a Corps validated testing laboratory. Provide previous satisfactory test results or service records from other Corps of Engineers (COE) projects within the last five years to determine the acceptability of the stone source. When these records are not available, test representative samples as specified to ensure that the stones are durable and suitable for use in the work. Laboratory tests, which the stones must be subjected to include specific gravity, absorption, abrasion, accelerated expansion, magnesium sulfate soundness, and other such supplemental tests described in paragraph TESTING REQUIREMENTS as may be necessary. Perform testing to determine conformance with the requirements for acceptance or rejection of stones proposed for use and to determine stone classification at the Contractor's expense at a Corps validated testing laboratory.

b. Sampling. In the absence of quarry documentation as required above, select representative samples of each different type of stone proposed for use in the jetty repair from each proposed source. Perform sample selection in the presence of the COR or designee. Provide the Government 48 hours notice before the required COR witnessing of the stone sample selection. Samples of each type of stone from each source must consist of 5 to 10 pieces with a total weight of not less than 150 pounds for each stone type proposed. No single piece must weigh more than 100 pounds. The presence of the COR or designee during the stone sample selection must not relieve the Contractor of the responsibility to select representative samples from the quarry for testing.

c. Testing. Perform testing to determine conformance with the requirements for acceptance or rejection of stones proposed for use and to determine stone classification at a Corps-validated testing laboratory at the Contractor's expense. Laboratory tests must include specific gravity, absorption, abrasion, accelerated expansion, magnesium sulfate soundness, and other such supplemental tests described in paragraph TESTING REQUIREMENTS.

d. Separate tests must be made for each different stone type. Satisfactory Contractor documentation or laboratory results on stone samples must not constitute approval of all stone from the quarry and in no way change the requirements for obtaining, developing, and maintaining a satisfactory source of stones. Throughout the duration of this Contract, the Government may sample and test stones proposed for use and delivered to the jetty storage area. No Contract time extension will be granted because materials fail to meet the specification requirements. Stones must meet all testing requirements described herein as well as the geologic examination described in the paragraph STONE QUALITY AND ACCEPTANCE. Should the stone from an individual source vary, as determined by visual inspection, the Contractor may be required to re-do some or all of the required tests. The Contractor must be responsible for the cost of all re-tests.



- e. Failure of Stones. Remove stones failing to meet specific requirements from the off-loading facility or the stockpile area. Only approved materials or stones must be placed in the jetty.

## PART 2 PRODUCTS

### 2.1 SOURCES

#### 2.1.1 General

a. Selection of Source. Designate in writing only one source or one combination of sources that is proposed to furnish stone. It is the Contractor's responsibility to determine that the stone source or combination of sources selected is capable of providing the quality, quantities and gradation needed.

b. Acceptance of Materials. Acceptance of a source of stone is not to be construed as acceptance of all material from that source. The right is reserved to reject materials from certain localized areas, zones, strata, or channels, when such materials are unsuitable for stone as determined by the COR.

#### 2.1.2 Stone Quality and Acceptance

Stone that meets all Corps testing standards is still subject to rejection if visual inspection deems the stone unsatisfactory. Each stone accepted for use must be as follows:

a. Composed of strong, hard, durable materials that must not slake or deteriorate on exposure to the action of water or atmosphere.

b. Contain no cracks, joints, faults, seams, or bands of minerals or deleterious materials which would result in breakage or reduction of specified stone weights or dimensions during or after final placement in the jetty repair.

c. Free of expansive or other materials which would cause accelerated deterioration by exposure to project climatic conditions.

d. Sufficiently uniform physical properties throughout so that all portions of the stone must meet the specified test requirements. Weak or inferior-appearing portions of any non-uniform type stone must be subjected to all testing necessary to determine that the stone will not be susceptible to splitting or differential weathering. Any stone, containing an inferior rock material portion that does not meet the specified test requirements must be rejected as unsatisfactory for jetty repairs and removed from the off-loading site. Igneous flow breccias, volcanic breccias, and sedimentary rocks have not performed well and are considered unsuitable for use as jetty stone.

e. Clean and sharp-edged and the longest dimension of any stone must not exceed three times its shortest dimension. It is intended for jetty stones to be blocky in overall shape. Due to the nature of the repairs, the Contractor must avoid producing jetty stones which are dominant in a single dimension (i.e. slabby or tabular).

#### 2.1.3 Testing Requirements

- a. Each stone must meet all the following test requirements for quality:

TEST	REQUIREMENT
Unit Weight	Not less than 165.0 pounds per cubic foot
Absorption	Not more than 5.0 percent
Abrasion - 500 revolutions	Not more than 20.0 percent loss (by weight)
Magnesium Sulfate Soundness - 5 cycles	Not more than 15.0 percent loss (by weight)
Accelerated Expansion	Not more than 15.0 percent breakdown (by weight) or piece count

b. Supplemental test requirements which may be required by the Government based on visual analysis include the following:

TEST	REQUIREMENT
Wetting and Drying - 80 cycles	Not more than 15.0 percent loss (by weight)
Freezing/Thawing - 100 cycles	Not more than 15.0 percent loss (by weight)
Petrographic Examination	Absence of weakness or materials that could result in significant stone alteration and reduction in durability
X-Ray Analysis (Spectrographic and Diffraction)	Absence of deleterious clays or other minerals that could result in significant deterioration of rock quality

c. All test results reported by the validated testing laboratory must be considered as exact, regardless of any permissible variance that may be established by test procedures for determining acceptability of jetty stone furnished under this Contract. Test procedures to be utilized are as follows:

d. Unit Weight and Absorption. Provide satisfactory test results and service records within the last five years; if not available, determine the unit weight (weight per cubic foot) by multiplying the bulk-saturated-surface-dry (BSSD) specific gravity by 62.4 pounds per cubic foot. Specific gravity and absorption must be determined in accordance with ASTM C127 (Modified) as follows:

- (1) the test sample must consist of about 5,000 grams of generally cubical pieces of stone passing the 2-inch and retained on the 1-1/2 inch standard square mesh sieve sizes
- (2) the test pieces must be laboratory prepared by jaw crushing or chipping.

e. Abrasion. Provide satisfactory test results and service records within the last five years; if not available, determine the abrasion loss in accordance with ASTM C131 (Modified) as follows:

- (1) the test sample must consist of the same size and gradation
- (2) the abrasive charge used must comply with that used for Grading "A"
- (3) the test sample must be subjected to 500 revolutions.

f. Magnesium Sulfate Soundness. Provide satisfactory test results and service records within the last five years; if not available, the test sample must consist of 5± kg of rock pieces passing the 2-inch and retained on the 1-1/2 inch sieve, prepared as specified. The test is based upon ASTM C88 (Modified). Conduct the test through 5 cycles, which requires two to three weeks to complete.

g. Accelerated Expansion. Provide satisfactory test results and service records within the last five years; if not available, the test sample must consist of 5± kg of rock pieces passing the 2-inch and retained on the 1-1/2 inch sieve, prepared and tested in accordance with Testing Procedure COE CRD-C 148 (Modified). Compute the test results by dividing the number of pieces that break down by the number of pieces in the original test sample. Failure or breakdown is defined as any piece separating into two or more pieces or losing sufficient surface material to allow it to pass through the 1-1/2 inch sieve. The test period is 15 days.

h. Wetting and Drying. Submit Wetting and Drying test results if required by the Government when marginal results from the aforementioned tests are obtained or if visual inspection reveals suspicious seams, slaking, laminations, cracks, faults, joints, or bands of minerals or deleterious materials. The test sample must consist of 5± kg of rock pieces passing the 2-inch and retained on the 1-1/2 inch sieve, prepared as specified. The test sample must be oven-dried and weighed, then soaked for 24 hours prior to starting the test. Testing must consist of 80 cycles of wetting and drying. Each cycle must consist of soaking for 3 hours in tap water at approximately 60° F and drying for 3 hours with an infrared heat lamp so that the surface temperature of the rock pieces reach 165° F. Upon completion of the test, samples must be oven-dried, screened over 1-1/2 inch sieve, and weighed. Compute percent loss based on original dry weight.

i. Freezing and Thawing. Submit Freezing and Thawing test results if required by the Government when marginal results from the aforementioned tests are obtained or if visual inspection reveals suspicious seams, slaking, laminations, cracks, faults, joints, or bands of minerals or deleterious materials. The test sample must consist of 5± kg of rock pieces passing the 2-inch and retained on the 1-1/2 inch sieve, prepared by jaw crushing or by hand chipping. All sharp edges must be chipped off and only pieces of approximately cubical shape must be used. Compute the original dry weight of pieces selected for the freeze-thaw test by determining moisture content of room-dry rock from representative sample surplus or undersized pieces using the formula below:

Dry weight of pieces selected from freeze-thaw = Weight room - dry

$$1 + \frac{\text{MC (in percent)}}{100}$$

Where MC = moisture content

j. Immerse specimens in water for 24 hours prior to the start of the test. Then place the sample in a pan approximately 15-inches by 9-1/2 inches by 2-1/4 inches and the pan filled from 1/4-inch to 1/2-inch with water. Subject the sample in the pan to freezing and thawing in the freeze-thaw apparatus described in ASTM C666/C666M (Modified). Accomplish freezing and thawing at the rate of 12 cycles per day, where one cycle consists of approximately one hour at 0 degrees plus/minus 2 degrees F and one hour at 40 degrees plus/minus degrees F. At the end of 100 cycles, wash, dry, sieve over the 1-1/2 inch sieve, and weigh the sample. Compute the percent loss based upon the original dry weight. Report observations of appearance of each piece with comment as to apparent soundness, cracking, etc. Photograph the sample at the end of the test or during the test when significant cracking, flaking crumbling, or disintegration has taken place.

k. Petrographic Examination. Submit Petrographic Examination test results if required by the Government when marginal results from the aforementioned tests are obtained or if visual inspection reveals suspicious seams, slaking, laminations, cracks, faults, joints, or bands of minerals or deleterious materials. Macroscopic and microscopic identification of rock and constituent minerals with general description of typical thin Sections. Examination includes description of any seams, veins, or joints and an estimate of alteration, degree of weathering, and probable rock durability. A comprehensive petrographic examination includes descriptions of dominant, accessory and alteration minerals, and a mode analysis of the rock giving percent constituents by point count examination of typical thin Sections.

l. X-Ray Analysis. Submit X-Ray Analysis (Spectrographic and Diffraction) test results if required by the Government when marginal results from the aforementioned tests are obtained or if visual inspection reveals suspicious seams, slaking, laminations, cracks, faults, joints, or bands of minerals or deleterious materials. The x-ray analyses consist of random pack powder mounts to determine constituents of rock with emphasis on determination of clay minerals and alteration products. X-ray diffraction technique includes quantitative estimates of the mineral assemblages and is of particular importance in the identification of swelling clays.

#### 2.1.4 Stone Classification

a. Stone Classification. Two separate stone classifications are used for this repair contract, based on stone weight and placement location. A-stone is to be used in the main body (trunk) repairs and in the lower armor stone layers of the end section (head). A-Select is to be used in the outer layer of the head section.

b. Gradation. The Stone Gradation Tables on the following pages provide the required weights of individual armor stones in tons of 2,000 pounds based upon the weight per cubic foot of acceptable stone furnished. If larger stones are proposed to be used, they must be approved by the COR and special care must be utilized to provide interlocking with adjacent stones. Armor stones larger than the maximum

allowed by gradation table may be accepted. A uniform variation of stone weights and shapes must be used throughout the repair areas to ensure a consistent high degree stone-to-stone interlocking. Segregation of stone weights or shapes within specified areas of the work must be avoided unless approved by the Government.

MCR Jetty A Rehabilitation

**A-Stone Gradation (tons)**

Stone Density (pcf)	0% Less Than (By total number)	0% to 10% Less Than (By total number)	40% to 60% Less Than (By total number)	100% Less Than (By total number)
165	8	16	21	31
166	8	15	20	30
167	8	15	20	30
168	8	15	19	29
169	8	14	19	28
170	7	14	18	28
171	7	14	18	27
172	7	13	18	27
173	7	13	17	26
174	7	13	17	25
175	7	12	17	25
176	6	12	16	24
177	6	12	16	24
178	6	12	16	23
179	6	11	15	23
180	6	11	15	22
181	6	11	15	22
182	6	11	14	22
183	6	11	14	21
184	6	10	14	21
185	5	10	14	20
186	5	10	13	20
187	5	10	13	20

MCR Jetty A Rehabilitation

188	5	10	13	19
189	5	9	13	19
190	5	9	12	18
191	5	9	12	18
192	5	9	12	18
193	5	9	12	17
194	5	9	11	17
195	4	8	11	17
196	4	8	11	17
197	4	8	11	16
198	4	8	11	16
199	4	8	10	16
200	4	8	10	15
201	4	8	10	15
202	4	7	10	15
203	4	7	10	15
204	4	7	10	14
205	4	7	9	14

**A-Select Stone Gradation (tons)**

Stone Density (pcf)	0% Less Than (By total number)	40% to 60% Less Than (By total number)	100% Less Than (By total number)
165	21	26	31
166	20	25	30
167	20	25	30
168	19	24	29
169	19	24	28
170	18	23	28
171	18	23	27
172	18	22	26
173	17	22	26
174	17	21	25
175	17	21	25
176	16	20	24
177	16	20	24
178	16	19	23
179	15	19	23
180	15	19	22
181	15	18	22
182	14	18	21
183	14	18	21
184	14	17	21
185	13	17	20
186	13	17	20
187	13	16	19
188	13	16	19
189	12	16	19
190	12	15	18
191	12	15	18
192	12	15	18
193	12	15	17



MCR Jetty A Rehabilitation

194	11	14	17
195	11	14	17
196	11	14	17
197	11	14	16
198	11	13	16
199	10	13	16
200	10	13	15
201	10	13	15
202	10	12	15
203	10	12	15
204	10	12	14
205	9	12	14

c. Rebreaking Stones. Breaking of individual pieces in place by blasting or mechanical methods will not be permitted.

d. Weight Identification. Paint representative stones of the various sizes (0%, 0%-10%, 40%-60% and 100% for the A-stone classification and 0%, 40%-60% and 100% for the A-Select classification) to be used for this project with their respective weights and displayed in the quarry and at the job site. The Contractor Quality Control (CQC) System Manager or equivalent and COR must mutually verify on a periodic basis that armor stone gradation requirements are being met. Paint individual weights on each stone. Mark jetty stones delivered to the storage area to show weight (in tons), and quarry name (if more than 1 quarry is used).

e. Rejected Stone and Residue. Determine the weight of all rejected pieces of stone and residue remaining in the hauling vehicle by reloading and weighing, and deduct such weight from the weight previously determined for payment. Dispose of all rejected stone and residue in an approved manner.

f. Handling Breakage. For any stone broken in handling after being weighed for pay quantity determination, the broken pieces may, upon approval, be placed in the appropriate jetty section if it meets the requirements for that section. If the broken stone meets none of the requirements for stone classification, it will be rejected and reweighed and subtracted from the pay quantity and be disposed of in an approved manner.

#### 2.1.1.5 Testing Frequency

All stone classifications must have indicated tests run prior to initial delivery. Rerun unit weight testing at 5,000 ton intervals during the Contract.

### PART 3 EXECUTION

#### 3.1 STONE DISTRIBUTION

##### 3.1.1 General

Repair of the MCR Jetty A consists of placement of jetty stone at the jetty side slopes and crest to obtain the full section as shown. Repairs must consist of a maximum 50-foot long transition from the existing jetty to the repair design template starting at Sta. 46+50. No jetty rework other than that to enable development of the haul road is to be performed inshore of Sta. 46+00. The repair section from Sta. 46+50 to 89+00 is to be constructed to the design template utilizing the existing jetty centerline. Blend side slopes to the existing jetty at the edges of the repair site. Initial work should be done during the low tide windows to expose the relict jetty stone to view. Excavation or rearrangement of stones on the existing jetty will be needed to achieve the repair template requirements and tolerances. Key in stones to create an interlocking structure and rearrange existing stones as necessary to achieve maximum interlock with both the existing cross section and new stones. Place all jetty stone by means of a crane, a derrick, or other equipment capable of placing stones to the lines, grades, and slopes shown.

### 3.1.2 Identification of Repair Areas

The nominal dimension for new A-stone is approximately 5.5 feet (for 171 pcf stone density). The jetty must be repaired if a minimum of 1 layer of new jetty stone can be accommodated within the cross-section template and its tolerances as identified in paragraph STONE PLACEMENT (subparagraph 3.3.1.e). Otherwise the area will not receive new jetty stone placement. The jetty is considered to have significant damage if a contiguous area needing repairs exceeds 50 square feet. First complete repairs where the jetty is significantly damaged, before addressing discrete areas of lesser damage. At areas where the damage is less than the 50 square foot threshold, the Government will direct the Contractor to make repairs based on the stone quantity available within the limits of this contract. Coordinate with the GQAR in order to agree on the prioritization of areas to be repaired within a given reach before repair activities have started.

### 3.1.3 Variable Repair Areas and Re-handling Existing Jetty Armor Stone

Reworking of existing jetty stone will be required to place, interlock, and seat new jetty stone within the repair cross section template. The present damage trend along the repair area is highly variable; some reaches will require significant amount of new armor stone (>2,000 tons/50-ft segment) to re-establish the jetty cross-section and some reaches will need minor repairs (<200 tons/50-ft segment). Because of the variable damage within the project area, some reaches may require considerable reworking of existing jetty stone to achieve requisite interfacing with new repair armor stone.

### 3.1.4 Transition Section, Station 46+00 to 46+50

A transition is to be created between the existing jetty and the start of the new repair design template at station 46+50. This transition is to occur over a distance not to exceed 50 feet northward of station 46+50. Move and rearrange existing stone as necessary to allow keying in the new stone to form a tight knit, smooth transition from the existing structure to the new work with no protrusions, notches, or sharp slope changes. Cannibalizing "healthy" jetty areas landward of station 46+00 for the purpose of filling in damaged areas within the transition will be prohibited.

### 3.1.5 Jetty Repair Section, Station 46+50 to 86+50

Use A-stone for the trunk section of the jetty repair and construct to a crest elevation of +23.4 ft NAVD88, a width of 30 feet, and side slopes of 1V on 1.5H. The depth for placement may extend to approximately -5 feet NAVD88.

### 3.1.6 Transition Section, Station 86+50 to 87+50

A transition section will be created starting at Station 86+50 and extending to 87+50, to transition from the trunk to the head. This 100-foot section will transition the crest width from 30 to 40 feet, the crest elevation from +23.4 to +19.4 feet NAVD88, and side slope angles from 1V on 1.5H to 1V on 2H. It is the designer's intent that the transition be smooth with no protrusions, notches, or sharp slope changes.

### 3.1.7 Head Stabilization, Station 87+50 to 89+00

- a. Use A-stone and A-Select stone to construct the head section of the

jetty to a crest elevation of +19.4 feet NAVD88 and a width of 40 feet. Build side slopes, including the outer or western end of the repairs, to a stable 1V on 2H slope configuration. Two or more layers of new armor stone may be required. The outer layer of armor stone must be A-Select stone. A-stone shall be used to construct underlayering within the cross section, where needed. The elevation of the existing relict base stone will vary from neat lines shown on the drawings. The lowest elevation for new armor stone placement may extend approximately -10 feet NAVD88. Seat and interlock the new repair stone with the relict stone base.

b. The repair work in the approximate 150-foot head section is intended to provide a tightly interlocked mass of repair stone which slopes down to the existing relict stone base and ties the new repair section into the seaward extent of relict base. Proper construction of this section is critical to the resilience of the entire jetty head repair. Some excavation of existing stone may be needed to achieve the full new design template.

### 3.2 EQUIPMENT

#### 3.2.1 Hauling Equipment

Plainly mark all hauling equipment with numbers. Weigh empty vehicles at least once a day and at any time after the equipment is modified or repaired in a manner that could affect its weight. The tare weight thus determined will be deducted from the gross weight to determine the net weight of the stone.

#### 3.2.2 Placing Equipment

Placing equipment must be capable of placing jetty stone individually without dropping the stone and in such a manner to not displace the underlying material. Stone placing equipment must have adequate safe capacity to repair the jetty to the lines, grades, and slopes shown. Size of equipment should include consideration for handling overweight stones for both newly placed and existing jetty armor stone. Note that the size of some of the existing armor stones presently on the jetty may exceed 30 tons. The selected equipment must be capable of placing the armor stone near its final position before release and be capable of moving the stone if necessary to achieve maximum interlock with adjacent stones. It is essential that all armor stone be placed as dictated by the repair template. The equipment used to place armor stone on the jetty must be capable of securely positioning the toe stone along the lowest point of the template. The total distance from the jetty centerline at Station 89+00 on the finished crest to the toe of the repairs extends approximately 80 feet. The equipment must be capable of turning all stones placed above and below -10 feet NAVD88 at least 90 degrees in both the horizontal and vertical planes, to the extent necessary for final positioning. Placing equipment must stay at least 10 feet above the water surface for safety concerns related to wave activity. Daily inspection of all handling equipment must be conducted. Written documentation of the inspection must be available for review by the GQAR.

#### 3.2.3 Equipment Operator

The operator of the placing equipment must be experienced in jetty stone placement and be experienced in operating the stone placing equipment as proposed to be used in this Contract work. Submit placement operator's

qualifications and certifications. The Government will require that the Contractor replace any operator not capable of placing stone as herein specified.

### 3.3 STONE PLACEMENT

#### 3.3.1 General

a. Construction Control. Prior to the placement of stone, establish construction control markers clearly visible and understandable to the equipment operators placing the stone. Stone placement on the jetty's side slopes must be controlled by construction control markers established by the Contractor. Templates or other approved methods to define the limits and slopes must be set up at appropriate intervals so that the stone-placing operator can easily delineate the horizontal and vertical limits of the surfaces of stone to be placed. Construction control markers setup and construction control methods must be reviewed by the COR prior to any placement of repair stone.

b. Placement of New Armor Stone. Place stone on the prepared slopes within the limits shown. The finished slopes must present a uniform and regular surface not steeper than that shown. Key rock into the existing jetty stone side slopes. Maintain the stone until final acceptance. The position and orientation of each stone should be noted by the stone placing operator and used as a guide to select, orient, and place the next stone. The stone placing operator must have a minimum of five stones to choose from to plan the placement. Pre-selection of stone at the offloading site must be performed to ensure that various shapes and sizes of stones are available for the stone placing operator to pick from for placement. Key in the transition from existing stone to new stone to produce maximum interlocking of stone at the beginning station of the work.

(1) Control individual stone placement to achieve an interlocked mass with the maximum surface contact and interlock with both the existing cross section and other new stones making contact on all faces after final placement. Maximum interlocking with adjacent stone must be achieved by orienting each individual stone until a well keyed-in mass is produced.

(2) Place all stones individually with the long axis of each stone oriented perpendicular to the outer surface with staggered vertical joints, and arranged to secure maximum surface contact and interlock between adjacent stones in order to minimize void size, reduce movement of the stone, and protect underlying stone. When necessary, set aside stones until suitable fits for each stone are found in order to achieve maximum interlock. No slab-like stone must be placed with its broadest dimension facing upward. Place all stone beginning at the bottom of the side slope and then continue up the slope to the crest with overlapping vertical joints. Toe stone must be placed with face to face contact with adjacent stones, and not face to point or point to point contact. The toe stone must be well seated and securely placed within the existing jetty surface. Place toe stone to take advantage of the tides as much as possible to provide the greatest visibility of the completed jetty toe and tie-in to the existing jetty slope. Coordinate toe stone placement activities with the COR prior to toe stone placement.

(3) In the event that sand is encountered in an area where armor stone is to be placed, excavation must take place to achieve exposure of the existing relict stone to provide the best possible stone to stone contact. Excavation must not exceed 6 feet. Government approval is required for work to be accomplished in these areas.

(4) Casting or dropping of stone or moving by drifting or manipulating down the slope will not be permitted. Placing by methods likely to cause segregation will not be permitted. Materials that do not meet the specified requirements for size, quality, or distribution of sizes must be removed and replaced with suitable materials at no additional cost to the Government.

(5) The finished work must be a well-distributed mass, free of pockets of either smaller or larger stone with a minimum of voids and a maximum of stone interlocking with stones making contact on all faces.

c. Repair Template Transition and Rehandling of Existing Stone. The transition from repair area to competent existing structure must be continuous (to avoid unraveling of repair area armor stone), for the toe, slope face, and crest areas of repair. Repositioning of existing stone may be required to facilitate a smooth transition. Perform reworking of existing stone within the designated repair areas only when needed:

(1) to achieve stone-stone interlocking with new and existing armor stone,

(2) ensure smooth transition between repaired jetty and existing grade,

(3) ensure that the appropriate size/shape of armor stone protects the jetty where repair areas transition to the existing grade, and

(4) to gain access to areas along the lower elevation of the repair template.

d. Reworking Limitations. Limit the reworking (or excavation) of the existing jetty grade within the repair areas such that no excavation is greater than 8 feet or extends below +10 feet NAVD88. If the existing crest elevation within a repair area is below +10 feet NAVD88, limit excavation of the existing jetty grade to the minimum required for completing repairs. Unless approved by the Government, reworked stone smaller than 4 tons must not be placed within the repair template. Evenly distribute any extra displaced stone not used in the repair template on the existing finished west side slope of the jetty and interlock as appropriate without disturbing the existing slope stone. Any existing stones encountered with rounded edges must be repositioned to the inside portion of the jetty cross section. Coordinate jetty rework activities with the GQAR prior to initiating the work. Take special care during the jetty repair activities to avoid activating side slope instabilities due to the cumulative effect of jetty toe destabilization. Repositioning of existing stone or placing new stone along unstable areas of the jetty may initiate a cascading slope failure on the jetty. Implement procedures to pre-plan the jetty repairs along susceptible areas of the jetty to minimize risk of jetty instability during construction. Rehandling of individual stones after

initial placement should be anticipated and will be required to achieve the aforementioned requirements. Existing stones may have to be reworked in some areas to achieve these requirements and meet construction tolerances.

e. Tolerances. Place all stone as shown on the drawings. A tolerance of plus 3-feet or minus 1-foot from the lines and grades shown on the drawings will be allowed for the A-stone except that the extreme of such tolerance must not be continuous over an area greater than 200 square feet and adjacent stones must vary no more than 3 feet in top elevation from each other. The outside slopes must present a uniform appearance with a minimum of pieces projecting outside the finished slope surface. The intention is that the work will be built generally to the required elevations, slopes, and grades, and that the outer surfaces must be even in appearance. Though tolerances are important, a smooth transition is more important than having discontinuous elevation of the crest with a few stones to meet a specific tolerance.

f. Woody Debris. A large amount of logs, driftwood, and other debris is present on the jetty between Stations 49+00 and 55+00. Any wood and debris interfering with jetty repair activities must be removed from the jetty in a way that leaves the jetty undamaged and not be incorporated into the jetty cross section. Jetty stones, new or reworked, shall not be placed on any woody debris. Woody debris removed from the jetty repair section is to be disposed of as indicated in Section 31 11 00.00 25, CLEARING AND GRUBBING.

g. Spotter. Utilize a spotter to aid in stone placement at all times except for times when unsafe working conditions exist. The spotter must be experienced in jetty stone placement and be familiar with the stone placing equipment as proposed to be used in this Contract work. Submit spotter's qualifications. The spotter and stone placement operator must maintain visual and radio contact during placing operations.

h. Vehicle Blockage Stones. Place three jetty stones on the jetty crest near the start of the jetty repairs as directed by the COR following completion of the jetty repairs.

i. Protection of Existing Survey Control Monuments. Existing survey control monuments (brass caps) encountered on the jetty crest must be marked and protected if no work is done in that area that disturbs their location.

j. Vertical Datum. The drawings show the vertical datum as NAVD88 (0 feet NAVD88 = +0.6 feet MLLW).

### 3.3.2 Jetty Demonstration Section

Demonstrate that the equipment has the capability and all stone placing operators have the ability to place jetty stone to the lines, grades, orientation, and fit as specified. Submit, for approval, the location of a Demonstration Section 50 feet in length. Demonstrate the ability to adequately reach, manipulate, and interlock stone along the entire repair template; particularly at the toe of the repair area. Perform an interim survey to verify lines and grades have been met prior to the visual inspection. The demonstration section will have both pre-construction and post-construction surveys and be incorporated in the jetty when it conforms to the specification requirements in the paragraph SURVEYS. If the work performed in the demonstration section is deficient, either rebuild the

section with the same operator or replace the equipment and/or the operator and recommence work on the demonstration section until the work complies with the Contract requirements. Work will not commence on the remainder of the jetty until it is demonstrated that equipment and operator have the ability to place the jetty stone as specified in the Contract.

### 3.4 STOCKPILING

Stockpile jetty stone, if required, in the area designated on the drawings. The designated area is approximately 7-acres in size, consists of some rocky overburden on top of quarry waste fill, and is not surfaced. Stockpile jetty stone no more than two pieces high. The side slopes of the stockpiles must be tight and stable to prevent movement of material from slight disturbances. Any method of stockpiling which could cause excessive breakage will not be permitted. Stone stockpiling must not take place within the helicopter pad buffer or in an any access road leading to the pad.

### 3.5 JETTY CREST HAUL ROAD

a. Provide and maintain a jetty haul road on the jetty crest if travel on the jetty by trucks or equipment is required. See Section 01 10 10.00 25, CONTRACTOR'S OPERATIONS AND REQUIREMENTS. The jetty haul road constructed by the Contractor must have sufficient quarry waste or road building material to prevent damage to the existing armor stone in areas not being repaired and protect new armor stone placed within the repair areas. Protect newly constructed areas of the jetty with haul road material, rubber mats, tires, or other approved devices prior to any equipment access. Construct the jetty crest haul road with two basic types of material:

(1) large "chinking" stone to fill large voids in the jetty stone or to provide shoulder support and

(2) smaller quarry material to provide a "driving" layer having sufficient thickness and strength to support heavy equipment and protect existing jetty stones.

b. The haul road must have no more than 12 percent fines by weight (i.e. - no more than 12 percent of the material passing the No. 200 U.S. Standard Sieve Size).

c. Locate and construct the jetty haul road in a manner to minimize disturbance to the existing jetty grade/surface in areas outside of the repair limits. Existing jetty stone above Elevation +23.4 feet NAVD88 must remain in place unless stone needs to be moved to provide construction equipment access or appropriate installation of new jetty stone. Existing jetty stone greater than 4 tons that is moved may be used to fill the design template. Evenly distribute any extra displaced stone not used in the repair template or used to fill holes in the crest on the existing finished west side slope of the jetty and interlock as appropriate without disturbing the existing slope stone. Make appropriate provisions for placing a sufficient thickness of haul road material to provide for a level roadway. Accomplish work in a manner that does not create unstable areas that can initiate a cascading slope failure. The haul road is not required to be removed at the end of the contract. Where turnouts are to be constructed, end dumping of stone is permitted but only after the underlying required cross section has been constructed to meet paragraph STONE PLACEMENT.



## MCR Jetty A Rehabilitation

Minimize the number of turnouts necessary to allow the construction operations to be carried out. All turnouts on the jetty constructed by the Contractor must be removed by the end of the Contract.

### 3.6 NAVIGATION LIGHT BASE

The existing Desdemona Sands Leading Light is located near the centerline of the jetty crest at approximate Station 74+00. Demolition of the SC-LED lantern and tower is the responsibility of the Contractor. The SC-LED lantern must not be damaged in the process and will become property of the U.S. Coast Guard upon completion. The remaining concrete base with existing wood concrete pouring forms must be removed prior to construction of the jetty crest haul road in that area. The base, minus forms, may be buried in an adjacent section of damaged jetty or as approved by the COR.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 35 - WATERWAY AND MARINE CONSTRUCTION

SECTION 35 52 00.00 25

MATERIAL OFF-LOADING FACILITY CONSTRUCTION

PART 1 GENERAL

- 1.1 SUBMITTALS
- 1.2 DESCRIPTION

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

- 3.1 MATERIAL OFF-LOADING FACILITY
  - 3.1.1 General
  - 3.1.2 Constraints
- 3.2 MATERIAL DELIVERY ACCESS ROUTE (MDAR)
  - 3.2.1 General
  - 3.2.2 On-site Woody Debris Incorporation
  - 3.2.3 Constraints

-- End of Section Table of Contents --

SECTION 35 52 00.00 25

MATERIAL OFF-LOADING FACILITY CONSTRUCTION

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Material Off-loading Facility Plan; G

1.2 DESCRIPTION

Install structures (such as timber piles, metal sheet piles, etc) as needed for delivery of jetty material and equipment by barge. Remove structures upon completion of the permanent work. For purposes of this specification, temporary structures must be any type of adequately constructed structure which the Contractor elects to build to satisfy, and which does satisfy, the condition that existing facilities be properly retained during use.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 MATERIAL OFF-LOADING FACILITY

3.1.1 General

a. Barging of materials is permitted for this contract. Provide a Material Off-loading Facility Plan describing methods of installation, materials to be used, location, drawings and design calculations, type and size of piles to be driven, specific pile driving equipment, pile driving method (eg - driving shoes on the pile), methods to ensure safety during installation/removal, quality control methods (specifically location verification), and impacted footprint below (area in acres) jurisdictional waters of the U.S. which is +11.2 feet NAVD88. Jetty relic stone is scattered along the jetty and may be encountered during the installation of piles. Provide details of how the Contractor will address this issue if encountered.

b. The off-loading facility must be safely designed and maintained and be carried to adequate depths and braced as necessary for proper performance of the work. The working drawings and design calculations must be prepared, sealed, and signed by a Professional Engineer. The furnishing of such plans must not serve to relieve the Contractor of any part of his responsibility for the safety of the work or for the successful completion of the project. The following items are also required in the stamped design: material requirements of piling (what grade steel, etc.), method of securing floating plant to pile structures.

c. Maintain temporary structures and approaches in place until no longer needed. Unless the CO directs otherwise, completely remove and dispose of properly. During removal, minimize debris falling into water and utilize low tides and calm conditions to minimize turbidity. Contractor-furnished materials remain the Contractor's property upon removal.

### 3.1.2 Constraints

The following constraints for barging to Jetty A include:

- a. Construct the material off-load facility between stations 77+00 and 86+00 or as approved by the CO.
- b. The area of fill below jurisdictional waters of the U.S. (+11.2 feet NAVD88) must not exceed 1.2 acres.
- c. A maximum of 24 piles can be installed as dolphins and a maximum of 93 sections of Z or H piles can be installed to retain rock fill. Pile diameter must be a maximum diameter of 24 inches.
- d. Piles are to be installed only by vibratory driving method. Jetty relict stone may be encountered during pile installation and may need to be relocated.
- e. Piles are to be untreated wood or other approved material.
- f. Piles may be driven and/or removed between 1 May and 30 September.
- g. A soft start procedure will be used at the beginning of each day when in-water pile driving or any time pile driving has ceased for more than 30 minutes. For vibratory pile driving, the contractor must initiate noise from vibratory hammers for 15 seconds at reduced energy followed by a 30-second waiting period. The procedure shall be repeated two additional times.
- h. For all vibratory pile driving, a shutdown and disturbance zone will be monitored.
  - (1) Monitoring will take place from 30 minutes prior to initiation through 30 minutes post-completion of pile driving.
  - (2) The shutdown zone will always be a minimum of 20 meters (33 feet) to prevent injury from physical interaction of marine mammals with construction equipment.
  - (3) Monitor the entirety of the underwater disturbance zone observable by binoculars.
- i. If the shutdown zone is obscured by fog or poor lighting conditions, pile driving will not be initiated until the entire shutdown zone is visible.
- j. If a marine mammal approaches or enters the shutdown zone during pile driving, work will be halted and delayed until either the animal has voluntarily left and visually confirmed beyond the disturbance zone, or 30 minutes have passed without re-detection of the animal.
- k. If a marine mammal is observed in the acoustic disturbance zone

within 20 meters, but not approaching or entering the shutdown zone or in the underwater disturbance zone, a "take" will be recorded and the work will be allowed to proceed without cessation. Marine mammal behavior will be monitored and documented on the reporting form.

l. Scan the waters for 30 minutes before and during all pile driving. If any species for which take is not authorized are observed within the area of potential sound effects during or 30 minutes before pile driving, the observer(s) will immediately notify the on-site supervisor or inspector, and require that pile driving either not initiate or temporarily cease until the animals have moved outside of the area of potential sound effects.

m. Visual monitoring will be conducted by qualified, trained marine mammal observers. An observer has prior training and experience conducting marine mammal monitoring or surveys, and who has the ability to identify marine mammal species and describe relevant behaviors that may occur in proximity to in-water construction activities.

n. Trained observers will be placed at the best vantage points practicable (from the construction barges, on shore, or jetty-side) to monitor for marine mammals and implement shutdown/delay procedures when applicable by calling for the shutdown to the hammer operator.

o. Marine mammal observer(s) will be on site at all times during pile driving. Each observer must meet a list of qualifications for marine mammal observers (see below) to be considered qualified, or undergo training to meet the qualifications before the start of pile driving. A minimum of two observers is required. One observer must be stationed at Clatsop Spit and one observer stationed at Jetty A at the pile installation site.

p. Use a hand-held or boat-mounted GPS device or rangefinder to verify the required monitoring distance from the project site.

q. Scan the waters within the area of potential sound effects using binoculars (10x42 or similar) or spotting scopes (20-60 zoom or equivalent), and by making visual observations.

r. If weather or sea conditions restrict the observer's ability to observe, or become unsafe for the monitoring vessel(s) to operate, cease pile installation until conditions allow for monitoring to resume.

s. Conduct pile driving only during daylight hours from sunrise to sunset when it is possible to visually monitor marine mammals.

t. Use a marine mammal observation sheet to record the species, date, and time of any marine mammal sightings. Record marine mammal behavior and any communication between the observer and the contractor during pile driving.

u. The following information must be collected on sighting forms.

(1) Date and time that pile removal and/or installation begins and ends.

(2) Construction activities occurring during each observation period.

MCR Jetty A Rehabilitation

- (3) Weather parameters (e.g., percent cover, visibility).
- (4) Water conditions [e.g., sea state, tidal state (incoming, outgoing, slack, low, and high)].
- (5) Species, numbers, and, if possible, sex and age class of marine mammals.
- (6) Marine mammal behavior patterns observed, including bearing and direction of travel, and, if possible, the correlation to SPLs.
- (7) Distance from pile removal and/or installation activities to marine mammals and distance from the marine mammal to the observation point.
- (8) Locations of all marine mammal observations.
- (9) Other human activity in the area.
- (10) note in behavioral observations, to the extent practicable, if an animal has remained in the area during construction activities.

v. Minimum qualifications for marine mammal observers:

- (1) Visual acuity in both eyes (correction is permissible) sufficient to discern moving targets at the water's surface with ability to estimate target size and distance. Use of binoculars or spotting scope may be necessary to correctly identify the target.
- (2) Advanced education in biological science, wildlife management, mammalogy or related fields (Bachelor's degree or higher is preferred).
- (3) Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience).
- (4) Experience or training in the field identification of marine mammals (cetaceans and pinnipeds).
- (5) Sufficient training, orientation or experience with vessel operation and pile driving operations to provide for personal safety during observations.
- (6) Ability to communicate orally, by radio, or in-person with project personnel to provide real time information on marine mammals observed in the area, as needed.

w. Install pile caps to prevent birds from perching on piles.

x. Do not disturb existing pile dikes (located between approximately station 83+00 and 83+50).

y. Keep a minimum of 50 feet clearance between the barge activities and the south side of the existing pile dikes and 100 feet clearance on the north side of the pile dikes.

- z. Remove the material off-load facility upon completion of the project.

### 3.2 MATERIAL DELIVERY ACCESS ROUTE (MDAR)

#### 3.2.1 General

A high ground remnant jetty construction feature exists on the estuary side of Jetty A and is available for use as a MDAR to deliver jetty materials and equipment to the staging and storage area. Material comprising this feature is primarily rocky overburden. Some larger jetty stones are also present in this area that have been displaced from the Jetty A side slope and must be moved back adjacent to the jetty and not be incorporated into the MDAR. The area has variable relief which may require both cutting and filling to achieve a consistent grade elevation. All debris encountered within the MDAR footprint must be removed prior to any reconstruction. Leave the MDAR in place upon completion of the project.

#### 3.2.2 On-site Woody Debris Incorporation

A portion of the woody debris removed from the jetty construction area is required to be used during improvement of the MDAR. Incorporate approximately 100 logs with a diameter larger than 1 foot and a minimum length of 10 feet into the lowest portions of the existing MDAR. Embed woody debris prior to fill below MHHT and place so they are evenly spaced, and have any root wads extending into the estuary side of the MDAR as shown on the drawings. Only use on-site woody debris.

#### 3.2.3 Constraints

The following constraints for reconstruction or using the MDAR include:

- a. A maximum width of 30 feet is allowed to develop the MDAR.
- b. Fill material for MDAR must be consistent with material described in Section 35 31 26.40 25, JETTY REPAIRS, paragraph JETTY CREST HAUL ROAD. Additional fill material may be utilized from grading high areas within existing limits of the MDAR as well as incorporation of woody debris from woody debris clearing operations.
- c. The footprint of the MDAR extending into jurisdictional waters of the U.S. due to grading or importing of material including turnouts must not exceed 1.3 acres.
- d. Fill volume for development of the MDAR must not exceed 38,000 cubic yards.
- e. The MDAR elevation must be a minimum of +12 feet NAVD88. Hauling along the MDAR is not permitted when MDAR is inundated.
- f. The MDAR must be completed so as not to impact the entire cross section of the jetty
- g. Do not remove any existing concrete platform or structure encountered in the construction of the MDAR. Leave in place and cover as needed.

-- End of Section --

**SUBMITTAL REGISTER**

CONTRACT NO.

TITLE AND LOCATION  
MCR Jetty A Rehabilitation

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY				REMARKS		
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		DATE OF ACTION	MAILED TO CONTR/ DATE RCD FRM APPR AUTH
		01 10 10.00 25	SD-01 Preconstruction Submittals														
			Schedule for Construction	1.4	G												
			Access Agreements	1.13	G												
			Security Procedures	1.15	G												
			Contractor's Planned Equipment Methods	1.18.1	G												
			Plant and Equipment List	1.18.2	G												
			Lifting Diagram	1.19.1	G												
			Loading Plan for Cranes and Heavy Equipment	1.19.3	G												
			Disposal Plan	1.22	G												
			Platform Weigh Scales and Recording Equipment	3.1.1	G												
			Independent Testing Company or Agency	3.1.1	G												
			Traffic Control Plan	1.13.1	G												
			SD-06 Test Reports														
			Scale Certification	3.1.1	G												
			Scale Tickets	3.1.2	G												
		01 22 00.00 25	SD-01 Preconstruction Submittals														
			Schedule of Mobilization and Demobilization Costs	1.5.1	G												
			Schedule of values; G														
		01 32 01.00 25	SD-01 Preconstruction Submittals														
			Preliminary Schedule	1.6.1	GECC												
			Initial Schedule	1.6.2	GECC												



# SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION  
MCR Jetty A Rehabilitation

CONTRACTOR

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																		(g)
		01 33 00	SD-01 Preconstruction Submittals Submittal Register	1.5	G													
		01 35 26.00 25	SD-01 Preconstruction Submittals															
			Crane Operators	1.6.1.6	G													
			Training Plan	1.7.3	G													
			Accident Prevention Plan (APP)	1.8	G													
			Activity Hazard Analysis (AHA)	1.9	G													
			Incllement Weather and Heat/Cold Stress Management Plans	1.17	G													
			Fall Prevention and Protection Plan	3.2.3	G													
			Fatigue Management Plan (FMP)	1.8.2	G													
			SD-06 Test Reports															
			Regulatory Citations, Violations, and Corrective Action	1.4														
			Drug and Alcohol Use Prevention Program	1.5														
			Accident or Mishap Reports	1.14.2														
			Crane Testing Reports	1.14.3														
			SD-07 Certificates															
			Confined Space Entry Permit	1.10														
			Hot Work Permit	1.10														
			Third Party Certification of Barge-Mounted Mobile Cranes and Mobile Equipment	1.13														

**SUBMITTAL REGISTER**

CONTRACT NO.

TITLE AND LOCATION  
MCR Jetty A Rehabilitation

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT OR CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					REMARKS	
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		MAILED TO CONTR/ DATE RCD FRM APPR AUTH
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01 35 26.00 25	Certificate of Compliance	1.14.4													
		01 35 27.00 25	SD-01 Preconstruction Submittals														
			Dive Team Personnel	1.4	G												
			Dive Plan and Schedule	1.6	G												
			Equipment Certification	1.6	G												
			Emergency Management Plan	1.6	G												
			Activity Hazard Analysis	1.6	G												
		01 45 00.00 25	SD-01 Preconstruction Submittals														
			Contractor Quality Control Plan	3.2	G												
			Construction Quality Management for Contractors	3.4.4													
			SD-06 Test Reports														
			Daily CQC Report	3.9													
		01 57 20.00 25	SD-01 Preconstruction Submittals														
			Environmental Protection Plan	1.10	GE CDC												
			SD-06 Test Reports														
			Turbidity Monitoring Reporting Forms	3.3.6	G												
			Marine Mammal Monitoring and Reporting Information	3.8.2													
		01 57 23.00 25	SD-06 Test Reports														
			SWPPP Amendments	3.4.1	G												
			Inspection Reports	3.4.2.2	G												
			SD-07 Certificates														
			CESCL Training Certificate	1.3.2	G												
			Mill Certificate or Affidavit	2.1.3													

# SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION  
MCR Jetty A Rehabilitation

CONTRACTOR

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(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01 78 39.00 25	SD-01 Preconstruction Submittals														
			Record Drawings Execution Plan	1.4	G												
			Pre-Construction Survey and Post-Construction Surveys	1.5.1	G												
			Pre-Construction Survey and Post-Construction Survey Drawings	1.5.2	G												
			Volume and Tonnage Calculations	1.5.1	G												
			Working As-Built Drawings	1.6													
			SD-11 Closeout Submittals														
			Preliminary Record Drawings	1.8	G												
			Preliminary CAD Drawings	1.8.2.2													
			Final Working As-Built Drawings	1.8.2.3													
			Final Record Drawings	1.9	G												
		31 11 00.00 25	SD-01 Preconstruction Submittals														
			Clearing and Grubbing Plan	1.1	G												
		32 12 16.00 25	SD-03 Product Data														
			Asphalt Concrete Mix Design	2.1	G												
			SD-06 Test Reports														
			Contractor Quality Control Tests	2.1	G												
			SD-07 Certificates														
			Asphalt Concrete Mix Design	2.1	G												
			Tack and Prime Coats	2.2	G												
		32 90 00.00 25	SD-01 Preconstruction Submittals														
			Revegetation Plan	1.5.3	G												

# SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION  
MCR Jetty A Rehabilitation

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVIEW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					REMARKS	
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		MAILED TO CONTR/ DATE RCD FRM APPR AUTH
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		32 90 00.00 25	SD-07 Certificates														
			Revegetation Contractor	1.5	G												
			Qualifications														
			Wwham	3.4	G												
		32 92 29.00 25	SD-01 Preconstruction Submittals														
			Qualifications	1.3.1	G												
			Survey	3.1	G												
			SD-02 Shop Drawings														
			Planting Plan	1.3.2	G												
			SD-06 Test Reports														
			Monitoring and Reporting Plan	1.3.3	G												
			monitoring reports	1.3.3	G												
		35 31 26.40 25	SD-01 Preconstruction Submittals														
			Quarry Documentation/Stone	1.5.2	G												
			Testing														
		35 52 00.00 25	SD-01 Preconstruction Submittals														
			Material Off-loading Facility Plan	3.1.1	G												

<b>TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE</b> For use of this form, see ER 415-1-10; the proponent agency is CECW-CE.	DATE	TRANSMITTAL NO.
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**SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS** *(This section will be initiated by the contractor)*

TO:	FROM:	CONTRACT NO.	CHECK ONE: <input type="checkbox"/> THIS IS A NEW TRANSMITTAL <input type="checkbox"/> THIS IS A RESUBMITTAL OF TRANSMITTAL _____
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SPECIFICATION SEC. NO. <i>(Cover only one section with each transmittal)</i>	PROJECT TITLE AND LOCATION	THIS TRANSMITTAL IS FOR: <i>(Check one)</i> <input type="checkbox"/> FIO <input type="checkbox"/> GA <input type="checkbox"/> DA <input type="checkbox"/> CR <input type="checkbox"/> DA/CR <input type="checkbox"/> DA/GA
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ITEM NO. <small>(See Note 3)</small>	DESCRIPTION OF SUBMITTAL ITEM <small>(Type size, model number/etc.)</small>	SUBMITTAL TYPE CODE <small>(See Note 8)</small>	NO. OF COPIES	CONTRACT DOCUMENT REFERENCE		CONTRACTOR REVIEW CODE	VARIATION <small>Enter "Y" if requesting a variation (See Note 6)</small>	USACE ACTION CODE <small>(Note 9)</small>
				SPEC. PARA. NO.	DRAWING SHEET NO.			
a.	b.	c.	d.	e.	f.	g.	h.	i.

REMARKS	I certify that the above submitted items had been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated.		
	<table style="width:100%;"> <tr> <td style="width:50%;">NAME OF CONTRACTOR</td> <td style="width:50%;">SIGNATURE OF CONTRACTOR</td> </tr> </table>	NAME OF CONTRACTOR	SIGNATURE OF CONTRACTOR
NAME OF CONTRACTOR	SIGNATURE OF CONTRACTOR		

**SECTION II - APPROVAL ACTION**

ENCLOSURES RETURNED <i>(List by item No.)</i>	NAME AND TITLE OF APPROVING AUTHORITY	SIGNATURE OF APPROVING AUTHORITY	DATE
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## INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each Transmittal shall be numbered consecutively. The Transmittal Number typically includes two parts separated by a dash (-). The first part is the specification section number. The second part is a sequential number for the submittals under that spec section. If the Transmittal is a resubmittal, then add a decimal point to the end of the original Transmittal Number and begin numbering the resubmittal packages sequentially after the decimal.
3. The "Item No." for each entry on this form will be the same "Item No." as indicated on ENG FORM 4288-R.
4. Submittals requiring expeditious handling will be submitted on a separate ENG Form 4025-R.
5. Items transmitted on each transmittal form will be from the same specification section. Do not combine submittal information from different specification sections in a single transmittal.
6. If the data submitted are intentionally in variance with the contract requirements, indicate a variation in column h, and enter a statement in the Remarks block describing the detailed reason for the variation.
7. ENG Form 4025-R is self-transmitting - a letter of transmittal is not required.
8. When submittal items are transmitted, indicate the "Submittal Type" (*SD-01 through SD-11*) in column c of Section I.  
Submittal types are the following:  
SD-01 - Preconstruction      SD-02 - Shop Drawings      SD-03 - Product Data      SD-04 - Samples      SD-05 - Design Data      SD-06 - Test Reports  
SD-07 - Certificates      SD-08 - Manufacturer's Instructions      SD-09 - Manufacturer's Field Reports      SD-10 - O&M Data      SD-11 - Closeout
9. For each submittal item, the Contractor will assign Submittal Action Codes in column g of Section I. The U.S. Army Corps of Engineers approving authority will assign Submittal Action Codes in column i of Section I. The Submittal Action Codes are:  

A -- Approved as submitted.	F -- Receipt acknowledged.
B -- Approved, except as noted on drawings. Resubmission not required.	X -- Receipt acknowledged, does not comply with contract requirements, as noted.
C -- Approved, except as noted on drawings. Refer to attached comments. Resubmission required.	G -- Other action required ( <i>Specify</i> )
D -- Will be returned by separate correspondence.	K -- Government concurs with intermediate design. ( <i>For D-B contracts</i> )
E -- Disapproved. Refer to attached comments.	R -- Design submittal is acceptable for release for construction. ( <i>For D-B contracts</i> )
10. Approval of items does not relieve the contractor from complying with all the requirements of the contract.

Below are two samples of the Construction Project Identification sign showing how this panel is adaptable for use to identify either military (top) or civil works projects (bottom). The graphic format for this 4'x 6' sign panel follows the legend guidelines and layout as specified below. The large 4'x 4' section of the panel on the right is to be white with black legend. The 2'x 4' section of the sign on the left

with the full Corps Signature (reverse version) is to be screen-printed Communication Red on the white background. The designation of a sponsor in the area indicated is optional with Military or Civil Works construction signs. Signs may list one sponsoring entity. If agreement on a sponsor designation cannot be achieved, the area should be left blank.

This sign is to be placed with the Safety Performance sign shown on the following page. Mounting and fabrication details are provided on page 16-4.

Special applications or situations not covered in these guidelines should be referred to the district Sign Program Manager.

Legend Group 1: One- to two-line description of Corps relationship to project.

Color: White  
Typeface: 1.25" Helvetica Regular  
Maximum line length: 19"

Legend Group 2: Division or District Name (optional). Placed below 10.5" reverse Signature (6" Castle).

Color: White  
Typeface: 1.25" Helvetica Regular

Legend Group 2a: One- to three-line identification of Military or Civil Works sponsor (optional). Place below Corps Signature to cross-align with Group 5a-b.

Color: White  
Typeface: 1.25" Helvetica Regular  
Maximum line length: 19"

Legend Group 3: One- to three-line project title legend describes the work being done under this contract.

Color: Black  
Typeface: 3" Helvetica Bold  
Maximum line length: 42"

Legend Group 4: One- to two-line identification of project or facility (civil works) or name of sponsoring department (military).

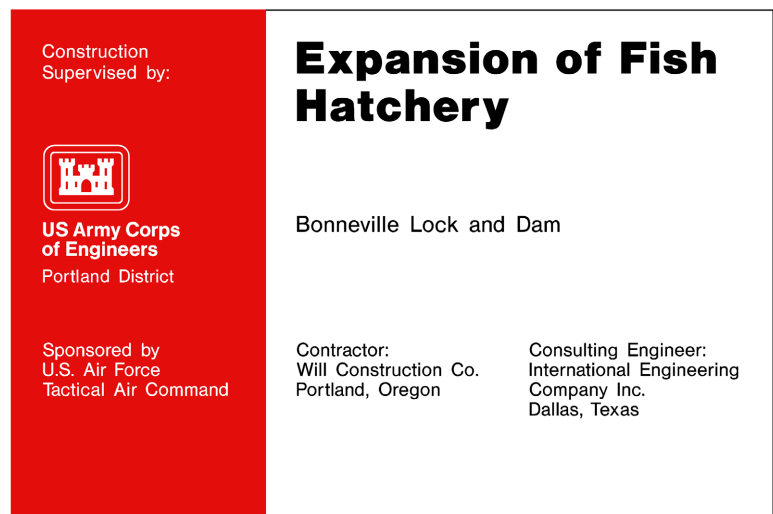
Color: Black  
Typeface: 1.5" Helvetica Regular  
Maximum line length: 42"

Cross-align the first line of Legend Group 4 with the first line of the Corps Signature (US Army Corps) as shown.

Legend Groups 5a-b: One- to five-line identification of prime contractors including: type (architect, general contractor, etc.), corporate or firm name, city, state. Use of Legend Group 5 is optional.

Color: Black  
Typeface: 1.25" Helvetica Regular  
Maximum line length: 21"

All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter- and word-spacing to follow Corps standards as specified in Appendix D.



Sign Type	Legend Size (A)	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
CID-01	various	4'x6'	4"x4"	HDO-3	48"	WH-RD/BK

Each contractor's safety record is to be posted on Corps managed or supervised construction projects and mounted with the Construction Project Identification sign specified on page 16-2.

The graphic format, color, size and typeface used on the sign are to be reproduced exactly as specified below. The

title with First Aid logo in the top section of the sign, and the performance record captions are standard for all signs of this type. Legend groups 2 and 3 below identify the project and the contractor and are to be placed on the sign as shown.

Safety record numbers are mounted on individual metal plates and are screw-

mounted to the background to allow for daily revisions to posted safety performance record.

Special applications or situations not covered in these guidelines should be referred to the district Sign Program Manager.

Legend Group 1: Standard two-line title "Safety is a Job Requirement" with 8" (outside diameter) Safety Green first aid logo.  
Color: To match Pantone system 347  
Typeface: 3" Helvetica Bold  
Color: Black

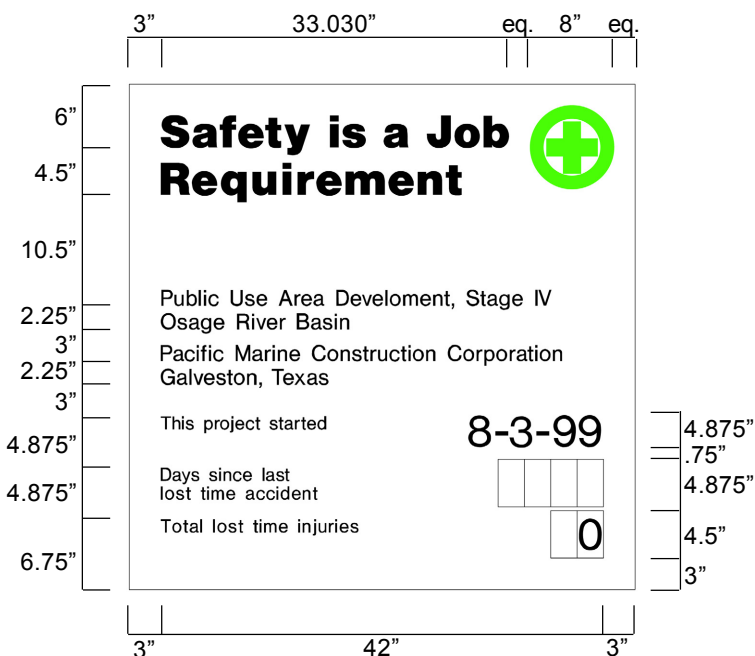
Legend Group 2: One- to two-line project title legend describes the work being done under this contract and name of host project.  
Color: Black  
Typeface: 1.5" Helvetica Regular  
Maximum line length: 42"

Legend Group 3: One- to two-line identification: name of prime contractor and city, state address. Color: Black  
Typeface: 1.5" Helvetica Regular  
Maximum line length: 42"

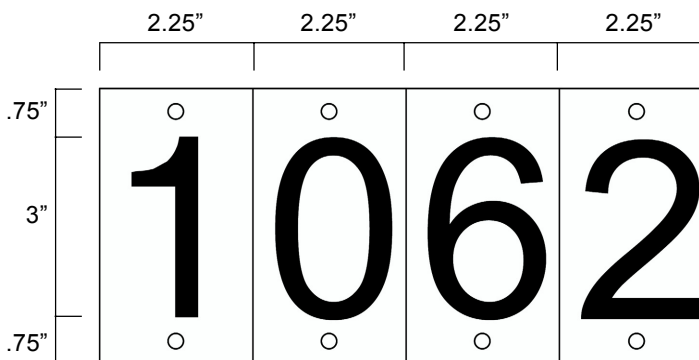
Legend Group 4: Standard safety record captions as shown.  
Color: Black  
Typeface: 1.25" Helvetica Regular

Replaceable numbers are to be mounted on white .060 aluminum plates and screw-mounted to background.  
Color: Black  
Typeface: 3" Helvetica Regular  
Plate size: 2.5" x 4.5"

All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter- and word-spacing to follow Corps standards as specified in Appendix D.



Sign Type	Legend Size (A)	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
CID-02	various	4'x4'	4"x4"	HDO-3	48"	WH/BK-SG





**SPILL EMERGENCY - INITIAL REPORT FORM**

**1. Reporting Name:** \_\_\_\_\_ **Responsible Party:** \_\_\_\_\_

**2. Location of Spill (include County, Nearest Town, County, Township, Range, Rivermile)**

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**3. Spill Description (time & date spilled, material involved, quantity)**

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**4. Environmental Impacts: Air? Surface Water? Groundwater? Fish? Wildlife?**

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**5. Reporting**

**Tracking No.**

**Date/Time**

**POC**

National Response Center: \_\_\_\_\_

Oregon Emergency Response System: \_\_\_\_\_

Washington Emergency Management: \_\_\_\_\_

**6. Incident Action Plan: Strategic Goals (what to do) and Tactical Objectives (who & how)**

**Strategic Goals**

**Tactical Objectives**

a. Perform Hazard Assessment \_\_\_\_\_

b. Establish Site Security \_\_\_\_\_

c. Establish Incident Command \_\_\_\_\_

d. Evacuate Injured or Exposed \_\_\_\_\_

e. Contain the Spill \_\_\_\_\_

f. Control the Spill \_\_\_\_\_

g. Initiate Cleanup \_\_\_\_\_

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General Decision Number: WA150080 07/24/2015 WA80

Superseded General Decision Number: WA20140080

State: Washington

Construction Type: Heavy  
including water and sewer line construction

County: Pacific County in Washington.

HEAVY CONSTRUCTION PROJECTS (including sewer/water construction).

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/02/2015
1	05/22/2015
2	06/12/2015
3	07/03/2015
4	07/24/2015

CARP0003-015 06/01/2014

PACIFIC COUNTY (South of a straight line made by extending the north boundary line of Wahkiakum County west to Willapa Bay to the Pacific Ocean, and thence north through the natural waterway to the Pacific Ocean (this will include the entire peninsula west of Willapa Bay)

	Rates	Fringes
CARPENTER (Including Formwork)...	\$ 33.94	14.83
MILLWRIGHT.....	\$ 34.09	14.83

Zone Differential (Add up Zone 1 rates):  
 Zone 2 - \$0.85  
 Zone 3 - 1.25  
 Zone 4 - 1.70  
 Zone 5 - 2.00  
 Zone 6 - 3.00

BASEPOINTS: ASTORIA, LONGVIEW, PORTLAND, THE DALLES, AND VANCOUVER, (NOTE: All dispatches for Washington State

Counties: Cowlitz, Wahkiakum and Pacific shall be from Longview Local #1707 and mileage shall be computed from that point.)

- ZONE 1: Projects located within 30 miles of the respective city hall of the above mentioned cities
- ZONE 2: Projects located more than 30 miles and less than 40 miles of the respective city of the above mentioned cities
- ZONE 3: Projects located more than 40 miles and less than 50 miles of the respective city of the above mentioned cities
- ZONE 4: Projects located more than 50 miles and less than 60 miles of the respective city of the above mentioned cities.
- ZONE 5: Projects located more than 60 miles and less than 70 miles of the respective city of the above mentioned cities
- ZONE 6: Projects located more than 70 miles of the respected city of the above mentioned cities

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\* CARP0770-007 06/01/2015

PACIFIC COUNTY (North of a straight line made by extending the north boundary line of Wahkiakum County west to the Pacific Ocean)

	Rates	Fringes
CARPENTER (Including Formwork)...	\$ 40.36	13.66
MILLWRIGHT.....	\$ 41.86	13.66

(HOURLY ZONE PAY: WESTERN AND CENTRAL WASHINGTON - ALL CLASSIFICATIONS EXCEPT MILLWRIGHTS AND PILEDRIVERS

Hourly Zone Pay shall be paid on jobs located outside of the free zone computed from the city center of the following listed cities:

Seattle	Olympia	Bellingham
Auburn	Bremerton	Anacortes
Renton	Shelton	Yakima
Aberdeen-Hoquiam	Tacoma	Wenatchee
Ellensburg	Everett	Port Angeles
Centralia	Mount Vernon	Sunnyside
Chelan	Pt. Townsend	

Zone Pay:

0 -25 radius miles	Free
26-35 radius miles	\$1.00/hour
36-45 radius miles	\$1.15/hour
46-55 radius miles	\$1.35/hour
Over 55 radius miles	\$1.55/hour

(HOURLY ZONE PAY: WESTERN AND CENTRAL WASHINGTON - MILLWRIGHT AND PILEDRIVER ONLY)

Hourly Zone Pay shall be computed from Seattle Union Hall, Tacoma City center, and Everett City center

Zone Pay:

0 -25 radius miles	Free
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26-45 radius miles       \$ .70/hour  
 Over 45 radius miles     \$1.50/hour

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 ELEC0076-005 09/01/2014

	Rates	Fringes
ELECTRICIAN.....	\$ 34.49	23.36

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ENGI0612-019 06/01/2014

PACIFIC (portion lying north of a parallel line extending west  
 from the northern boundary of Wahkaikum County to the sea)  
 COUNTY

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1A.....	\$ 38.39	17.40
GROUP 1AA.....	\$ 38.96	17.40
GROUP 1AAA.....	\$ 39.52	17.40
GROUP 1.....	\$ 37.84	17.40
GROUP 2.....	\$ 37.35	17.40
GROUP 3.....	\$ 36.93	17.40
GROUP 4.....	\$ 34.57	17.40

Zone Differential (Add to Zone 1 rates):  
 Zone 2 (26-45 radius miles) = \$1.00  
 Zone 3 (Over 45 radius miles) - \$1.30

BASEPOINTS: CENTRALIA, OLYMPIA, TACOMA

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1AAA - Cranes-over 300 tons, or 300 ft of boom  
 (including jib with attachments)

GROUP 1AA - Cranes 200 to 300 tons, or 250 ft of boom  
 (including jib with attachments); Tower crane over 175 ft  
 in height, base to boom; Excavator/Trackhoe, Backhoe: Over  
 90 metric tons

GROUP 1A - Cranes, 100 tons thru 199 tons, or 150 ft of boom  
 (including jib with attachments); Crane-overhead, bridge  
 type, 100 tons and over; Tower crane up to 175 ft in height  
 base to boom; Excavator/Trackhoe, Backhoe: over 50 metric  
 tons to 90 metric tons;

GROUP 1 - Cranes 45 tons thru 99 tons, under 150 ft of boom  
 (including jib with attachments); Crane-overhead, bridge  
 type, 45 tons thru 99 tons; Derricks on building work;;  
 Excavator/Trackhoe, Backhoe: over 30 metric tons to 50  
 metric tons;

GROUP 2 - Cranes, 20 tons thru 44 tons with attachments;  
 Crane-overhead, bridge type-20 tons through 44 tons;  
 Excavator/Trackhoe, Backhoe: 15 to 30 metric tons; Drilling  
 Machine; Grader-finishing

GROUP 3 - Cranes-thru 19 tons with attachments; A-frame crane over 10 tons; Excavator/Trackhoe, Backhoe: under 15 metric tons; Forklift: 3000 lbs and over with attachments; Oiler; Grader-nonfinishing; Boom Truck over 10 tons

GROUP 4 -Cranes-A frame-10 tons and under; Forklift: under 3000 lbs with attachments; BoomTruck 10 tons and under

HANDLING OF HAZARDOUS WASTE MATERIALS: Personnel in all craft classifications subject to working inside a federally designated hazardous perimeter shall be eligible for compensation in accordance with the following group schedule relative to the level of hazardous waste as outlined in the specific hazardous waste project site safety plan.

H-1 Base wage rate when on a hazardous waste site when not outfitted with protective clothing, Class "D" Suit - Base wage rate plus \$ .50 per hour.

H-2 Class "C" Suit - Base wage rate plus \$1.00 per hour.

H-3 Class "B" Suit - Base wage rate plus \$1.50 per hour.

H-4 Class "A" Suit - Base wage rate plus \$2.00 per hour.

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 ENGI0701-012 01/01/2015

PACIFIC COUNTY (REMAINDER OF COUNTY)

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 39.47	14.10
GROUP 1A.....	\$ 41.44	14.10
GROUP 1B.....	\$ 43.42	14.10
GROUP 2.....	\$ 37.58	14.10
GROUP 3.....	\$ 36.44	14.10
GROUP 4.....	\$ 35.36	14.10
GROUP 5.....	\$ 34.13	14.10
GROUP 6.....	\$ 30.94	14.10

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

Group 1

Concrete Batch Plan and or Wet mix three (3) units or more; Crane, Floating one hundred and fifty (150) ton but less than two hundred and fifty (250) ton; Crane, two hundred (200) ton through two hundred ninety nine (299) ton with two hundred foot (200') boom or less (including jib, inserts and/or attachments); Crane, ninety (90) ton through one hundred ninety nine (199) ton with over two hundred (200') boom Including jib, inserts and/or attachments); Crane, Tower Crane with one hundred seventy five foot (175') tower or less and with less than two hundred foot (200') jib; Crane, Whirley ninety (90) ton and over; Helicopter when used in erecting work

Group 1A

Crane, floating two hundred fifty (250) ton and over; Crane, two hundred (200) ton through two hundred ninety nine

(299) ton, with over two hundred foot (200') boom (including jib, inserts and/or attachments); Crane, three hundred (300) ton through three hundred ninety nine (399) ton; Crane, Tower Crane with over one hundred seventy five foot (175') tower or over two hundred foot (200') jib; Crane, tower Crane on rail system or 2nd tower or more in work radius

#### Group 1B

Crane, three hundred (300) ton through three hundred ninety nine (399) ton, with over two hundred foot (200') boom (including jib, inserts and/or attachments); Floating crane, three hundred fifty (350) ton and over; Crane, four hundred (400) ton and over

#### Group 2

Asphalt Plant (any type); Asphalt Roto-Mill, pavement profiler eight foot (8') lateral cut and over; Auto Grader or "Trimmer"; Blade, Robotic; Bulldozer, Robotic Equipment (any type); Bulldozer, over one hundred twenty thousand (120,000) lbs. and above; Concrete Batch Plant and/or Wet Mix one (1) and two (2) drum; Concrete Diamond Head Profiler; Canal Trimmer; Concrete, Automatic Slip Form Paver (Assistant to the Operator required); Crane, Boom Truck fifty (50) ton and with over one hundred fifty foot (150') boom and over; Crane, Floating (derrick barge) thirty (30) ton but less than one hundred fifty (150) ton; Crane, Cableway twenty-five (25) ton and over; Crane, Floating Clamshell three (3) cu. Yds. And over; Crane, ninety (90) ton through one hundred ninety nine (199) ton up to and including two hundred foot (200') of boom (including jib inserts and/or attachments); Crane, fifty (50) ton through eighty nine (89) ton with over one hundred fifty foot (150') boom (including jib inserts and/or attachments); Crane, Whirley under ninety (90) ton; Crusher Plant; Excavator over one hundred thirty thousand (130,000) lbs.; Loader one hundred twenty thousand (120,000) lbs. and above; Remote Controlled Earth Moving Equipment; Shovel, Dragline, Clamshell, five (5) cu. Yds. And over; Underwater Equipment remote or otherwise, when used in construction work; Wheel Excavator any size

#### Group 3

Bulldozer, over seventy thousand (70,000) lbs. up to and including one hundred twenty thousand (120,000) lbs.; Crane, Boom Truck fifty (50) ton and over with less than one hundred fifty foot (150') boom; Crane, fifty (50) ton through eighty nine (89) ton with one hundred fifty foot (150') boom or less (including jib inserts and/or attachments); Crane, Shovel, Dragline or Clamshell three (3) cu. yds. but less than five (5) cu. Yds.; Excavator over eighty thousand (80,000) lbs. through one hundred thirty thousand (130,000) lbs.; Loader sixty thousand (60,000) lbs. and less than one hundred twenty thousand (120,000) lbs.

#### Group 4

Asphalt, Screed; Asphalt Paver; Asphalt Roto-Mill, pavement

profiler, under eight foot (8') lateral cut; Asphalt, Material Transfer Vehicle Operator; Back Filling Machine; Backhoe, Robotic, track and wheel type up to and including twenty thousand (20,000) lbs. with any attachments; Blade (any type); Boatman; Boring Machine; Bulldozer over twenty thousand (20,000) lbs. and more than one hundred (100) horse up to seventy thousand (70,000) lbs.; Cable-Plow (any type); Cableway up to twenty five (25) ton; Cat Drill (John Henry); Chippers; Compactor, multi-engine; Compactor, Robotic; Compactor with blade self-propelled; Concrete, Breaker; Concrete, Grout Plant; Concrete, Mixer Mobile; Concrete, Paving Road Mixer; Concrete, Reinforced Tank Banding Machine; Crane, Boom Truck twenty (20) ton and under fifty (50) ton; Crane, Bridge Locomotive, Gantry and Overhead; Crane, Carry Deck; Crane, Chicago Boom and similar types; Crane, Derrick Operator, under one hundred (100) ton; Crane, Floating Clamshell, Dragline, etc. Operator, under three (3) cu. yds. Or less than thirty (30) ton; Crane, under fifty (50) ton; Crane, Quick Tower under one hundred foot (100') in height and less than one hundred fifty foot (150') jib (on rail included); Diesel-Electric Engineer (Plant or Floating); Directional Drill over twenty thousand (20,000) lbs. pullback; Drill Cat Operator; Drill Doctor and/or Bit Grinder; Driller, Percussion, Diamond, Core, Cable, Rotary and similar type; Excavator Operator over twenty thousand (20,000) lbs. through eighty thousand (80,000) lbs.; Generator Operator; Grade-all; Guardrail Machines, i.e. punch, auger, etc.; Hammer Operator (Piledriver); Hoist, stiff leg, guy derrick or similar type, fifty (50) ton and over; Hoist, two (2) drums or more; Hydro Axe (loader mounted or similar type); Jack Operator, Elevating Barges, Barge Operator, self-unloading; Loader Operator, front end and overhead, twenty five thousand (25,000) lbs. and less than sixty thousand (60,000) lbs.; Log Skidders; Piledriver Operator (not crane type); Pipe, Bending, Cleaning, Doping and Wrapping Machines; Rail, Ballast Tamper Multi-Purpose; Rubber-tired Dozers and Pushers; Scraper, all types; Side-Boom; Skip Loader, Drag Box; Strump Grinder (loader mounted or similar type); Surface Heater and Planer; Tractor, rubber-tired, over fifty (50) HP Flywheel; Trenching Machine three foot (3') depth and deeper; Tub Grinder (used for wood debris); Tunnel Boring Machine Mechanic; Tunnel, Mucking Machine; Ultra High Pressure Water Jet Cutting Tool System Operator; Vacuum Blasting Machine Operator; Water pulls, Water wagons

#### Group 5

Asphalt, Extrusion Machine; Asphalt, Roller (any asphalt mix); Asphalt, Roto-Mill pavement profiler ground man; Bulldozer, twenty thousand (20,000) lbs. or less, or one hundred (100) horse or less; Cement Pump; Chip Spreading Machine; Churn Drill and Earth Boring Machine; Compactor, self-propelled without blade; Compressor, (any power) one thousand two hundred fifty (1,250) cu. ft. and over, total capacity; Concrete, Batch Plant Quality control; Concrete, Combination Mixer and compressor operator, gunite work; Concrete, Curb Machine, Mechanical Berm, Curb and/or Curb and Gutter; Concrete, Finishing Machine; Concrete, Grouting Machine; Concrete, Internal Full Slab Vibrator Operator;

Concrete, Joint Machine; Concrete, Mixer single drum, any capacity; Concrete, Paving Machine eight foot (8') or less; Concrete, Planer; Concrete, Pump; Concrete, Pump Truck; Concrete, Pumpcrete Operator (any type); Concrete, Slip Form Pumps, power driven hydraulic lifting device for concrete forms; Conveyored Material Hauler; Crane, Boom Truck under twenty (20) tons; Crane, Boom Type lifting device, five (5) ton capacity or less; Drill, Directional type less than twenty thousand (20,000) lbs. pullback; Fork Lift, over ten (10) ton or Robotic; Helicopter Hoist; Hoist Operator, single drum; Hydraulic Backhoe track type up to and including twenty thousand (20,000) lbs.; Hydraulic Backhoe wheel type (any make); Laser Screed; Loaders, rubber-tired type, less than twenty five thousand (25,000) lbs.; Pavement Grinder and/or Grooving Machine (riding type); Pipe, cast in place Pipe Laying Machine; Pulva-Mixer or similar types; Pump Operator, more than five (5) pumps (any size); Rail, Ballast Compactor, Regulator, or Tamper machines; Service Oiler (Greaser); Sweeper Self-Propelled; Tractor, Rubber-Tired, fifty (50) HP flywheel and under; Trenching Machine Operator, maximum digging capacity three foot (3') depth; Tunnel, Locomotive, Dinkey; Tunnel, Power Jumbo setting slip forms, etc.

#### Group 6

Asphalt, Pugmill (any type); Asphalt, Raker; Asphalt, Truck Mounted Asphalt Spreader, with Screed; Auger Oiler; Boatman; Bobcat, skid steed (less than one (1) yard); Broom, self-propelled; Compressor Operator (any power) under 1,250 cu. ft. total capacity; Concrete Curing Machine (riding type); Concrete Saw; Conveyor Operator or Assistant; Crane, Tugger; Crusher Feederman; Crusher Oiler; Deckhand; Drill, Directional Locator; Fork Lift; Grade Checker; Guardrail Punch Oiler; Hydrographic Seeder Machine, straw, pulp or seed; Hydrostatic Pump Operator; Mixer Box (CTB, dry batch, etc.); Oiler; Plant Oiler; Pump (any power); Rail, Brakeman, Switchman, Motorman; Rail, Tamping Machine, mechanical, self-propelled; Rigger; Roller grading (not asphalt); Truck, Crane Oiler-Driver

Zone Differential (add to Zone 1 rates):

Zone 2 - \$3.00

Zone 3 - \$6.00

For the following metropolitan counties: MULTNOMAH; CLACKAMAS; MARION; WASHINGTON; YAMHILL; AND COLUMBIA; CLARK; AND COWLITZ COUNTY, WASHINGTON WITH MODIFICATIONS AS INDICATED:

All jobs or projects located in Multnomah, Clackamas and Marion Counties, West of the western boundary of Mt. Hood National Forest and West of Mile Post 30 on Interstate 84 and West of Mile Post 30 on State Highway 26 and West of Mile Post 30 on Highway 22 and all jobs or projects located in Yamhill County, Washington County and Columbia County and all jobs or projects located in Clark & Cowlitz County, Washington except that portion of Cowlitz County in the Mt. St. Helens "Blast Zone" shall receive Zone I pay for all



classifications.

All jobs or projects located in the area outside the identified boundary above, but less than 50 miles from the Portland City Hall shall receive Zone II pay for all classifications.

All jobs or projects located more than 50 miles from the Portland City Hall, but outside the identified border above, shall receive Zone III pay for all classifications.

For the following cities: ALBANY; BEND; COOS BAY; EUGENE; GRANTS PASS; KLAMATH FALLS; MEDFORD; ROSEBURG

All jobs or projects located within 30 miles of the respective city hall of the above mentioned cities shall receive Zone I pay for all classifications.

All jobs or projects located more than 30 miles and less than 50 miles from the respective city hall of the above mentioned cities shall receive Zone II pay for all classifications.

All jobs or projects located more than 50 miles from the respective city hall of the above mentioned cities shall receive Zone III pay for all classifications.

-----  
IRON0086-012 07/01/2015

	Rates	Fringes
Ironworker (REINFORCING & STRUCTURAL) .....	\$ 40.04	23.19

-----

LABO0001-004 06/01/2014

PACIFIC (North of a straight line made by extending the north boundary of Wahkiakum County west to the Pacific Ocean), COUNTY, ZONE 1:

	Rates	Fringes
Laborers:		
GROUP 2.....	\$ 25.79	10.30
GROUP 3.....	\$ 32.29	10.30
GROUP 4.....	\$ 33.08	10.30
GROUP 5.....	\$ 33.62	10.30

ZONE DIFFERENTIAL (ADD TO ZONE 1 RATES):  
 ZONE 2 - \$1.00  
 ZONE 3 - \$1.30

BASE POINTS: BELLINGHAM, MT. VERNON, EVERETT, SEATTLE, KENT, TACOMA, OLYMPIA, CENTRALIA, ABERDEEN, SHELTON, PT. TOWNSEND, PT. ANGELES, AND BREMERTON

ZONE 1 - Projects within 25 radius miles of the respective city hall

ZONE 2 - More than 25 but less than 45 radius miles from the respective city hall  
 ZONE 3 - More than 45 radius miles from the respective city hall

LABORERS CLASSIFICATIONS

GROUP 2: Flagger

GROUP 3: Mason Tender-Cement/Concrete; Chipping Guns (under 30 lbs)

GROUP 4: Grade Checker; Pipe Layer; Chipping Guns (over 30 lbs)

GROUP 5: Mason Tender-Brick

-----  
 LABO0335-003 06/01/2013

PACIFIC (South of a straight line made by extending the north Boundary line of Wahkiakum County west to the Pacific Ocean)  
 COUNTY

	Rates	Fringes
Laborers:		
ZONE 1:		
GROUP 3.....	\$ 29.69	10.05
GROUP 4.....	\$ 30.07	10.05
GROUP 5.....	\$ 26.15	10.05

LABORERS CLASSIFICATIONS

GROUP 2: Mason Tender-Cement/Concrete; Chipping Guns

GROUP 4: Grade Checker; Pipelayer

GROUP 5: Flagger

ZONE DIFFERENTIAL (Add to Zone Rates): ZONE 2 - \$0.65  
 ZONE 3 - 1.15  
 ZONE 4 - 1.70  
 ZONE 5 - 2.75

ZONE 1: Projects within 30 miles of the respective city hall.

ZONE 2: More than 30 miles but less than 40 miles from the respective city hall.

ZONE 3: More than 40 miles but less than 50 miles from the respective city hall.

ZONE 4: More than 50 miles but less than 80 miles from the respective city hall.

ZONE 5: More than 80 miles from the respective city hall.

BASE POINTS: GOLDENDALE, LONGVIEW, AND VANCOUVER

-----  
 LABO0335-009 09/01/2013

PACIFIC(south of a straight line made by extending the north  
 boundary of Wahkiakum County west to the Pacific Ocean)

	Rates	Fringes
Hod Carrier		
Brick Mason Tender/Hod		
Carrier.....	\$ 30.47	10.05

-----  
 \* PAIN0055-017 07/01/2015

	Rates	Fringes
PAINTER		
Brush, Roller.....	\$ 23.05	10.85
Spray.....	\$ 23.05	10.85

-----  
 PLAS0528-004 06/01/2015

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 38.52	15.43

-----  
 SUWA2009-046 08/07/2009

	Rates	Fringes
FENCE ERECTOR.....	\$ 15.00	0.00
LABORER: Common or General.....	\$ 22.93	5.60
LABORER: Landscape.....	\$ 14.67	0.00
OPERATOR: Bulldozer.....	\$ 27.22	7.63
OPERATOR: Loader.....	\$ 26.11	7.87
OPERATOR: Mechanic.....	\$ 25.53	7.70
OPERATOR: Roller.....	\$ 25.25	8.20
PIPEFITTER.....	\$ 33.77	8.82
TRUCK DRIVER: Dump Truck.....	\$ 20.50	6.56
TRUCK DRIVER: Water Truck.....	\$ 24.36	8.30
TRUCK DRIVER: 10 Yard Truck.....	\$ 24.61	8.34

-----  
 WELDERS - Receive rate prescribed for craft performing  
 operation to which welding is incidental.  
 =====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

---

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

---

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the

interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

&gt;

General Decision Number: WA150105 03/20/2015 WA105

Superseded General Decision Number: WA20140105

State: Washington

Construction Type: Heavy Dredging

Counties: Washington Statewide.

DREDGING CONSTRUCTION PROJECTS (Excludes D.O.E. Hanford Site in Benton and Franklin Counties)

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/02/2015
1	01/16/2015
2	02/27/2015
3	03/06/2015
4	03/20/2015

\* ENGI0302-030 06/01/2014

CHELAN (WEST OF THE 120TH MERIDIAN), CLALLAM, DOUGLAS (WEST OF THE 120TH MERIDIAN), GRAYS HARBOR, ISLAND, JEFFERSON, KING, KITSAP, KITTITAS, MASON, OKANOGAN (WEST OF THE 120TH MERIDIAN), SAN JUNA, SKAGIT, SNOHOMISH, WHATCOM AND YAKIMA (WEST OF THE 120TH MERIDIAN) COUNTIES

	Rates	Fringes
DREDGING		
GROUP 1.....	\$ 35.93	17.40
GROUP 2.....	\$ 36.93	17.40
GROUP 3.....	\$ 37.35	17.40
GROUP 4.....	\$ 38.39	17.40
GROUP 5.....	\$ 36.93	17.40
GROUP 6.....	\$ 37.35	17.40

ZONE 2 (26-45 radius miles) - Add \$1.00 to Zone 1 rates

ZONE 3 (Over 45 radius miles) - Add \$1.30 to Zone 1 rates

BASEPOINTS: Kent, Everett, Mt. Vernon, Bellingham, Port

Angeles, Port Townsend, Aberdeen, Shelton, Bremerton,  
Wenatchee, and Yakima

WORK PERFORMED ON HYDRAULIC DREDGES:

- GROUP 1: Assistant Mate (Deckhand)
- GROUP 2: Oiler
- GROUP 3: Assistant Engineer (Electric, Diesel, Steam or  
Booster Pump); Mates and Boatmen
- GROUP 4: Craneman, Engineer Welder
- GROUP 5: Leverman, Hydraulic
- GROUP 6: Maintenance

ENGI0370-006 06/01/2013

ADAMS, ASOTIN, BENTON, CHELAN (EAST OF THE 120TH MERIDIAN),  
COLUMBIA, DOUGLAS (EAST OF THE 120TH MERIDIAN), FERRY,  
FRANKLIN, GARFIELD, GRANT, LINCOLN, OKANOGAN (EAST OF THE 120TH  
MERIDIAN), PEND OREILLE, SPOKANE, STEVENS, WALLA WALLA, WHITMAN  
AND YAKIMA (EAST OF THE 120TH MERIDIAN) COUNTIES

WORK PERFORMED ON HYDRAULIC DREDGES

	Rates	Fringes
Hydraulic Dredge		
GROUP 1:.....	\$ 25.56	12.85
GROUP 2:.....	\$ 25.88	12.85
GROUP 3:.....	\$ 26.49	12.85
GROUP 4:.....	\$ 26.65	12.85
GROUP 5:.....	\$ 26.81	12.85
GROUP 6:.....	\$ 27.09	12.85
GROUP 7:.....	\$ 27.36	12.85

- GROUP 1: Assistant Mate (Deckhand)
- GROUP 2: Assistant Engineer (Electric, Diesel, Steam, or  
Booster Pump)
- GROUP 3: Engineer Welder
- GROUP 4: Leverman, Hydraulic
- GROUP 5: Maintenance
- GROUP 6: Oiler
- GROUP 7: Mates & Boatman

HEAVY WAGE RATES APPLIES TO CLAM SHELL DREDGE, HOE AND  
DIPPER, SHOVELS AND SHOVEL ATTACHMENTS, CRANES AND  
BULLDOZERS.

ENGI0612-013 06/01/2014

LEWIS, PIERCE, PACIFIC (THAT PORTION WHICH LIES NORTH OF A  
PARALLEL LINE EXTENDED WEST FROM THE NORTHERN BOUNDARY OF  
WAHKAIKUM COUNTY TO THE SEA IN THE STATE OF WASHINGTON) AND  
THURSTON COUNTIES

PROJECTS:  
CATEGORY A PROJECTS (excludes Category B projects, as shown



below)

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
WORK PERFORMED ON		
HYDRAULIC DREDGES		
GROUP 1.....	\$ 35.93	17.40
GROUP 2.....	\$ 36.93	17.40
GROUP 3.....	\$ 37.35	17.40
GROUP 4.....	\$ 38.39	17.40
GROUP 5.....	\$ 36.93	17.40
GROUP 6.....	\$ 37.35	17.40

ZONE 2 (26-45 radius miles) - Add \$1.00 to Zone 1 rates

ZONE 3 (Over 45 radius miles) - Add \$1.30 to Zone 1 rates

BASEPOINTS: Tacoma, Olympia, and Centralia

CATEGORY B PROJECTS - 95% of the basic hourly rate for each group plus full fringe benefits applicable to Category A projects shall apply to the following projects: Reduced rates may be paid on the following:

1. Projects involving work on structures such as buildings and structures whose total value is less than \$1.5 million excluding mechanical, electrical, and utility portions of the contract.
2. Projects of less than \$1 million where no building is involved. Surfacing and paving included, but utilities excluded.
3. Marine projects (docts, wharfs, etc.) less than \$150,000

WORK PERFORMED ON HYDRAULIC DREDGES:

GROUP 1: Assistant Mate (Deckhand

GROUP 2: Oiler

GROUP 3: Assistant Engineer (Electric, Diesel, Steam or Booster Pump); Mates and Boatmen

GROUP 4: Craneman, Engineer Welder

GROUP 5: Leverman, Hydraulic

GROUP 6: Maintenance

HEAVY WAGE RATES APPLIES TO CLAM SHEEL DREDGE, HOE AND DIPPER, SHOVELS AND SHOVEL ATTACHMENTS, CRANES AND BULLDOZERS

HANDLING OF HAZARDOUS WASTE MATERIALS

H-1 Base wage rate when on a hazardous waste site when not outfitted with protective clothing, Class "D" Suit - Base wage rate plus \$ .50 per hour.

H-2 Class "C" Suit - Base wage rate plus \$1.00 per hour.

H-3 Class "B" Suit - Base wage rate plus \$1.50 per hour.

H-4 Class "A" Suit - Base wage rate plus \$2.00 per hour.

-----  
\* ENGI0701-003 01/01/2015

CLARK, COWLITZ, KLUCKITAT, PACIFIC (SOUTH), SKAMANIA, AND WAHAKIYAKUM COUNTIES

DREDGING:

	Rates	Fringes
Dredging:		
ZONE A		
ASSISTANT ENGINEER.....	\$ 42.80	14.35
ASSISTANT MATE.....	\$ 37.44	14.35
LEVERMAN, DIPPER, FLOATING CLAMSHELL.....	\$ 45.96	14.35
LEVERMAN, HYDRAULIC.....	\$ 45.96	14.35
TENDERMAN.....	\$ 41.31	14.35
ZONE B		
ASSISTANT ENGINEER.....	\$ 45.80	14.35
ASSISTANT MATE.....	\$ 40.44	14.35
LEVERMAN, DIPPER, FLOATING CLAMSHELL.....	\$ 48.96	14.35
LEVERMAN, HYDRAULIC.....	\$ 48.96	14.35
TENDERMAN.....	\$ 44.31	14.35
ZONE C		
ASSISTANT ENGINEER.....	\$ 48.80	14.35
ASSISTANT MATE.....	\$ 43.44	14.35
LEVERMAN, DIPPER, FLOATING CLAMSHELL.....	\$ 51.96	14.35
LEVERMAN, HYDRAULIC.....	\$ 51.96	14.35
TENDERMAN.....	\$ 47.31	14.35

ZONE DESCRIPTION FOR DREDGING:

ZONE A - All jobs or projects located within 30 road miles of Portland City Hall.

ZONE B - Over 30-60 road miles from Portland City Hall.

ZONE C - Over 60 road miles from Portland City Hall.

\*All jobs or projects shall be computed from the city hall by the shortest route to the geographical center of the project.

-----  
WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.  
=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).  
-----

The body of each wage determination lists the classification

and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

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#### Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

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A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

---

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
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U.S. Department of Labor  
200 Constitution Avenue, N.W.

Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION



**US Army Corps  
of Engineers** ®  
Portland District

# **Water Quality Protection and Monitoring Plan for Section 401 Individual Water Quality Certification**

## **Mouth of the Columbia River Jetty A Rehabilitation**

**April 2015**

# TABLE OF CONTENTS

1.0	INTRODUCTION .....	1
1.1	Project Background .....	1
1.2	MCR Jetty A Project Description .....	2
1.2.1	Site Conditions .....	2
1.2.2	Jetty A Construction Activities .....	5
1.2.3	Work in/near Wetlands and Waters.....	12
1.2.4	Construction Schedule and Timing .....	15
1.2.5	Sources and Transportation of Rock and Other Fill Material .....	15
1.2.6	Construction Staging, Storage, and Rock Stock Piles.....	16
1.3	Relevant Water Quality Criteria .....	16
1.4	Existing Water Quality.....	18
2.0	WATER QUALITY PROTECTION MEASURES.....	18
2.1	Temporary Erosion Controls .....	18
2.2	Turbidity Minimization Measures .....	19
2.3	Concrete Work .....	20
2.4	Emergency Response .....	20
2.5	Hazardous Materials .....	21
2.6	Spill Containment and Control .....	22
2.7	Water Quality Monitoring.....	23
2.8	Mitigation and Restoration .....	23
2.9	Additional Conservation Measures.....	23
3.0	WATER QUALITY MONITORING PLAN.....	24
3.1	Instrumented Monitoring .....	25
3.2	Visual Monitoring.....	25
3.2.1	Monitoring Parameters.....	25
3.2.2	Monitoring Schedule.....	26
3.2.3	Monitoring Locations.....	26
3.3	Record Keeping and Reporting .....	27
3.3.1	Monitoring Reports.....	27
4.0	CONTINGENCY RESPONSE AND NOTIFICATION PLAN .....	27
4.1	Contingency Measures.....	27
4.1.1	Work Below Ordinary High Water Mark.....	27

4.1.2 Construction Debris in Water ..... 28  
4.1.3 Distressed or Dying Fish ..... 28  
4.1.4 Discharge of Oil, Fuel, or Chemicals ..... 28  
4.2 Notification ..... 29  
5.0 REFERENCES ..... 31

Appendix A Water Quality Monitoring Form

### LIST OF TABLES

Table 1. Jetty A Wetland Summary ..... 4  
Table 2. In-Water Work Project Activities. .... 13  
Table 3. Rock Quarries Identified as Potential Sources of Material for Critical Repairs. .... 16  
Table 4. Water Quality Parameters of Concern in the Project Area. .... 17

### LIST OF FIGURES

Figure 1. Location of the MCR Jetty System. .... 2  
Figure 2. Jetty A Location ..... 3  
Figure 3. Jetty A Access and Staging Area Draft Plan ..... 8  
Figure 4. Jetty A Repair & Access Road Concept Plan - Overview ..... 9  
Figure 5. Jetty A Material Offloading Facility Concept Plan ..... 10  
Figure 6. Jetty A Material Offloading Facility Concept Cross-Section ..... 11



# 1.0 INTRODUCTION

This document provides background information on the mouth of the Columbia River (MCR) Jetty A Rehabilitation Project, and describes the Water Quality Protection and Monitoring Plan (WQPMP) that will be implemented during project construction. The objective of the WQPMP is to minimize impacts on water quality during work performed over water or below the jurisdictional ordinary high water mark (OHWM), in compliance with Section 401 of the Clean Water Act (CWA). Work performed above the OHWM will be regulated by the project's National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP), which will be secured from the Environmental Protection Agency (EPA) through a permit request via the online electronic Notice of Intent system to use their CWA Section 402 CGP.

Sections 2, 3, and 4 of this WQPMP include water quality protection measures; monitoring parameters, methods, and evaluation criteria; and contingency responses in the event a water quality criterion is exceeded during construction activities.

## 1.1 PROJECT BACKGROUND

The Columbia River drains approximately 259,000 square miles and flows 1,243 miles from its headwaters in the Canadian Rockies of British Columbia, across the state of Washington, and along the border of Washington and Oregon to its mouth on the Pacific Ocean near Astoria, Oregon. The portion of the river referred to as the "lower Columbia River" extends from Bonneville Dam (River Mile [RM] 146) to the river mouth (Figure 1).

The combination of large waves from the Pacific Ocean and strong river currents historically resulted in shifting sandbars at the MCR, making navigation through it extremely treacherous. Between 1885 and 1917, the U.S. Army Corps of Engineers (USACE) constructed the North and South Jetties to realign the ocean entrance to the Columbia River, dramatically improving navigation through the MCR. Jetty A and the Sand Island pile dikes, constructed from 1930 to 1942, produced the present entrance configuration (Figure 1). All the jetties have experienced considerable deterioration since construction, mainly due to extreme wave attack and foundation instability associated with erosion of the tidal shoals on which the jetties were built.



**Figure 1. Location of the MCR Jetty System.**

The Jetty A Rehabilitation Project site is located on the north bank of the Columbia River east of Cape Disappointment State Park, near the City of Ilwaco, Washington (Figure 2). The Jetty A Rehabilitation project is part of a larger repair and rehabilitation strategy for addressing issues at all three jetties. The proposed rehabilitation activities at Jetty A include construction access improvements, the creation of staging areas, delivery of construction materials, rehabilitation and repair of the existing jetty, and dredging and construction of a temporary barge off-loading facility.

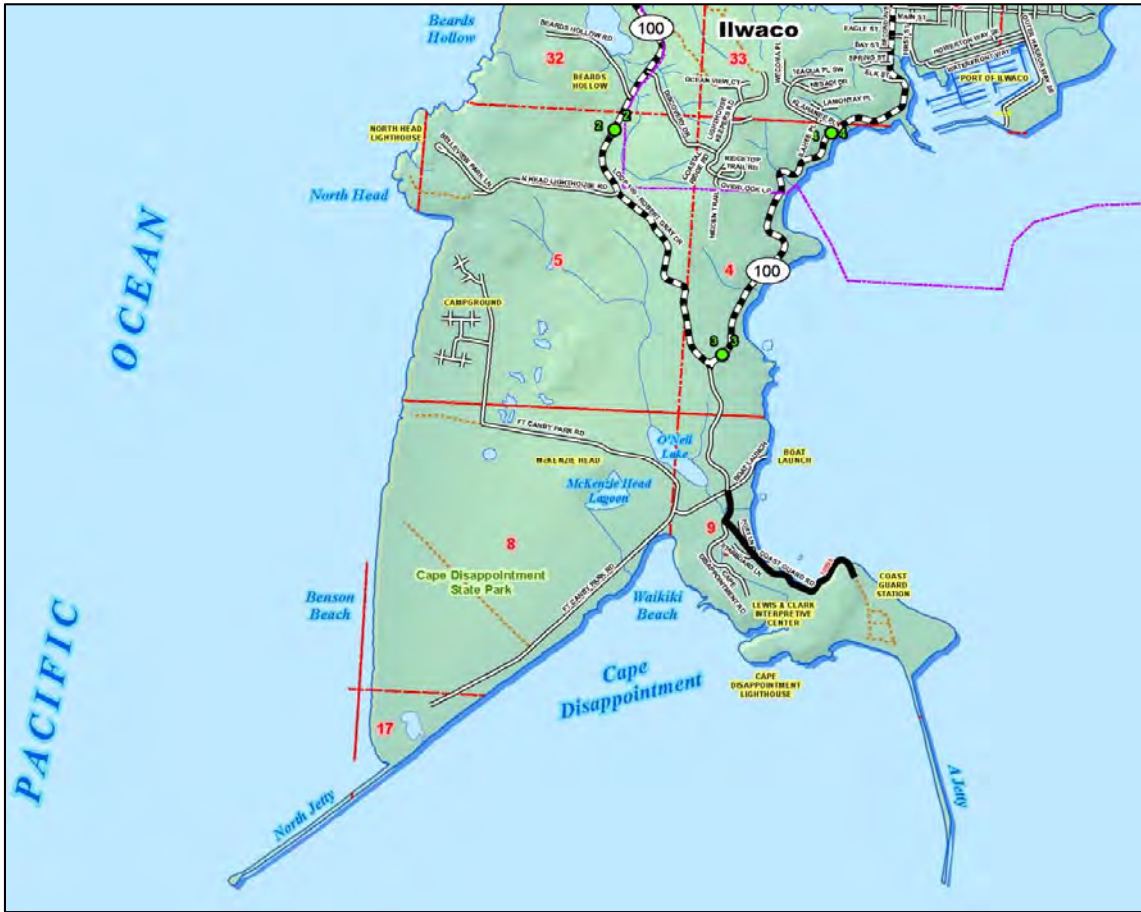
## **1.2 MCR JETTY A PROJECT DESCRIPTION**

### **1.2.1 Site Conditions**

Jetty A was constructed in 1939 to direct river and tidal currents away from the downstream North Jetty. Various repairs have been performed over the years to restore the height and width of the crest. Originally 1.1 miles in length, the length of the jetty has been reduced by approximately 900 feet since its construction, and without action is expected to continue to deteriorate at a rate of 5 to 20 feet per year (USACE 2012a).

Jetty A is located near Cape Disappointment State Park, on the Long Beach Peninsula, in Pacific County, Washington. The jetty is on USACE-owned property that is leased to the U.S. Coast Guard (USCG) for operations of its facility. The rubble-mound structure, constructed on an existing tidal shoal, has a crest elevation ranging from 20 to 24 feet North American Vertical Datum of 1988 (NAVD88) and a crest width ranging from 10 to

40 feet. It extends approximately 1 mile south into the mouth of the Columbia River and, along with the North and South Jetties, helps to stabilize the navigational channel, reduce the need for dredging, and provide protection for vessels (USACE 2012a).



**Figure 2. Jetty A Location.**

Summary tidal information for the project site is provided below based on data from the National Oceanic and Atmospheric Administration’s (NOAA) National Ocean Service for the MCR North Jetty tidal gage station (Station 9440574), near Cape Disappointment, Washington. This tidal station captures water levels characteristic of the open coast conditions of the MCR. For this project, relevant elevations are listed below (AECOM 2015a):

- MEAN LOWER LOW WATER, MLLW = -0.25 ft NAVD 88
- MEAN HIGHER HIGH WATER, MHHW = 7.5 ft NAVD 88
- MEAN HIGH WATER, MHW = 6.9 ft NAVD 88
- MEAN TIDE LEVEL, MTL = 3.9 ft NAVD 88
- MEAN SEA LEVEL, MSL = 3.8 ft NAVD 88
- MEAN LOW WATER, MLW = 1.0 ft NAVD 88

The Mean Higher High Tide (MHHT) elevation is used to determine the lateral extent of navigable waters under the CWA. During a December 2014 site visit, the USACE determined the MHHT boundary using field indicators, such as scour marks and presence of litter, debris, and driftwood. On the east (estuary) side of the jetty, an elevation of 11.2 feet NAVD88 is used to define the river’s jurisdictional boundary. On the west (ocean) side, increased wave heights result in a higher jurisdictional boundary; the MHHT line corresponds to the 14.0-foot elevation contour (AECOM 2015a).

Aquatic habitat in the vicinity of Jetty A consists primarily of shallow-water habitat (defined for this project as water that is between 0 and 20 feet to 23 feet below MLLW<sup>1</sup> [AECOM 2015a]). There is little habitat heterogeneity because of the dynamic current, wind, and wave conditions. The area is mostly comprised of relic large jetty armor stone and shifting sand foundation. There is an existing relic pile dike in the vicinity. Large volumes of driftwood that accumulate on the jetty are transitory within the jetty area. Little terrestrial vegetation grows on the jetty (AECOM 2015a).

Six wetlands were delineated on Jetty A during a site visit in December 2014. Five of the wetlands are non-tidal wetlands formed on top of historical fill in the upper terrace and receive water exclusively by precipitation and runoff from higher upland areas. The sixth wetland is located at a hairpin turn near the USCG administration buildings and continues along the shoreline of Baker Bay to the northwest (USACE 2015). Table 1 below summarizes the wetlands within the project area.

**Table 1. Jetty A Wetland Summary**

<b>Wetland ID</b>	<b>Wetland Area (acre)</b>	<b>Buffer Width (feet)</b>	<b>Type</b>
JA1	0.34	50	Non-Tidal
JA1N	0.03	50	Non-Tidal
JA2	0.12	50	Non-Tidal
JA4	0.01	50	Non-Tidal
JA5	0.01	50	Non-Tidal
JA6	0.04 (in study area)	100	Estuarine Inter-Tidal Emergent, persistent

Source: USACE 2015

<sup>1</sup> MLLW is 0.25 feet below zero feet NAVD88 at the North Jetty Tidal Station No. 9440574. To convert MLLW elevations to NAVD88, add 0.25 feet.

## 1.2.2 Jetty A Construction Activities

### 1.2.2.1 Laydown/Stockpile Area

Approximately 7.6 acres located near the root of the jetty have been identified as suitable for offloading, staging, and stockpiling of construction related equipment and material. This area is generally located north of STA 46+00 and south of the Coast Guard facilities. This is an old shooting range and dumping ground in the vicinity that the Corps will avoid during staging. The Corps will also avoid the existing working Coast Guard helipad and provide an appropriate buffer. A horizontal clearance of 100 feet is required based on coordination with USCG personnel. A minimum of a 20-foot buffer will be in place around the constructed staging/stockpiling area, except for land-based refueling areas, which will have a buffer of about 150 feet. The stockpile area will require some grading for stockpile and staging purposes, and clearing and grubbing of existing vegetation. A layer of gravel is required after clearing and grubbing to provide a suitable surface for construction equipment and stockpiling (Moffat & Nichol 2014). Figure 3 at the end of Chapter 1 shows the draft plan view of the material laydown/stockpile area. This area will be restored and re-vegetated upon project completion.

### 1.2.2.2 Construction Access and Material Offloading

Access improvements are required for construction equipment and materials to be delivered to the site. Access improvements would allow for delivery by barge, by truck, or both.

#### *Land Based Construction Access*

For truck access, a construction access pathway will be constructed both on the top of the jetty and along the eastern, leeward side of the existing jetty between the stockpile area located near the jetty (STA 46+00) and the jetty head (STA 89+00) (Figure 4). Existing debris, primarily driftwood, will be relocated to low points in the existing pathway area to act as fill. Rock infill will be placed to fill large voids between the placed driftwood and topping gravel added to provide a suitable surface for construction equipment. A minimum 2:1 gravel rock overlay to driftwood volumetric ratio is required to prevent the driftwood from floating. No more than two vehicle turnouts will be placed along the pathway. Each turnout will be approximately 20 feet wide by 90 feet long.

#### *Material Offloading Facility*

For barge access, a material offloading facility (MOF) will be constructed in addition to construction of the access pathway. The MOF will be located between approximately Station 77+00 and 86+00, avoiding the pile dike structure (~STA 83+00 to 83+50). The deck or working surface elevation for the structure may be about +19.4 feet NAVD88 to keep the construction equipment out of the water during high tide and mild storm events. The MOF will include temporary piles and

dredging to a bottom finish depth of -25 ft MLLW, including over-dredge disturbance to -32 ft MLLW. Construction access for the MOF may require a maximum of approximately 60,000 cubic yards (cy) of dredge volume be removed from a maximum area of approximately 1.7 acres (74,052 square feet) and could include an additional maximum 29,640 CY (7,778 CY below MLLW) of fill placed to construct and stabilize the MOF. The maximum footprint of the fill for the MOF will be no more than 1.2 acres.

Maintenance dredging may be required for one additional year, depending on the length of the construction project. The MOF would be removed within 2 years of the time of construction.

### *Barge Access and Delivery Route*

Barge access may rely on berthing a floating crane near station 84+00 to off-load rock transported by barge onto the temporary staging area. The crest of the jetty construction access road between Station 77+00 and 86+00 will be filled with smaller gradation of armor stone to create an approximately 70-foot-wide temporary stockpile/staging area. This temporary stockpile/staging area will be used to stockpile rock from the barge and allow ample space for off-road trucks to maneuver (Figure 5, Figure 6). An excavator, or similar equipment, will load material from the stockpile onto off-road trucks that are staged in this area. The off-road vehicles will travel to the barge location via the construction access pathway and turn around within the widened portion of the pathway. The widened portion of the pathway is around elevation +19.4 feet (NAVD88) but will likely be constructed at the final design crest elevation.

The likely scenario is that a crane barge will berth against three dolphins and the material barge will berth against the crane barge. The berthing dolphins may be comprised of one plumb and two battered steel H or pipe piles. The platform and berthing dolphins would be equipped with a fendering system comprised of fenders and fender panels. It is anticipated that the crane will be used to unload rock from the barge. This concept assumes a floating crane/barge of sufficient length and lifting capacity to unload materials without having to move or reposition the barge. The contractor may propose an alternative barge offloading scenario, but will be provided with constraints related to: the maximum allowable size of the dredge and fill footprints; the maximum allowable volume of dredged material; the maximum allowable depth of dredging; the maximum number and types of piles used (no treated wood, 24-inch maximum diameter); and the requirement to use a vibratory hammer for pile installation.

The toe of the rock fill will likely be stabilized by re-working the relic stone to key into the jetty slope at some pre-determined elevation (currently assumed to be 0.0 feet NAVD88) by the contractor. The slope will then be built up using new stone that will eventually be used in the jetty repair and temporarily filled with crushed rock to

create an even driving surface for the off-road equipment. The footprint fill area for barge access/delivery route below jurisdictional OHW will be no greater than 1.3 acres and fill volume will not exceed 38,888 CY.

### **1.2.2.3 Jetty Repairs**

The design template for scheduled Jetty A trunk repairs includes a 30-foot crest width, +24-foot MLLW crest elevation, a 1V:1.5 - 2H ocean-side slope, and 1V:1.5H river channel side slope from approximately Station 46+00 to approximately station 87+00. The design template for the jetty head stabilization (~STA 87-89+00) will feature a 40-foot-wide crest at approximately elevation +20-ft MLLW with a side-slope of approximately 1V:2H. Total head and trunk repairs for Jetty A will extend from approximately Stations 46+00 to 89+00 and will lie within the existing jetty footprint based on the configuration of the original cross section, previous repair cross sections, and redistribution of jetty rock by wave action.

Spatially variable damage along the exposed length of the jetty will be repaired using up to 82,000 tons of armor stone. Repairs will be made to the upper area of the jetty cross-section using armor stone having a size range of 7 to 28 tons, each. Median armor stone size will be approximately 18 tons, and repairs will be made using land-based equipment for armor stone placement. Reworked relic stone could account for about 12,560 tons. Most of the work will occur above MLLW using land-based equipment (a crane or large track-hoe excavator on top of the jetty) and limited water-based equipment. The crane or excavator will use the access pathway to move along the jetty. Rock will be supplied to the land-based placement operation by land and/or marine-based rock delivery.

### **1.2.2.4 Navigational Structure Repair**

An existing US Coast Guard (USCG) navigational tower structure, located at Station 78+00 could be left in place, removed, or replaced. If replaced, the replacement tower will include construction of a concrete base of about 6 feet by 6 feet by 4 feet (deep). The USCG will provide the tower with a platform, a ladder, a prefabricated re-bar basket with the anchor bolts set in it for the tower base, and a prefabricated wood concrete form with pins for the rock. The concrete foundation will be poured on-site into a pre-fabricated wood concrete form and pre-fabricated re-bar basket. Rebar will be drilled into the rocks for structural stability. If the existing USCG navigational tower structure at Station 78+00 is to be replaced, first the existing base in need of replacement will be removed and the armor stone exposed. Then, anchors will be drilled, the bottom graded with finer stone so that any concrete will not seep through cracks in the jetty stone, and a frame used to contain the new concrete base. An existing range marker, located at about Station 86+50, will remain in place and be avoided during jetty repair efforts.

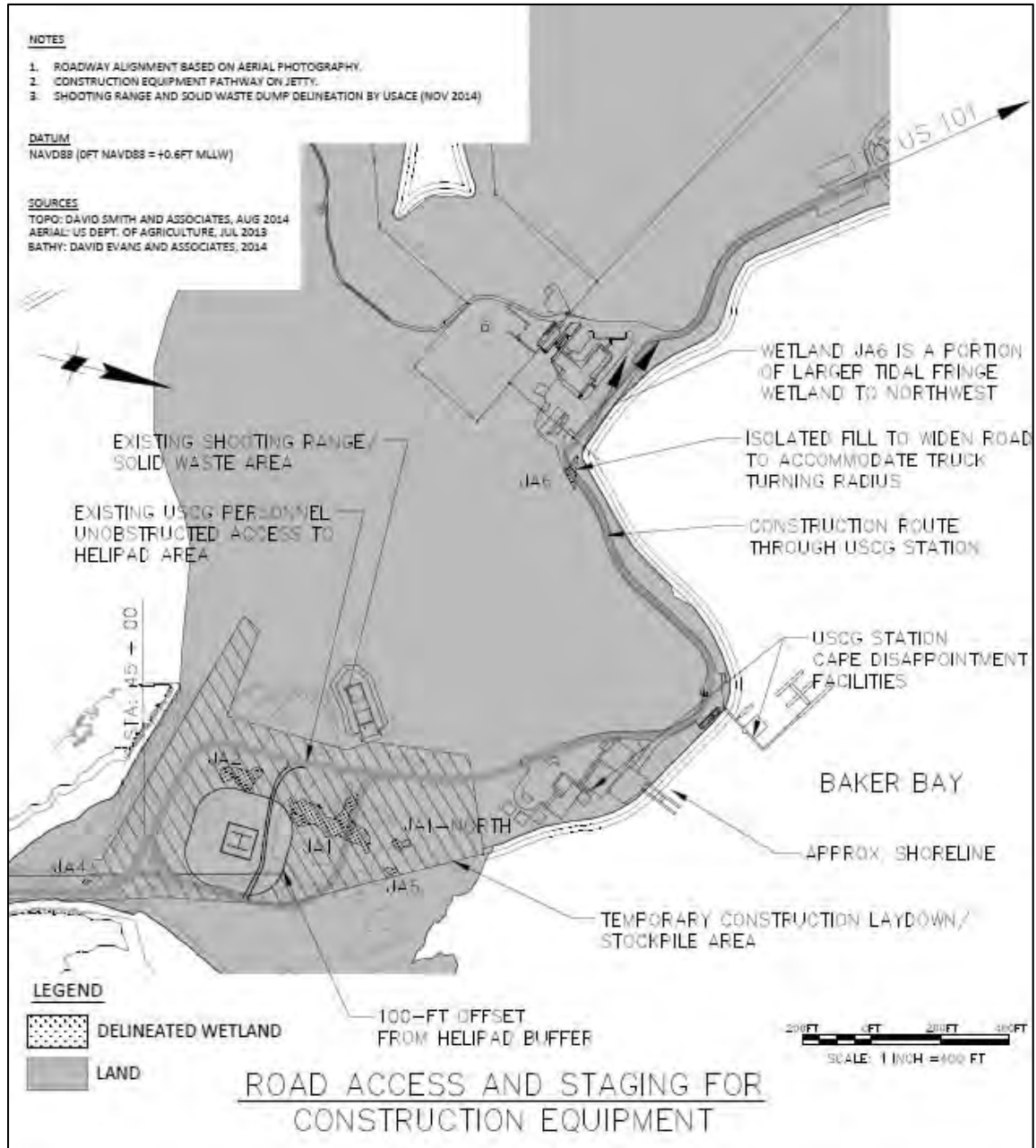


Figure 3. Jetty A Access and Staging Area Draft Plan



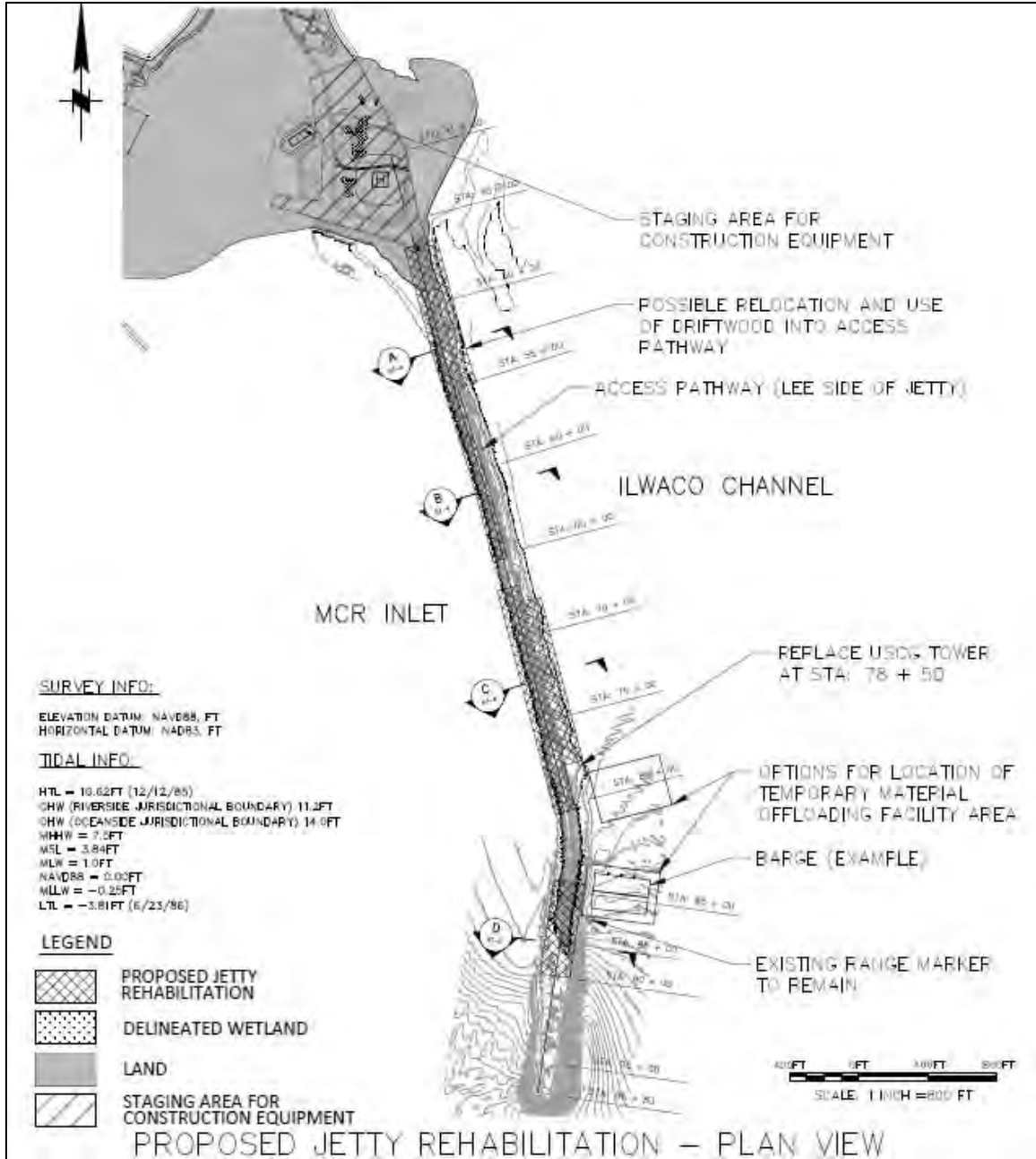


Figure 4. Jetty A Repair & Access Road Concept Plan - Overview

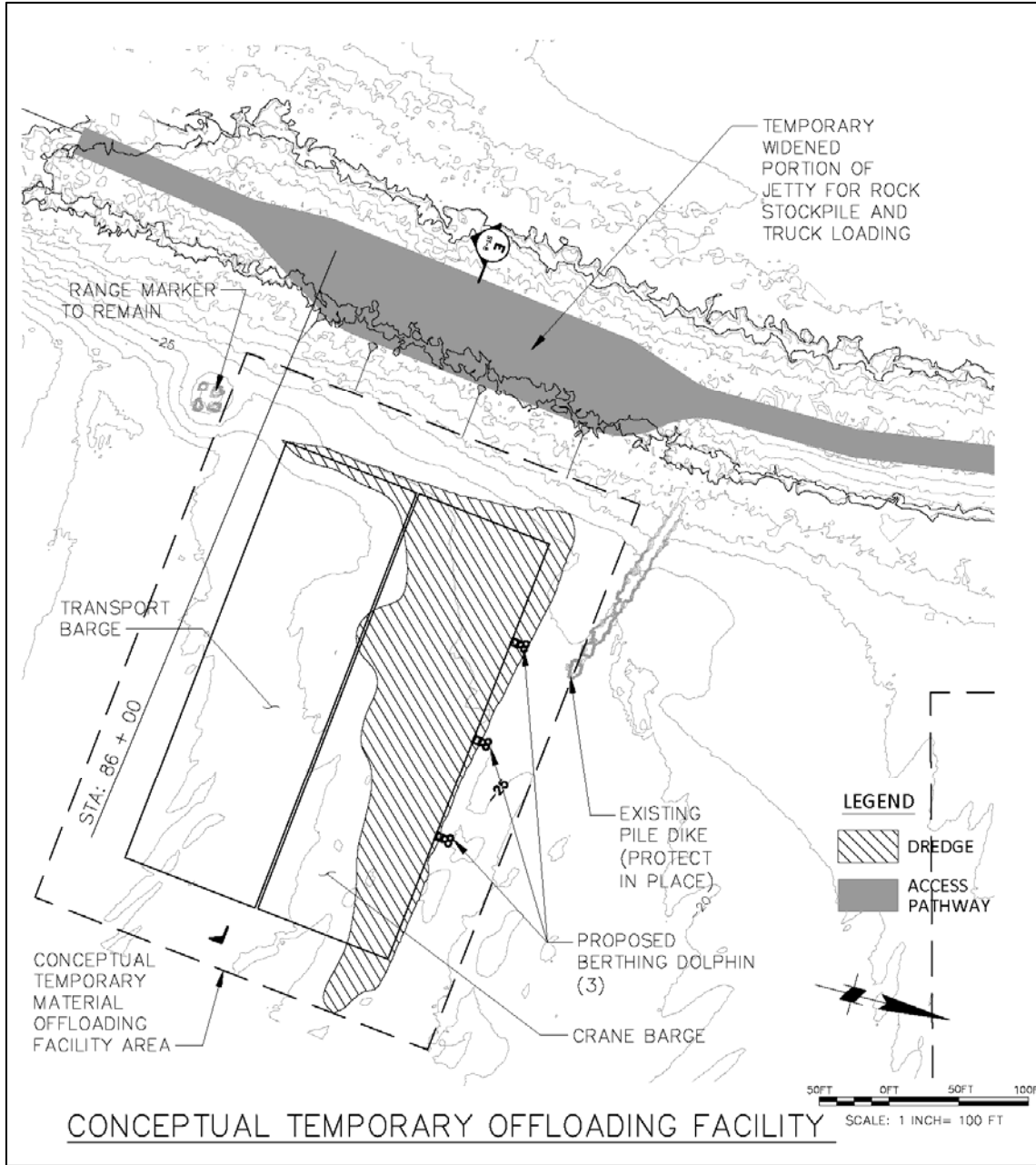
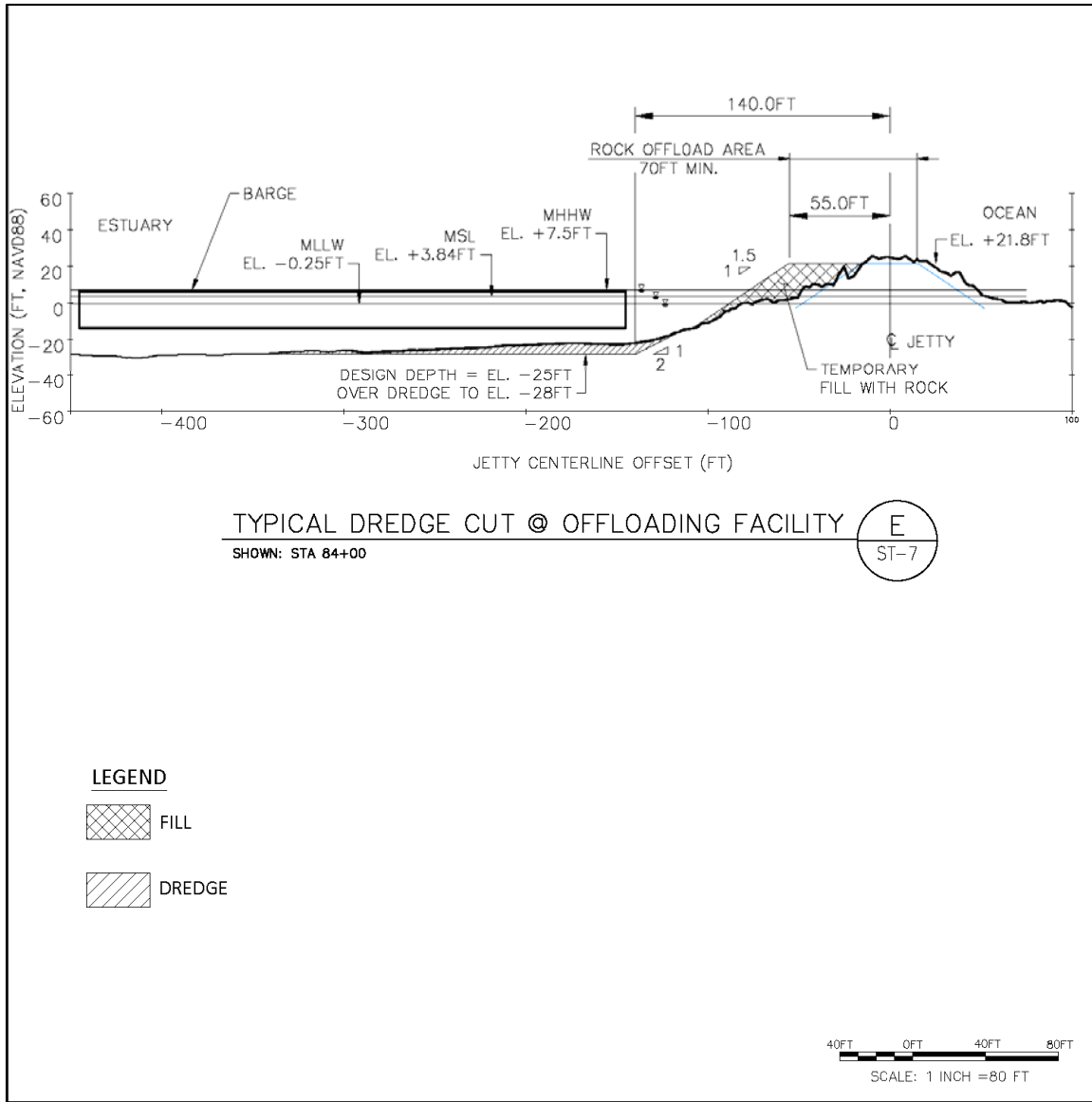


Figure 5. Jetty A Material Offloading Facility Concept Plan



**Figure 6. Jetty A Material Offloading Facility Concept Cross-Section**

### 1.2.3 Work in/near Wetlands and Waters

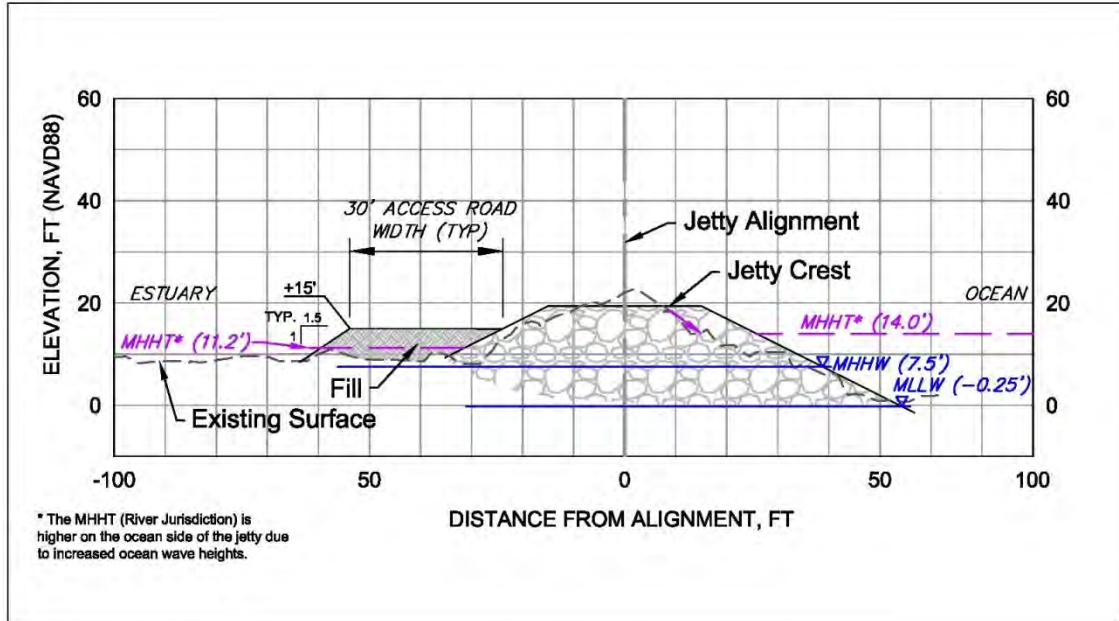
Rehabilitation activities at Jetty A would result in approximately 0.54 acre of unavoidable permanent wetland impacts. Wetlands JA1, JA1N, JA2, JA4, and JA5, and their buffers, would be permanently filled as a result of construction staging, storage, and rock stockpiles. Approximately 0.04 acre of wetland JA6 would be temporarily filled by roadway improvements. When possible, removable mats will be used to reduce temporary wetland fill impacts. Following construction, imported road fill would be removed from the estuarine wetland site and all temporary impacts would be restored to pre-construction condition (AECOM 2015b). Figure 3 shows impacts to wetlands from construction of the laydown/stockpile area and access road.

Most of the jetty repair work is expected to occur above -5 ft MLLW, however, there may be isolated work areas near the seaward end that extend to -10 ft MLLW. Repairs are intended to address damage along the upper part of the jetty, from -5 feet NAVD 88 to the jetty crest (23.4 ft NAVD 88) along STA 46+00 to 87+00 and -10 ft NAVD 88 to 19.4 ft NAVD 88 (jetty crest) along STA 87-89. Along most of the area, the toe of the template is not expected to extend below 0 ft NAVD 88. Placement of stone below 0 ft NAVD is expected to be limited to isolated locations and shall occur only to transition the repair template to the existing structure surface. Approximately 15,000 cy of driftwood, which has accumulated along the trunk of the jetty, will be either incorporated into elements of site restoration or mitigation designs (incorporated into the causeway), or partially removed as part of the project. During construction, it is possible that barrels or waste that could be hazardous or toxic could be uncovered, or float onto the Jetty during construction. If this occurs, material will be handled in compliance with the Corp's Hazardous and Toxic Wastes specifications and will be reported to the Coast Guard National Response Center (1-800-424-8802).

Volumes of cut material required for pathway construction assumes only driftwood material will be removed from the site as required while reworking of the relic jetty stone will remain. There would be 7,778 CY of total fill volume below the MLLW, which represents less than 10% of the total fill for the project. Proposed in-water work, including quantities of cut and fill, are summarized in Table 2. A cross section of the proposed Jetty A and associated construction access road is shown in Figure 7.

**Table 2. In-Water Work Project Activities.**

<b>Activity</b>	<b>Duration (Temporary or Permanent)</b>	<b>Amount of material (cy) to be placed in or removed from waterbody</b>	<b>Area (acres) of waterbody directly affected</b>
Construction Access Pathway (Cut)	Permanent	Up to 15,000	Approx. 2.6 acres on top of jetty
Construction Access Pathway (Fill)	Permanent	Up to 38,888	1.3 below OHW (riverside)
Jetty (armor stone) Head and Trunk (Fill)	Permanent	Up to 46,200	Approx. 2.96 crest acres
MOF Construction (Fill)	Permanent	Up to 29,640 total (Up to 7,778 below MLLW)	1.2
Jetty Repair (driftwood) (Fill)	Permanent	Max. practicable maintaining stable access causeway	Maximum practicable, estimated ~ 0.76 acres
MOF Dredging	Permanent	Up to 60,000	1.7
Piling	Temporary	Install (vibratory) up to 3 dolphins for MOF (up to 24 steel pipe piles, up to 24-inch diam. each) Install (vibratory) up to 93 Z or H pile sections for MOF	
Maintenance Dredging for MOF Basin (within 1 year after construction)	Temporary	Up to 10,500	1.7



**Figure 7. Construction Footprint Profile**

A maximum 1.7-acre dredge basin with a finish depth of -25 feet MLLW (-32 ft MLLW maximum with disturbance and advanced maintenance) may be required to accommodate both barges (material and crane). This may include up to 60,000 cy of dredge volume removed. An additional approximately 1.2 acres and 29,640 cy of fill would be required to construct the offloading area. Maintenance dredging may be needed before offloading during each year of construction. Dredging is likely to occur on a nearly annual basis for the duration of the project construction period (USACE 2012b). A clamshell dredge would likely be used for all dredging, though there is a small chance that a pipeline dredge could be feasible but is unlikely to be used. The material to be dredged is medium to fine-grained sand.

Disposal of dredged material will occur at existing approved in-water sites. Two dredged material disposal sites, the Shallow Water Site and the North Jetty site, were considered for disposal of dredged material. Modeling has showed that the potential changes to the two disposal sites from the proposed action would not inhibit their use as disposal sites. These sites have been previously vetted through the appropriate regulatory agencies, were evaluated for their effects, and were subsequently designated or approved after such review. However, given equipment and condition constraints at the project site, it is now more likely that disposal will occur either in the flowlane or in the Environmental Protection Agency designated Deep Water Site southwest of the mouth. The flow lane disposal is most likely, as disposal at the Deep Water Site is very dangerous in the winter season. The current proposed action and use of these disposals sites will maintain compliance with approved use (USACE 2012b).

Placement of rock by heavy equipment, jetty access road construction, dredging, disposal, and pile installation and removal could all cause temporary and local increases

in suspended sediment. These increases are expected to have minimal and limited effects on the environment; suspended sediment is expected to stay within acceptable levels for fish and wildlife species of concern. Previous tests have confirmed that material to be dredged will be primarily sand with little or no fines, which does not stay suspended in the water column for a significant length of time (USACE 2012b). Increases in turbidity from construction activities on the Jetty will likely occur on a nearly daily basis but will be of limited extent and duration, as rock placement will involve clean fill. Wave and current conditions in the action area naturally contribute to higher background turbidity levels; such conditions also preclude the effective use of isolating measures to minimize turbidity. Additionally, the Portland Sediment Evaluation Team (PSET) determined that project sediments are unlikely to contain contaminants above marine benthic toxicity screening levels, and determined that sediment chemical testing of sediments is not required.

Turbidity levels and durations will be limited to conditions required in the State Water Quality Certification that include exceedance windows that are protective of beneficial uses such as by salmonids and other aquatic life. Section 2.2 provides water quality protection measures for minimizing increases in turbidity.

Replacement of the navigational structure near the head of the jetty will involve pouring concrete. While all concrete pouring will occur above the MHHW, it can still pose a risk to water quality and elevated pH levels. To replace the navigational structure, USACE will expose the armor stone, drill the anchors, and then grade the bottom with finer rock so the concrete would not seep through the armor stone cracks and into the ocean. Additionally, the concrete will be covered while it is curing to avoid contact with rainwater during storm events.

#### **1.2.4 Construction Schedule and Timing**

Construction activities for the Jetty A Rehabilitation Project likely will occur over two seasons in 2015 and 2016. Rock procurement would occur in 2015 and initial placement of rock could also occur. However, the majority of construction activities would occur in 2016. The MOF would be removed within 2 years of the time of construction.

#### **1.2.5 Sources and Transportation of Rock and Other Fill Material**

Currently, rock and gravel sources have not been confirmed. However, one or more of the quarry options presented in Table 3 would be used. Stone may be trucked or barged from the quarry. From Cape Disappointment State Park, trucks will travel along Coast Guard Road to the staging/stockpile area.

The USACE intends to use operating quarries rather than opening any new quarries. The contractor and quarry owner/operator will be responsible for ensuring that quarries

selected for use are appropriately permitted and in compliance with all state and federal laws.

**Table 3. Rock Quarries Identified as Potential Sources of Material for Critical Repairs.**

Quarry <sup>1</sup>	County, State	Nearest City	Road Miles from MCR	Unit Weight (pcf)
Beaver Lake Quarry	Skagit, WA	Clear Lake, WA	251	181.1
Marble Mount Quarry	Skagit, WA	Concrete, WA	276	189.7
Columbia Granite Quarry	Thurston, WA	Vail, WA	129	168.5
Tower Rock (Phipps) Quarry	Cowlitz, WA	Castle Rock, WA	75	167.4
Fisher Quarry	Clark, WA	Camas, WA	116	168.5
192nd Street Quarry	Clark, WA	Camas, WA	117	168.5
Mountain Top (Yacolt) Quarry	Clark, WA	Yacolt, WA	115	166.2
Old Maid's Canyon Quarry	Jefferson, OR	Madras, OR	220	168/175
Youngs River Falls Quarry	Clatsop, OR	Astoria, OR	30	181.8

pcf = pounds per cubic foot

<sup>1</sup>List may not be all-inclusive

### 1.2.6 Construction Staging, Storage, and Rock Stock Piles

As described in Section 1.2.2.1, an area for construction staging, laydown, and stockpiling will be located near the root of Jetty A, north of STA 46+00 and south of the USCG facilities. If necessary during construction, stockpiles may be covered when materials are not being moved. However, this is not anticipated since a majority of the stone that would be stockpiled on-site would be extremely large armor stone. Covering other materials that may be stockpiled for the haul road may prevent erosion and increased turbidity caused by runoff from stockpiled materials. Construction of the staging areas would result in permanent fill of five wetlands and temporary fill of another wetland as discussed previously. Staging and stockpiles will remain above 11.2 ft NAVD 88.

## 1.3 RELEVANT WATER QUALITY CRITERIA

The designated beneficial uses for coastal waters of the Pacific Ocean, from Ilwaco to Cape Flattery, inclusive of the Project Site (near RM 0 of the Columbia River) include extraordinary aquatic life uses, shellfish harvest, primary contact recreation; and other miscellaneous uses, such as wildlife habitat, harvesting, commerce and navigation, boating, and aesthetics (WAC 173-201A-612).

Water quality concerns include turbidity from earthwork, rock placement, and dredging activities, potential spills associated with green concrete work from construction of the navigation structure near the Jetty head, and potential hazardous waste removal of washed-up materials. There are relevant water quality criteria for this area of coastal waters for turbidity and pH, as described below.



Table 4 presents the water quality standards for turbidity (WAC 173-201A-210[1][e]) for this area of coastal waters. The water quality standards for turbidity are applicable to all construction activities performed below the OHWM.

**Table 4. Water Quality Parameters of Concern in the Project Area.**

Monitoring Parameter	Water Quality Criterion	
Turbidity	If less than 50 NTU:	Background Turbidity plus 5 NTU
	If greater than 50 NTU:	Background Turbidity plus 10 percent

NTU = Nephelometric Turbidity Unit

Per WAC 173-201A-210[1][e], a temporary area of mixing is allowed during and immediately after necessary in-water construction activities that result in the disturbance of in-place sediments. For the Jetty A Rehabilitation project, this would likely apply to dredging and disposal and pile installation and removal activities.

All necessary local and state permits and approvals must be obtained and best management practices (BMPs) implemented to avoid/minimize disturbance of in-place sediments and turbidity criteria exceedances before temporary mixing zones are allowed. Before mixing zones are granted, supporting information must be supplied that demonstrates that “the mixing zone would not have a reasonable potential to cause a loss of sensitive or important habitat, substantially interfere with the existing or characteristic uses of the water body, result in damage to the ecosystem, or adversely affect public health as determined by the department” (WAC 173-201A-400 [4]).

The size of the mixing zone and the concentrations of pollutants present shall be minimized (WAC 173-201A-400 [6]). For estuaries or marine waters, the point of compliance for a temporary area of mixing extends at a 150-foot radius from the activity causing the turbidity exceedance.

The general in-water work window (IWWW) for the protection of fish in the Columbia River is November 1 through February 28. Jetty A rehabilitation activities may occur both in and outside this time frame. It is anticipated that much of the in-water work would be completed outside the established in-water work period due to the dangerous sea conditions and unacceptable safety risk of working on the jetty that would occur during the IWWW.

In addition to the criteria in Table 4, the project must also comply with narrative water quality standards, including the following:

- No visible petroleum sheen on water observed at the construction site.

- No distressed or dying fish observed at the construction site and attributed to site activities.

These narrative criteria must be met at the project location with no dilution.

The water quality standards for pH for this area of coastal waters indicate an allowable pH range within 7.0 to 8.5 with a human-caused variation of less than 0.2 units (WAC 173-201A-210[1][f]). As mentioned previously, concrete work associated with the navigation structure at the jetty head has the possibility to affect pH levels. Possible scenarios include rainwater coming into contact green cement during storm events or proper containment and housekeeping measures not upheld during construction activities. However due to the BMPs that would be applied to prevent contact of stormwater runoff with the green cement (Section 2.3), no measurable impacts to pH levels are anticipated.

## **1.4 EXISTING WATER QUALITY**

Oregon and Washington have classified the lower Columbia River as water quality-limited and placed it on the CWA Section 303(d) list for the following parameters: RM 0 to 35.2 for temperature and polychlorinated biphenyls (PCBs); RM 35.2 to 98 for arsenic, dichlorodiphenyl trichloroethane (DDT), PCBs, and temperature; and RM 98 to 142 for temperature, arsenic, DDT, PCBs, and polynuclear aromatic hydrocarbons (PAHs). In Washington, the river also is on the Section 303(d) list for dichloro-diphenyl-dichloroethane, Alpha BHC (a pesticide), mercury, dissolved gas, dieldrin, chlordane, aldrin, dichloro-diphenyl-dichloroethylene, fecal coliforms, and sediment bioassay. In addition, the entire river is subject to a US Environmental Protection Agency (EPA) total maximum daily load (TMDL) for dioxin.

The MCR is not 303(d) listed for turbidity or pH.

# **2.0 WATER QUALITY PROTECTION MEASURES**

## **2.1 TEMPORARY EROSION CONTROLS**

Temporary erosion controls will be installed prior to initiation of ground-disturbing activities on-site. USACE will seek use of the EPA's NPDES Construction General Permit (CGP) for Stormwater Discharge from Construction Activities. As part of the permit, a Stormwater Pollution Prevention Plan (SWPPP) will be prepared that will outline all facilities, BMPs, and measures for erosion prevention, sediment control, and pollution prevention. The Corps' contractor will be required to have Certified Erosion and Sediment Control Lead implement the SWPPP which will include elements for erosion and sediment control, such as the following:

- Construction discharge water generated on-site (debris, sediment, and other pollutants) will be treated using the best available technology.
- Water quality treatments will be designed, installed, and maintained in accordance with manufacturers' recommendations and localized conditions.
- Silt fences, fiber rolls, or straw bales, cofferdams, and graveled access points will be used to control sedimentation and construction discharge water.
- Construction waste material used or stored on-site will be confined, removed, and disposed properly.

## **2.2 TURBIDITY MINIMIZATION MEASURES**

The placement of the temporary dolphins, offloading facilities, and dredging could cause short-term increases in turbidity. Dredged material would be placed in the flow lane or at the Deepwater Ocean Dredged Material Disposal Site (ODMDS) that has been previously evaluated and approved by the EPA. The ODMDS has a Site Management and Monitoring Plan that is aimed at assuring that disposal activities will not unreasonably degrade or endanger the marine environment. Site management activities include regulating the time, quantity, and physical/chemical characteristics of dredged material that is placed in the site; establishing disposal controls; and monitoring the site environs to verify that unanticipated or significant adverse effects are not occurring from past or continued use of the site and that permit terms are met. The relative quantities, characteristics, and effects of the proposed action would not be expected to have different or significant negative impacts to these sites (USACE 2012b).

The following overall impact minimization practices and BMPs will be used for all maintenance dredging for offloading facilities.

1. If a pipeline dredge is used (which is extremely unlikely), then to reduce the potential for entrainment of juvenile salmon or green sturgeon, the cutterheads will remain on the bottom to the greatest extent possible and only be raised 3 feet off the bottom when necessary for dredge operations.
2. To reduce turbidity, if a clamshell bucket is used, all digging passes shall be completed without any material, once in the bucket, being returned to the wetted area. No dumping of partial or half-full buckets of material back into the project area will be allowed. No dredging of holes or sumps below minimum depth and subsequent redistribution of sediment by dredging, dragging, or other means will be allowed. All turbidity monitoring will comply with State 401 Water Quality Certification Conditions.

3. If the Captain or crew operating the dredges observes any kind of sheen or other indication of contaminants or distressed or dying fish, he/she will immediately stop dredging and notify USACE environmental staff to determine appropriate action and will follow all appropriate agency contact protocols.
4. The Corps recently received a no-test determination from the Regional Sediment Evaluation Team. However, if routine or other sediment sampling determines that dredged material is not acceptable for unconfined, in-water placement, then a suitable alternative disposal plan will be developed in cooperation with the National Marine Fisheries Service (NMFS), EPA, Washington Department of Ecology (Ecology), and other agencies.

## **2.3 CONCRETE WORK**

As mentioned above, concrete work associated with the navigation structure at the jetty head has the possibility to affect pH levels. As mentioned in Section 1.2.3, prior to pouring the concrete, the base will be graded with fine aggregate to prevent concrete from seeping through the armor stone cracks and into the ocean. The immediate construction area on top of the jetty required for pouring the concrete pad supporting the navigation structure will be adequately isolated, and wash and cure water will be appropriately contained and treated offsite prior to discharge. Concrete will be cured for a minimum of 24-hours prior to contact with any water. These construction practices will avoid and minimize the potential for wet concrete to contact ocean water or stormwater entering the ocean, thereby minimizing water quality risks associated with concrete work.

## **2.4 EMERGENCY RESPONSE**

To avoid the need for emergency response, a USACE Government Quality Assurance Representative will be on-site or available by phone at all times throughout construction. Emergency erosion/pollution control equipment and BMPs will be on-site at all times. The USACE Project Engineer or their designee will conduct regular inspections and ensure that a supply of sediment control materials (e.g., silt fence, fiber rolls, or straw bales), hazardous material containment booms, and spill containment booms are available and accessible to facilitate the cleanup of any hazardous material spills. An emergency response plan will be on-site at all time.

Regular site inspections will occur in compliance with the NPDES CGP permit either 1) at least once every 7 calendar days; or 2) once every 14 calendar days and within 24 hours of the occurrence of a storm event of 0.25 inches or greater.

Ecology and EPA will be notified at the following addresses when the discharge of turbidity exceeds the water quality standards.

Washington Department of Ecology  
Lori Kingsbury, Federal Permit Manager  
Ecology Southwest Regional Office  
(360) 407-6926  
loch461@ecy.wa.gov

USEPA – Region 10  
NPDES Compliance Unit – Attn: Federal Facilities Compliance Officer  
1200 6th Ave, Suite 900  
OCE-133  
Seattle, WA 98101  
(206) 553-1846

Pacific County Emergency Management will be notified at the following address in the case of any emergencies.

Pacific County Emergency Management Agency  
300 Memorial Drive  
P.O. Box 101  
South Bend, WA 98586-0101  
(360) 875-9397

In case of hazardous material or oil spills, the National Response Center, the Washington Military Department's Emergency Management Division (EMD), Ecology, USCG, and the Oregon Department of Environmental Quality (DEQ) will be notified.

- USCG National Response Center, (800) 424-8802
- USCG, Sector Columbia River, (503) 861-2242
- Washington Military Department's EMD, (800) 258-8990
- Ecology, Southwest Region Office, (360) 407-6300
- Oregon DEQ, Portland, 503-229-5263

## **2.5 HAZARDOUS MATERIALS**

A description of any regulated or hazardous products or materials to be used for the project, including procedures for inventory, storage, handling and monitoring, will be kept on-site. Hazardous waste will be separated from construction and domestic waste. Waste will be stored in sealed containers suitable to prevent leakage and corrosion, and labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements. All containers stored outside will be stored within appropriately sized secondary containment to prevent spills from being discharged, or by similarly effective

means designed to prevent the discharge of pollutants from the area. Hazardous materials will be disposed of in accordance with the manufacturer's recommended method of disposal and in compliance with federal, state, and local requirements. Spills will be cleaned up immediately using dry clean-up methods where possible and used materials will be disposed of properly.

Fuels or toxic materials associated with equipment will not be stored or transferred near the water. Fueling and maintenance of equipment should occur offsite. If on-site fueling or maintenance is required, equipment will be fueled and lubricated only in designated refueling areas at least 150 feet from the OHWM and wetland areas. Fueling on the jetty itself for cranes and other stationary equipment will occur via a Wiggins Fast-Fuel system, or equivalent, per the Biological Opinion from NMFS. Secondary containment will also be implemented during fueling of the stationary equipment, and additional spill response materials will be available in the immediate vicinity of the stationary refueling actions. Portable facilities for sanitary waste will be located within the project staging area. The Corps is also requiring the use of Environmentally Acceptable Lubricants (EALs)<sup>2</sup> for equipment on the jetty or working below the OHWM.

Any barrels or waste of questionable hazardous or toxic nature that are uncovered or float onto the jetty during construction will comply with the Corps' Hazardous and Toxic Wastes specifications and also will be reported to the Coast Guard National Response Center at 1-800-424-8802.

## **2.6 SPILL CONTAINMENT AND CONTROL**

A description of spill containment and control procedures and associated spill clean-up supplies and equipment will be on-site, including: notification to proper authorities, specific cleanup and disposal instructions for different products, quick response containment and cleanup measures stored on the site including a supply of sediment control materials, proposed methods for disposal of spilled materials, and employee training for spill containment. Generators, cranes, and any other stationary power equipment operated within 150 feet of OHWM or wetland areas will be maintained as necessary to prevent leaks and spills from entering the water. Vehicles/equipment will be inspected daily for fluid leaks and cleaned as needed before operating within 150 feet of OHWM. Any leaks discovered will be repaired before the vehicle/equipment resumes service.

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<sup>2</sup> Environmentally Acceptable Lubricants by the U.S. EPA (2011); *e.g.*, mineral oil, polyglycol, vegetable oil, synthetic ester; Mobil® biodegradable hydraulic oils, Total® hydraulic fluid, Terresolve Technologies Ltd.® biobased biodegradable lubricants, Cougar Lubrication® 2XT Bio engine oil, Series 4300 Synthetic Bio-degradable Hydraulic Oil, 8060-2 Synthetic Bio-Degradable Grease No. 2, *etc.* The use of trade, firm, or corporation names in this Plan is for the information and convenience and does not constitute an official endorsement or approval by the U.S. Department of Defense or Portland District Corps of Engineers of any product or service to the exclusion of others that may be suitable. For additional information, see also:  
<http://nepis.epa.gov/EPA/html/DLwait.htm?url=/Exe/ZyPDF.cgi/P100DCJI.PDF?Dockey=P100DCJI.PDF>

Equipment used over or below the OHWM will be cleaned before leaving the staging area, as often as necessary to remain grease-free. Equipment operating on the jetty or causeway, and any equipment operating over or below the OHWM will also be required to use EALs. Proper fueling and maintenance procedures will be followed as discussed above in Section 2.5.

## **2.7 WATER QUALITY MONITORING**

In-water work will require turbidity monitoring that will be conducted in accordance with 401 Water Quality Certification Conditions to ensure the project maintains compliance with State water quality standards. Temporally, effects to water quality from suspended sediment and turbidity could occur on a daily basis, but are not expected to be continuous throughout the day. Water quality monitoring is described in more detail in Section 3.0 below.

## **2.8 MITIGATION AND RESTORATION**

As described in Section 1.2.3, the repairs to Jetty A would result in unavoidable impacts to wetlands and waters of the United States protected under Section 404 of the CWA. The USACE would implement compensatory mitigation for those impacts. Mitigation options for impacts to wetlands and non-wetland waters were proposed in the Corps' Mitigation and Monitoring Proposal and Bank Use Plan. Three wetland mitigation options were considered: 1) the Long Beach Mitigation Bank; 2) Wetland Creation near the North Jetty; and 3) a combination of those two options. For non-wetland waters impacts, three mitigation options were considered: 1) local riparian enhancement; 2) seagrass habitat establishment; and 3) habitat complexity improvements associated with jetty design. The Corps proposed to purchase wetland mitigation bank credits and to implement a combination of sea grass establishment and habitat complexity improvements commensurate with impacts.

## **2.9 ADDITIONAL CONSERVATION MEASURES**

In addition to standard environmental protection measures to be included in the contract specifications, the following measures will be employed during the marbled murrelet nesting season (April 1 – September 15) to reduce impacts from noise to nesting marbled murrelets:

1. Trucks will only be allowed to use the roads through Cape Disappointment State Park during daylight hours.
2. Trucks will not unnecessarily stop along the roads through Cape Disappointment State Park.
3. Trucks will be prohibited from using compression brakes (also known as Jake brakes) on the roads through Cape Disappointment State Park.

Sea lions and seals are not as common on Jetty A relative to the South Jetty; Jetty A is not an identified haul out for pinnipeds. However, if seals or sea lions are observed on the structure during construction, conservation measures will be implemented to minimize disturbance. During land-based rock placement, contractor vehicles and personnel will avoid as much as possible direct approach towards pinnipeds. If it is absolutely necessary for the contractor to make movements towards pinnipeds, the contractor shall approach in a slow and steady manner to reduce the behavioral harassment to the animals as much as possible. Monitoring and reporting will occur as required.

Offloading facilities will be installed via vibratory hammer and will use steel or untreated wood piles. The Corps will implement a soft-start procedure for pile installation. The objective of a soft-start is to provide a warning and/or give animals in close proximity to pile driving a chance to leave the area prior to a vibratory driver operating at full capacity thereby, exposing fewer animals to loud underwater and airborne sounds. A soft start procedure will be used at the beginning of each day when in-water pile driving or any time pile driving has ceased for more than 30 minutes. For vibratory pile driving, the contractor will initiate noise from vibratory hammers for 15 seconds at reduced energy followed by a 30-second waiting period. The procedure shall be repeated two additional times.

The Corps also will require the contractor to take precautions to avoid and minimize spread of aquatic invasives. This includes appropriate inspection and cleaning of all construction equipment and supplies intended for use in waters that has been exposed to other lake or stream water.

### **3.0 WATER QUALITY MONITORING PLAN**

Visual monitoring is proposed for this project. Instrumented turbidity monitoring at the site during winter and summer months is considered dangerous and will not be completed. Turbidity will be visually monitored from the top of the jetty every 4 hours during construction when placed materials may be transported to the Columbia River and estuary from the construction site. In the event that an exceedance of water quality standards is indicated by visual monitoring, contingency response actions and agency notifications will be triggered. The contingency response and notification plan is provided in Section 4. Additional 401 Water Quality Certification conditions and protocols may be identified.

Visual monitoring of construction activities will be conducted daily for turbidity plumes, floating debris, trash, oil sheen, etc.



### **3.1 INSTRUMENTED MONITORING**

Instrumented turbidity monitoring will not be performed at this site due to safety concerns.

### **3.2 VISUAL MONITORING**

Turbidity will be visually monitored every 4 hours during construction, with photographic documentation of each monitoring event. The mixing zone for turbidity along estuary waters is 150 feet. Turbidity will visually be sampled at the Background Station and the Compliance Station. The Background Station will be positioned approximately 500 feet up-current of the Project Site and beyond the influence of construction activities. The Compliance Station for turbidity will be 150 feet down-current from the construction activity, although tidal reversals are possible during flood tide conditions, which could shift the Compliance and Background Station locations. Monitoring at the Compliance and the Background stations will be completed on the same schedule in order to compare the Compliance Station with the Background Station during each monitoring interval.

Visual monitoring of the Columbia River will be performed from the top of the jetty. To perform visual monitoring, the observer will look for either a plume or a visible difference in turbidity between the background site and the compliance site. Visual and photographic monitoring will be documented on the data sheet provided in Appendix A. Additional 401 Water Quality Certification conditions and protocols may be identified.

Visual monitoring will be performed during any work below the OHWM, including but not limited to the following construction activities:

- Rock placement or rework
- Haul road and turn-out construction
- Pile installation and removal
- Dredging

#### **3.2.1 Monitoring Parameters**

The following parameters will be assessed during visual monitoring:

- Turbidity
- Sheen
- Distressed or dying fish
- Construction debris in the water
- Operation and effectiveness of BMPs

Visual monitoring will include photographic documentation of all monitoring events. Photos will be taken from the top of the jetty and/or the barge. All photos, along with

date, time, tide, weather, and observations, will be documented on the data sheet included in Appendix A.

### **3.2.2 Monitoring Schedule**

The frequency of visual monitoring will be as follows:

- Every 4 hours during construction operations on the jetty or below OHWM by the Project Engineer or their designee.
- Prompt confirmation by the Project Engineer, or their designee, that appropriate steps have been taken to correct the exceedance or poor conditions noticed in visual monitoring.

### **3.2.3 Monitoring Locations**

The Background Station will be positioned approximately 500 feet up-current of the project site and beyond the influence of construction activities. The Background Station will be located along a part of the jetty with comparable water depth and other physical characteristics (e.g., slope and substrate) to the extent possible. This station will be monitored during every event because the turbidity criterion is based on an acceptably small increase above ambient background levels in the river.

Photographic documentation of turbidity monitoring will be completed from the top of the jetty. Photos will be documented on the Exceedance Photo Documentation data sheet included in Appendix A.

To identify the Compliance Site from the viewpoint, the 150-foot radius will be marked along the jetty both up- and down-current of construction activity. The Background Station will also be marked.

The Compliance and Background monitoring stations will be used for all Jetty A Rehabilitation activities.

Visual monitoring will also be performed at the following locations during rock placement, access road and turn-out construction, dredging, and pile installation/removal:

- For BMP performance, at the location of all active operations.
- For visible sheen, just down-current of the construction in the Columbia River and the Pacific Ocean Nearshore.
- For construction-related floating debris
- For distressed or dying fish

### **3.3 RECORD KEEPING AND REPORTING**

The Project Engineer or Construction Manager will keep a written record of monitoring activities and inspections during visual monitoring. These records will be maintained in project files and provided to Ecology in accordance with specified reporting requirements

#### **3.3.1 Monitoring Reports**

Results of water quality monitoring will be documented and submitted (e-mailed) to Ecology weekly during construction. A written summary of visual observations and photographic documentation will also be provided. The water quality monitoring reports will include the following information:

- Date and time of sample
- Sample location
- Sample results
- Name of person collecting the sample
- Weather conditions
- Photo ID number

A water quality monitoring form is included in Appendix A.

## **4.0 CONTINGENCY RESPONSE AND NOTIFICATION PLAN**

### **4.1 CONTINGENCY MEASURES**

In the event of an exceedance of water quality standards outside of allowable exceedance windows per the State Water Quality Certification, as observed during visual monitoring, personnel will immediately assess the source of the impact or exceedance. Once the source has been identified, personnel will implement operational modifications or other control measures to prevent further occurrences and limit additional environmental impact. Monitoring will continue to confirm the control measures are effective and the observed water quality exceedances have been mitigated. The Corps and contractor will conduct required reporting.

#### **4.1.1 Work Below Ordinary High Water Mark**

In the event a significant turbidity plume resulting from project activities is observed during visual monitoring of construction activities below the OHWM, construction operations and BMPs will be thoroughly inspected to identify the source of the turbidity exceedance, and appropriate operational controls, engineering controls, or enhanced

BMPs will be promptly implemented to reduce turbidity to acceptable levels. A turbidity plume is considered significant when it extends the entire length of the mixing zone and remains visible 150 feet from the construction activity or point of discharge.

Based on the shape and extent of the turbidity plume, it should be evident that the plume is sourced from a site construction activity rather than a background condition. If a visible turbidity plume is evident at the compliance boundary, follow-up monitoring will be initiated to better assess compliance with water quality standards and to track the effectiveness of any supplemental controls or BMPs that may be implemented.

Turbidity exceedances will be photographed and documented on the data sheet included in Appendix A. The Corps and contractor will conduct required reporting.

#### **4.1.2 Construction Debris in Water**

If construction debris is observed in water, the Contractor will promptly recover the debris and dispose of it properly.

#### **4.1.3 Distressed or Dying Fish**

In the event distressed or dying fish are observed at the construction site and are attributed to site activities, work will immediately stop and the Washington Military Department's EMD, the Washington Department of Fish and Wildlife (WDFW), NMFS, and Ecology will be contacted at the numbers listed below:

- Washington Military Department's EMD, (800) 258-5990
- Chris Conklin, WDFW, (360) 249-1228
- NMFS Office of Law Enforcement, (503) 231-6240 or (206) 526-6133
- Ecology, Southwest Regional Office, (360) 407-6926

The condition of the fish (dead, dying, or erratic behavior); an estimate of the number, species, and size of fish in each condition; and the location of fish relative to construction operations will be noted. If any dead Endangered Species Act-listed species are present, samples will be frozen in secure storage under chain-of-custody for possible agency inspection. Additional fish and water sampling may be conducted at the direction of the resource agencies.

#### **4.1.4 Discharge of Oil, Fuel, or Chemicals**

In the event of a discharge of oil, fuel, or chemicals, work will stop and containment and cleanup efforts will be completed as soon as possible. Work may resume only after the source of the spill or leak has been identified and controlled, as long as the work does not interfere with, delay, or hinder the containment and cleanup efforts. Cleanup

includes appropriate disposal of any spilled material and cleanup material. The following agencies will be immediately notified:

- Ecology's Spill Response Office, (360) 407-6300
- Washington Military Department's EMD, (800) 258-5990
- National Response Center, (800) 424-8802
- Oregon Emergency Response Service (OERS), (800) 452-0311

## **4.2 NOTIFICATION**

In the case of any in-water work that is out of compliance with the discharges approved under the Section 401 Water Quality Certification and the NPDES CGP construction stormwater permit for this project, the attendant project personnel will immediately notify the Project Engineer or their designee, who will notify Lori Kingsbury, Federal Permit Manager, Ecology Southwest Regional Office at (360) 407-6926, or by e-mail at loch461@ecy.wa.gov. Notification to Ecology must be made within 24 hours of the occurrence. A detailed written report will be submitted to Ecology within 5 days after the notification. The report will include the following information:

- Nature, extent, and duration of the water quality exceedance, including detailed visual observations and, if appropriate, field parameter measurements
- Identification of the likely cause of the exceedance
- Description of control measures or BMPs implemented to mitigate the exceedance
- Notifications to agency, including timing and names of agency personnel contacted
- Documentation that control measures were effective at mitigating the water quality exceedance and stabilizing environmental conditions in the construction area

EPA and USACE will also be notified at the following addresses.

USEPA – Region 10  
NPDES Compliance Unit – Attn: Federal Facilities Compliance Officer  
1200 6th Ave, Suite 900  
OCE-133  
Seattle, WA 98101  
(206) 553-1846

U.S. Army Corps of Engineers  
Attn: Eric Bluhm  
PO Box 2946  
333 SW First Ave  
Portland, OR 97204  
(503) 808-4759

## 5.0 REFERENCES

- AECOM. 2015a. Mouth of the Columbia River Jetty A Major Rehabilitation. Jetty A Mitigation Options for Non-Wetland Water Impacts. January 28.
- AECOM. 2015b. Mouth of the Columbia River Jetty A Major Rehabilitation. Jetty A Wetland Mitigation Options. January 27.
- Ecology (Washington Department of Ecology). 2012. Stormwater Management Manual for Western Washington, Volume II: Construction Stormwater Pollution Prevention. Washington State Department of Ecology Water Quality Program. August 2012.
- Moffat & Nichol. 2014. Jetty A Construction Access Alternatives – Task 7 Report. December 10.
- USACE (U.S. Army Corps of Engineers). 2015. Mouth of the Columbia River—Jetty A Wetland Delineation Memorandum. U.S. Army Corps of Engineers, Portland District. February 2015.
- USACE. 2012a. Revised Final Environmental Assessment: Rehabilitation of the Jetty System at the Mouth of the Columbia River. U.S. Army Corps of Engineers, Portland District. May 2012.
- USACE. 2012b. Revised Clean Water Act Section 404(b)(1) Evaluation For Major Rehabilitation of the Jetty System at the Mouth of the Columbia River in Pacific County, Washington and Clatsop County, Oregon. June.

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# **Appendix A**

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## *Water Quality Monitoring Form*



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# Turbidity Monitoring Form

For use on Corps projects requiring 401 WQC turbidity monitoring

<b>Project, Permit &amp; Contact Information</b>	
Project Name:	<b>MCR Jetty A Rehabilitation Project</b>
Address/Location:	<b>Top of Jetty</b>
City:	<b>Ilwaco, WA</b>
County:	<b>Pacific</b>
Contract #:	
401 Cert #:	
Instream Work Start:	
Instream Work End:	
Extension Date:	
Phone #:	
Cell #:	
Fax #:	
Corps Project Manager:	<b>Eric Bluhm</b>
Corps PME Contact:	<b>Barbara Cisneros</b>
Corps COR:	<b>Jeff Edwards</b>
Corps Inspector:	<b>Ed Saldana</b>
Contractor Supervisor:	<b>503-784-5921</b>
Contractor Inspector:	
WA DOE -Contact/Phone:	<b>Lori Kingsbury (360) 407-6167</b>
EPA-Contact/Phone:	<b>Margaret McCoughly (206) 553-1772</b>

Monitoring Individual's Name	DATE	Work Start/End TIME	TIME of Observation	TIDAL STAGE and Direction (ebb or flood)	Weather	Photo ID(s)	Back-ground 500 ft up-current (Plume observed: yes or no)	Within 150 ft of Discharge Location (Plume observed: yes or no)	Compliance Point 150 ft down-current (Plume observed: yes or no)	Difference in plumes (color/ clarity/ sheen/ etc.)	COMMENTS -- if turbidity was visible or exceeded background levels at interim checks, how was work modified to reduce turbidity? Which Best Management Practices (BMPs) were implemented pre and post reading? No plume observed, continue to monitor every 4 hours

**Turbidity Monitoring Instructions:**

- At the start of work and every 4 hours thereafter, visually assess and photograph the background levels approximately 500 ft up current of the work site, in undisturbed water. This is the representative background point.
- Then visually assess and photograph the compliance measurement approximately 150 ft down current of work site in a representative location.
- When monitoring visually, turbidity that is visible over background is considered an exceedance of the standard.
- If an exceedance over the background level occurs within 150 feet of work site, modify the activity and/or BMPs and continue to monitor every four hours.
- If an exceedance over the background level continues within 150 feet of work site at the second monitoring interval, the activity must stop until the turbidity levels return to background. If, however, turbidity levels return to background at second monitoring level due to implementation of BMPs or natural attenuation, work may continue with appropriate monitoring as above.
- During visual monitoring, stop work after 8 hours with an observed plume within 150 feet or an observed plume greater than 150 feet of the work site.

Visual Monitoring		
No Plume Observed	Continue to monitor every 4 hours	Continue to monitor every 4 hours
Plume observed within compliance distance	Modify BMPs and continue to monitor every 4 hours	Stop work after 8 hours with an observed plume within compliance distance
Plume observed beyond compliance distance	Stop Work	Stop Work



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

June 29, 2015

U.S. Army Corps of Engineers  
Portland District Civil Works  
ATTN: Ms. Joyce E. Casey  
PO Box 2946  
Portland, OR 97208-2946

RE: Water Quality Certification Order No. **11477** for Corps Project No. **CENWP-PM-E-10-03; P2#403198**; Mouth of the Columbia River (MCR) Jetty A Rehabilitation Project, in the vicinity of Cape Disappointment State Park, Ilwaco, Pacific County, Washington

Dear Ms. Casey:

On April 27, 2015, the U.S. Army Corps of Engineers, Portland District Civil Works submitted a Joint Aquatic Resource Permit Application (JARPA) to the Department of Ecology (Ecology) for a Section 401 Water Quality Certification (401 Certification) under the federal Clean Water Act for the MCR – Jetty A Rehabilitation Project, Pacific County, Washington.

The proposed rehabilitation activities include: the addition of rock to fortify the jetty trunk and head, construction access improvements, the creation of construction staging/laydown areas, dredging and construction of a temporary barge-offloading facility adjacent to the jetty.

On behalf of the State of Washington, Ecology certifies that the work described in the JARPA and the public notice complies with applicable provisions of Sections 301, 302, 303, 306, and 307 of the Clean Water Act, as amended and applicable state laws. This certification is subject to the conditions contained in the enclosed Order.

If you have any questions, please contact Lori Kingsbury at (360) 407-6926. The enclosed Order may be appealed by following the procedures described in the Order.

Sincerely,

Perry J Lund, Unit Manager  
Shorelands and Environmental Assistance Program  
Southwest Regional Office

Enclosure

By Certified Mail 7012 2920 0000 1182 1420



e-cc: Barbara Cisneros, Corps of Engineers, Portland District  
Rick Schwartz, WA DNR  
Christopher Conklin, WDFW  
Faith Taylor-Eldred, Pacific County  
Tim Crose, Pacific County  
ECY RE FEDPERMITS  
Loree' Randall, Ecology, HQ SEA  
Deb Cornett, Ecology, SWRO WQ  
Lori Kingsbury, Ecology, SWRO SEA  
Rick Mraz, Ecology, SWRO SEA

**IN THE MATTER OF GRANTING A ) ORDER No. 11477**  
**WATER QUALITY ) Corps Project No. CENWP-PM-E-10-03;**  
**CERTIFICATION TO ) P2#403198,**  
**U.S. Army Corps of Engineers ) Mouth of the Columbia River (MCR) Jetty A**  
**Portland District Civil Works ) Rehabilitation Project within the U.S. Coast**  
in accordance with 33 U.S.C. 1341 ) Guard Reservation, in the vicinity of Cape  
(FWPCA § 401), RCW 90.48.120, RCW ) Disappointment State Park, Ilwaco, Pacific  
90.48.260 and Chapter 173-201A WAC ) County, Washington

TO: U.S. Army Corps of Engineers  
Portland District Public Works  
ATTN: Joyce Casey  
PO Box 2946  
Portland, OR 97208-2946

On April 27, 2015, the U.S. Army Corps of Engineers, Portland District Public Works (Corps) submitted a Joint Aquatic Resources Permit Application (JARPA) to the Department of Ecology (Ecology) requesting a Section 401 Water Quality Certification for the Mouth of the Columbia River (MCR) Jetty A Rehabilitation Project. A public notice regarding the request was distributed by Ecology for the above-referenced project pursuant to the provisions of Chapter 173-225 WAC on May 21, 2015.

The proposed project consists of the following primary components:

- Construct an access pathway with up to three vehicle turnouts along the side of jetty;
- Create construction staging/laydown areas;
- Potential removal and replacement of US Coast Guard navigational tower structure;
- Place armor stone fill at jetty trunk and head;
- Initial dredging of up to 60,000 cubic yards of material for the Material Offloading Facility (MOF) basin; and,
- Maintenance dredging of the MOF Basin within One (1) year after construction.

The project will result in the placement of 0.51 acre of permanent fill in Category III wetlands; 0.04 acre of temporary fill in Category I wetlands; and impact approximately 1.9 acres of buffer to create construction access, material delivery, staging, and construction lay-down areas.

All temporary impacts will be restored to pre-construction condition. To offset the permanent impacts to Category III wetlands and buffers, the Applicant will purchase 0.89 credits from the Long Beach Wetland Mitigation Bank.

Approximately 15,000 cubic yards of driftwood, which has accumulated along the trunk of the jetty will be either incorporated into elements of site restoration or mitigation designs, or partially removed as part of the project.

This project is located at the mouth of the Columbia River near the Ilwaco Channel, within the U.S. Coast Guard reservation and in the vicinity of Cape Disappointment State Park, Ilwaco,

Pacific County, Washington; Sections 9 and 16, Township 9 North, Range 11 West; WRIA 24, Willapa Watershed.

**AUTHORITIES:**

In exercising authority under 33 U.S.C. § 1341, RCW 90.48.120, and RCW 90.48.260, Ecology has examined this application pursuant to the following:

1. Conformance with applicable water quality-based, technology-based, and toxic or pretreatment effluent limitations as provided under 33 U.S.C. §1311, 1312, 1313, 1316, and 1317 (FWPCA § 301, 302, 303, 306 and 307);
2. Conformance with the state water quality standards contained in Chapter 173-201A WAC and authorized by 33 U.S.C. §1313 and by Chapter 90.48 RCW, and with other applicable state laws; and,
3. Conformance with the provision of using all known, available and reasonable methods to prevent and control pollution of state waters as required by RCW 90.48.010.

**WATER QUALITY CERTIFICATION CONDITIONS:**

Through issuance of this Order, Ecology certifies that it has reasonable assurance that the activity as proposed and conditioned will be conducted in a manner that will meet the applicable water quality standards and other appropriate requirements of state law. In view of the foregoing and in accordance with 33 U.S.C. § 1341, RCW 90.48.120, RCW 90.48.260, Chapter 173-200 WAC and Chapter 173-201A WAC, water quality certification is granted to the Applicant subject to the conditions within this Order.

Certification of this proposal does not authorize the Applicant to exceed applicable state water quality standards (Chapter 173-201A WAC), ground water standards (Chapter 173-200 WAC) or sediment quality standards (Chapter 173-204 WAC). Furthermore, nothing in this certification shall absolve the Applicant from liability for contamination and any subsequent cleanup of surface waters, ground waters or sediments occurring as a result of project construction or operations.

**A. General Conditions:**

1. For purposes of this Order, the term "Applicant" shall mean the U.S. Army Corps of Engineers, Portland District Civil Works and its agents, assignees and contractors.
2. For the purposes of this Order, all submittals required by its conditions shall be sent either by regular mail to Ecology's Southwest Regional Office, Attn: Federal Permit Manager, P.O. Box 47775, Olympia, WA 98504-7775 or via e-mail (preferred) to loch461@ecy.wa.gov.

3. All submittals and notifications shall be identified with Order No. 11477, Corps Project No. CENWP-PM-E-10-03; P2#403198 and include the Applicant's name, project name, and project location.
4. Work authorized by this Order is limited to the work described in the Joint Aquatic Resource Permit Application (JARPA) submittal package received by Ecology on April 27, 2015. The Applicant will be out of compliance with this Order and must submit an updated JARPA if the information contained in the JARPA referenced above is voided by subsequent changes to the project not authorized by this Order.
5. Within 30 days of receipt of an updated JARPA, Ecology will determine if the revised project requires a new water quality certification and public notice or if a modification to this Order is required.
6. Copies of this Order shall be kept on the job site and readily available for reference by Ecology personnel, the construction superintendent, construction managers and lead workers, and state and local government inspectors.
7. The Applicant shall provide access to the project site upon request by Ecology personnel for site inspections, monitoring, necessary data collection, and/or to ensure that conditions of this Order are being met.
8. Nothing in this Order waives Ecology's authority to issue additional orders if Ecology determines that further actions are necessary to implement the water quality laws of the state. Furthermore, Ecology retains continuing jurisdiction to make modifications hereto through supplemental order, if additional impacts due to project construction or operation are identified or if additional conditions are necessary to further protect water quality.
9. The Applicant shall ensure that all appropriate project engineers and contractors at the project site have read and understand relevant conditions of this Order and all permits, approvals, and documents referenced in this Order. The Applicant shall provide Ecology a signed statement (see Attachment A for an example) from each project engineer and contractor that they have read and understand the conditions of this Order and the above-referenced permits, plans, documents and approvals. These statements shall be provided to Ecology before construction begins at the project.
10. This Order does not authorize direct, indirect, permanent, or temporary impacts to waters of the state (including wetlands) or related aquatic resources, except as specifically provided for in conditions of this Order.
11. Failure of any person or entity to comply with this Order may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce its terms.

**B. Water Quality Conditions:**

1. This Order does not authorize temporary exceedances of water quality standards beyond the limits established in WAC 173-201A-210(1)(e)(i).

- a. The area of mixing established for marine waters is a 150-foot radius surrounding the in-water activity. Turbidity occurring outside that zone that is more than 5 nephelometric turbidity units (NTU) over background when the background is 50 NTU or less, or a 10% increase in turbidity when the background turbidity is more than 50 NTU is a violation of the turbidity water quality standard.
  - b. A visible turbidity plume anywhere at or beyond the 150-foot point of compliance from the activity shall be considered to be an exceedance of the standard.
2. Water Quality Monitoring: The Applicant shall conduct water quality monitoring as described in the U.S. Army Corps of Engineers, Portland District, *Water Quality Protection and Monitoring Plan for Section 401 Individual Water Quality Certification, Mouth of the Columbia River, Jetty A Rehabilitation (WQPMP)* dated April, 2015.
3. Ecology must approve, in writing, and changes or additions to the WQPMP.
4. Reporting: Results of the water quality monitoring shall be documented in a Monitoring Report and submitted to the Ecology Federal Permit Manager, weekly during the period of in-water work activities, per Condition A.2 of this Order.
5. Water Quality Exceedances: If water quality exceedances are observed outside the point of compliance, work shall cease immediately and the Applicant or the contractor shall assess the cause of the water quality problem and take immediate action to stop, contain, correct the problem and prevent further water quality turbidity exceedances. If an exceedance occurs, the Applicant shall follow the procedures below.
6. Notification of Exceedances: Notification of exceedances shall be made to Ecology **within 24 hours of occurrence**. Notification shall be made with reference to Order No. 11477, Attn: Federal Permit Manager, by telephone at (360) 407-6926 or by e-mail at loch461@ecy.wa.gov. The Applicant shall, at a minimum, provide Ecology with the following information:
  - a. A description of the nature, extent, and cause of the exceedance.
  - b. The period of non-compliance, including exact dates, duration, and times and/or the anticipated time when the project will return to compliance.
  - c. The steps taken, or to be taken, to reduce, eliminate, and prevent recurrence of the non-compliance.
  - d. In addition, within five (5) days after notification of an exceedance, the Applicant shall submit a written report to Ecology that describes the nature of the exceedance, water quality monitoring results and location, photographs, and any other pertinent information.
7. Mitigation and/or additional monitoring may be required if the monitoring results indicate that the water quality standards have not been met.



**C. Timing Requirements:**

1. This Order shall remain in effect for a period of five (5) years from date of issuance.

**D. Notification Requirements:**

1. Written notification (e-mail is preferred) shall be made to Ecology's Southwest Regional Office Federal Permit Manager in accordance with Condition A.2, for the following activities:
  - a. Prior to the onset of in-water work for **each construction season**.
  - b. Within ten (10) days **after completion of construction for each project season**.
  - c. **Immediately** following a violation of the state water quality standards or any condition of this Order.
2. If project construction is not completed within 13 months of issuance of this Order, the Applicant shall submit a written construction status report. Status reports shall be submitted every 12 months thereafter until project construction is complete.

**NOTE:** These notifications shall include the Applicant's name, the Project name, Order No. 11477, Corps Project No. CENWP-PM-E-10-03; P2#403198, the project location, contact name, and contact's phone number.

**E. General Construction Conditions:**

1. The Applicant shall submit a copy of the Stormwater Pollution Prevention Plan (SWPPP) to Ecology's Southwest Regional Office Federal Permit Manager, per Condition A.2. of this Order, prior to the start of construction.
2. All work in and near waters of the state shall be done so as to minimize turbidity, erosion, and other water quality impacts.
3. Construction stormwater, sediment, and erosion control Best Management Practices (BMP's) outlined in the SWPPP shall be in place at before starting clearing, filling, and grading work and shall be maintained throughout construction.
4. Within the project limits, all environmentally sensitive areas that are to be protected from disturbance shall be fenced with high visibility construction fence (HVF) prior to commencing construction activities. All project staff shall be trained to recognize construction fencing or flagging that identifies sensitive area boundaries.
5. All clearing limits, travel corridors, stockpile locations, and staging areas shall be clearly marked prior to commencing construction activities and maintained until all work is completed for this project.
6. Staging areas located within 50 feet of waters of the state, shall provide additional spill containment for any equipment used at that location and have absorbent pads and booms immediately available.

7. Appropriate BMPs shall be implemented to minimize track-out during construction.
8. Machinery and equipment used during construction shall be serviced, fueled, and maintained on uplands a minimum of 100 feet from waters of the state including wetlands, unless otherwise approved by Ecology, in order to prevent contamination to any surface water.
9. No petroleum products, fresh concrete, lime, chemicals, or other toxic or deleterious materials shall be allowed to enter waters of the state.
10. Wash water containing oils, grease, or other hazardous materials resulting from wash down of equipment or working area shall not be discharged into state waters. The Applicant shall establish a separate, contained area for washing down vehicles and equipment that does not have any possibility of draining to surface waters and/or wetlands.
11. All construction debris, excess sediment, and other solid waste material shall not be stockpiled below the Ordinary High Water Mark (OHWM) and shall be properly managed and disposed of in an upland disposal site approved by the appropriate regulatory authority.
12. Clean Fill Criteria: The Applicant shall ensure that fill placed for the proposed project does not contain toxic materials in toxic amounts.
13. Rock for the jetty should be composed of clean, angular material of a sufficient durability and size to prevent it from being broken up or washed away by high water or wave action.
14. All equipment that will operate over or within waters of the state shall utilize bio-degradable hydraulic fluid and shall be free of external petroleum-based products. Accumulation of soils or debris shall be removed from the drive mechanisms and the undercarriage of equipment prior to use. Equipment shall be inspected daily for leaks, accumulation of grease, etc. Any identified problems shall be fixed before operating over or within waters of the state.
15. Barge(s) shall not be anchored over vegetated shallows and shall not be allowed to ground out.
16. Barge(s) and tugs shall be operated in deep water so as to minimize the near-shore propeller wash impacts such as suspension of near-shore sediments.

*Concrete Work*

18. Spill protection measures shall be in place prior to any concrete delivery near waters of the state.
19. If cast in place, wet concrete/grout shall be prevented from entering waters of the state. All forms for any concrete/grout structure shall be completely sealed off to prevent the possibility of fresh concrete entering waters of the state. Impervious materials shall be placed over any exposed concrete/grout.

20. Concrete delivery systems shall be inspected daily to prevent any discharges to surface waters.
21. Concrete process water shall not enter waters of the state. Any concrete process/contact water discharged from a confined area with curing concrete shall be routed to upland areas to be treated and disposed of properly with no possible entry to waters of the state

*Pile Installation and Removal*

22. Three (3) berthing dolphins may be constructed as part of the material off-loading facility (MOF). Berthing dolphins may be constructed of steel or untreated wood piles. No treated wood piles may be placed.
23. A vibratory hammer shall be used to install and remove piles.
24. All piles used for construction of the MOF will be removed upon project completion.

**F. Dredging and Disposal Conditions:**

1. A *Dredging Plan* is required and shall be submitted to Ecology's Federal Permit Manager (Per Condition A .2 above) at least ten (10) days prior to any dredge activity at the project location.
2. All dredging is to be done using a clam shell or pipeline dredge. Use of any other type of dredge requires pre-approval from Ecology.
3. If a pipeline dredge will be used, the cutterheads will remain on the bottom to the greatest extent possible and only be raised three (3) feet off the bottom when necessary for dredge operations.
4. Dredging operations shall be conducted in a manner that minimizes the disturbance or siltation of adjacent waters and prevents the accidental discharge of petroleum products, chemicals, or other toxic or deleterious substances into waters of the State.
5. To minimize turbidity, hopper dredges, scows, and barges used to transport dredged materials to the disposal or transfer sites must completely contain the dredged material.
6. The Dredge Operator shall pause the bucket at the surface, after its ascent through the water column, to minimize turbidity by allowing free water to drain from the bucket prior to swinging the bucket onto the barge.
7. During dredging, the Corps shall have a boat available on site at all times to retrieve any debris from the water.

*Disposal of Dredged Material:*

8. Dredged material shall not be stockpiled on a temporary or permanent basis below the ordinary high water mark.
9. In order to maximize retention of sand in the littoral system for beneficial uses, dredged material shall be placed within existing, approved, in-water disposal sites (Shallow Water site and North Jetty site) or at other nearshore sites which are considered dispersive in

nature and have the ability to provide materials to the littoral system; unless the use of a site would result in an unacceptable risk to navigational safety.

10. Disposal of material in the Deepwater Site constitutes a wasting of the littoral sand resource. Therefore, the Corps shall only use the proposed Deepwater Site as a contingency site for disposal of dredged material where a determination has been made that the use of the other authorized sites would result in an unacceptable risk to navigational safety.
11. For material taken to open water disposal sites, all debris (larger than two feet in any dimension) shall be removed from the dredged sediment prior to disposal. Similar sized debris found floating in the dredging or disposal area shall also be removed.

**G. Compensatory Mitigation Conditions:**

1. The Applicant shall mitigate wetland impacts as described in the *Proposed Bank Use Plan, Mouth of the Columbia River, Jetty A Rehabilitation Project* (hereafter called the "mitigation plan") prepared by The U.S. Army Corps of Engineers, Portland District, dated March 2015 or as revised and approved by Ecology.
2. Prior to impacting wetlands, the Applicant shall submit to Ecology documentation from the bank sponsor verifying the purchase of 0.89 wetland mitigation bank credits (credits) for impacts to 0.51 acre of Category III palustrine emergent wetland and 1.9 acres of wetland buffer, from the Long Beach Wetland Mitigation Bank. This documentation must include the permit number, permit issuance date, impact acreage, the amount of credits required by the permit, and date of credit purchase.
3. The Applicant shall notify Ecology of any changes to the amount of wetland impacts, or revisions to the mitigation plan.
4. The Applicant shall complete the purchase of credits before the impacts to wetlands occur or Ecology may require additional compensation to account for temporal loss of wetland functions.
5. If the credits are not purchased within 13 months of the date of this Order, the Applicant shall inform Ecology, in writing, of the status of:
  - a) The MCR Jetty A Rehabilitation Project;
  - b) When bank credits will be purchasedWith the:
  - c) Reason for the delay
  - d) Expected date of completion.The Applicant shall submit an updated written notification every 12 months thereafter until MCR Jetty A Rehabilitation Project is complete and the required credits are purchased.

**H. Emergency/Contingency Measures:**

1. The Applicant shall develop a Spill Prevention and Containment Plan for all aspects of this project, and shall have spill cleanup materials and an emergency call list available on site.
2. Any work that is out of compliance with the provisions of this Order, or conditions causing distressed or dying fish, or any discharge of oil, fuel, or chemicals into state waters, or onto land with a potential for entry into state waters, is prohibited. If these situations occur, the Applicant or operator shall immediately take the following actions:
  - a. Cease operations that are causing the compliance problem.
  - b. Assess the cause of the water quality problem and take appropriate measures to correct the problem and/or prevent further environmental damage.
  - c. In the event of finding distressed or dying fish, the applicant shall collect fish specimens and water samples in the affected area within the first hour of the event. These samples shall be held in refrigeration or on ice until the applicant is instructed by Ecology on what to do with them. Ecology may require analyses of these samples before allowing the work to resume.
  - d. In the event of a discharge of oil, fuel, or chemicals into state waters, or onto land with a potential for entry into state waters, containment and cleanup efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Cleanup shall include proper disposal of any spilled material and used cleanup materials.
  - e. Immediately notify Ecology's 24-Hour Spill Response Team at 1-800-258-5990, and within 24 hours of spills or other events Ecology's Federal Permit Manager at (360) 407-6926 or (360) 407-6300.
  - f. Submit a detailed written report to Ecology's Federal Permit Manager within five (5) days (per condition A.2. above) that describes the nature of the event, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of any samples taken, and any other pertinent information.
3. Fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc., shall be checked regularly for drips or leaks, and shall be maintained and stored properly to prevent spills into state waters, including wetlands.
4. If at any time during work the proponent finds buried chemical containers, such as drums, or any unusual conditions indicating disposal of chemicals, the proponent shall immediately notify Ecology using the above phone numbers.

**YOUR RIGHT TO APPEAL**

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

**ADDRESS AND LOCATION INFORMATION**

Street Addresses	Mailing Addresses
<p><b>Department of Ecology</b> Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503</p>	<p><b>Department of Ecology</b> Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608</p>
<p><b>Pollution Control Hearings Board</b> 1111 Israel RD SW STE 301 Tumwater, WA 98501</p>	<p><b>Pollution Control Hearings Board</b> PO Box 40903 Olympia, WA 98504-0903</p>

**CONTACT INFORMATION**

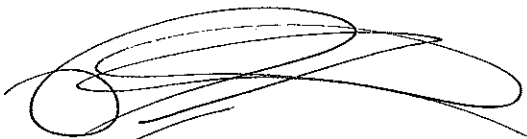
Please direct all questions about this Order to:

Lori Kingsbury, Federal Permit Manager  
Department of Ecology  
Southwest Regional Office  
P.O. Box 47775  
Olympia, WA 98504-7775  
loch461@ecy.wa.gov

**MORE INFORMATION**

- **Pollution Control Hearings Board Website**  
[www.eho.wa.gov/Boards\\_PCHB.aspx](http://www.eho.wa.gov/Boards_PCHB.aspx)
- **Chapter 43.21B RCW - Environmental and Land Use Hearings Office – Pollution Control Hearings Board**  
<http://apps.leg.wa.gov/RCW/default.aspx?cite=43.21B>
- **Chapter 371-08 WAC – Practice And Procedure**  
<http://apps.leg.wa.gov/WAC/default.aspx?cite=371-08>
- **Chapter 34.05 RCW – Administrative Procedure Act**  
<http://apps.leg.wa.gov/RCW/default.aspx?cite=34.05>
- **Chapter 90.48 RCW – Water Pollution Control**  
<http://apps.leg.wa.gov/RCW/default.aspx?cite=90.48>
- **Chapter 173.204 Washington Administrative Code (WAC) Sediment Management Standards**  
<http://www.ecy.wa.gov/biblio/wac173204.html>
- **Chapter 173-200 WAC Water Quality Standards for Ground Waters of the State of Washington**  
<http://www.ecy.wa.gov/biblio/wac173200.html>
- **Chapter 173-201A WAC Water Quality Standards for Surface Waters of the State of Washington**  
<http://www.ecy.wa.gov/biblio/wac173201A.html>

**SIGNATURE**



Perry J Lund, Unit Manager  
Shorelands and Environmental Assistance Program  
Southwest Regional Office

JUNE 29 2015

Date





**Attachment A**  
**Statement of Understanding**  
**Water Quality Certification Conditions**

MCR – Jetty A Rehabilitation  
U.S. Army Corps of Engineers, Portland District Civil Works  
Water Quality Certification Order No. 11477  
and  
Corps Project No. CENWP-PM-E-10-03; P2#403198

I, \_\_\_\_\_, state that I will be involved as an agent or contractor for the U.S. Army Corps of Engineers, Portland District Civil Works, in the site preparation and/or construction of the MCR –Jetty A Rehabilitation Project, located at the mouth of the Columbia River within the U.S. Coast Guard Reservation, in the vicinity of the Cape Disappointment State Park, Ilwaco, Pacific County, Washington. I further state that I have read and understand the relevant conditions of Washington Department of Ecology Water Quality Certification Order No. 11477 and the applicable permits and approvals referenced therein which pertain to the project-related work for which I am responsible.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

\_\_\_\_\_  
Phone

\_\_\_\_\_  
Company





STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

June 29, 2015

U.S. Army Corps of Engineers  
Portland District Civil Works  
ATTN: Ms. Joyce E. Casey  
PO Box 2946  
Portland OR 97208-2946

RE: Coastal Zone Consistency for Corps Project No. CENWP-PM-E-10-03;  
P2#403198, MCR – Jetty A Rehabilitation Project, within the U.S. Coast Guard  
Reservation, in the vicinity of Cape Disappointment State Park, Ilwaco, Pacific  
County, Washington

Dear Ms. Casey:

On April 27, 2015, the U.S. Army Corps of Engineers, Portland District Civil Works (Corps) submitted a Consistency Determination that the project referenced above is consistent with the Washington State Coastal Zone Management Program (CZMP). Pursuant to Section 307(c)(3) of the Coastal Zone Management Act of 1972 as amended, Ecology concurs with the Corps' determination that the proposed work is consistent with Washington's CZMP.

If you have any questions regarding Ecology's consistency determination please contact Lori Kingsbury at (360) 407-6926.

**YOUR RIGHT TO APPEAL**

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this Order:

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- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

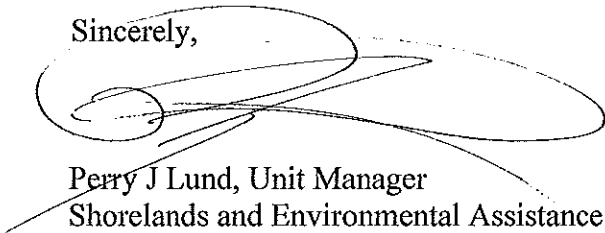


You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

**ADDRESS AND LOCATION INFORMATION**

<b>Street Addresses</b>	<b>Mailing Addresses</b>
<p><b>Department of Ecology</b> Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503</p> <p><b>Pollution Control Hearings Board</b> 1111 Israel RD SW STE 301 Tumwater, WA 98501</p>	<p><b>Department of Ecology</b> Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608</p> <p><b>Pollution Control Hearings Board</b> PO Box 40903 Olympia, WA 98504-0903</p>

Sincerely,



Perry J Lund, Unit Manager  
Shorelands and Environmental Assistance Program  
Southwest Regional Office

By Certified Mail 7012 2920 0000 1182 1437

e-cc: Barbara Cisneros, Corps of Engineers, Portland District  
Rick Schwartz, WA DNR  
Christopher Conklin, WDFW  
Faith Taylor-Eldridge, Pacific County  
Tim Crose, Pacific County  
[ecyrefedpermits@ecy.wa.gov](mailto:ecyrefedpermits@ecy.wa.gov)  
Loree' Randall, Ecology, HQ SEA  
Deb Cornett, Ecology, SWRO WQ  
Lori Kingsbury, Ecology, SWRO SEA  
Rick Mraz, Ecology, SWRO SEA

**Stormwater Pollution Prevention Plan (SWPPP)**

**For Construction Activities At:**

Mouth of Columbia River Jetty A  
Cape Disappointment Coast Guard Station, Pacific County, Washington  
Ilwaco, WA 98624

**SWPPP Prepared For:**

US Army Corps of Engineers, Portland District  
Col. Jose Aguilar, Commander  
333 SW First Ave  
Portland, OR 97204-3495  
503-808-4500

**SWPPP Prepared By:**

Michelle Rhodes  
333 SW First Ave  
Portland, OR 97204-3495  
503-808-4853  
Michelle.m.rhodes@usace.army.mil

**SWPPP Preparation Date:**

**5/26/2015**

**Estimated Project Dates:**

**Project Start Date: 10 /01/2015**  
**Project Completion Date: 09/30/2018**

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**Contents**

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**SECTION 1: CONTACT INFORMATION/RESPONSIBLE PARTIES ..... 5**

1.1 Operator(s) / Subcontractor(s) ..... 5

1.2 Stormwater Team ..... 5

**SECTION 2: SITE EVALUATION, ASSESSMENT, AND PLANNING ..... 6**

2.1 Project/Site Information ..... 6

2.2 Discharge Information ..... 6

2.3 Nature of the Construction Activity ..... 7

2.4 Sequence and Estimated Dates of Construction Activities ..... 9

2.5 Allowable Non-Stormwater Discharges ..... 9

2.6 Site Maps ..... 9

**SECTION 3: DOCUMENTATION OF COMPLIANCE WITH OTHER FEDERAL REQUIREMENTS ..... 10**

3.1 Endangered Species Protection ..... 10

3.2 Historic Preservation ..... 10

3.3 Safe Drinking Water Act Underground Injection Control Requirements ..... 10

**SECTION 4: EROSION AND SEDIMENT CONTROLS ..... 12**

4.1 Natural Buffers or Equivalent Sediment Controls ..... 12

4.2 Perimeter Controls ..... 13

4.3 Sediment Track-Out ..... 13

4.4 Stockpiled Sediment or Soil ..... 14

4.5 Minimize Dust ..... 14

4.6 Minimize the Disturbance of Steep Slopes ..... 15

4.7 Topsoil ..... 15

4.8 Soil Compaction ..... 15

4.9 Storm Drain Inlets ..... 16

4.10 Constructed Stormwater Conveyance Channels ..... 16

4.11 Sediment Basins ..... 16

4.12 Chemical Treatment ..... 16

4.13 Dewatering Practices ..... 16

4.14 Other Stormwater Controls ..... 16

4.15 Site Stabilization ..... 17

**SECTION 5: POLLUTION PREVENTION STANDARDS ..... 18**

5.1 Potential Sources of Pollution ..... 18

5.2 Spill Prevention and Response ..... 19

5.3 Fueling and Maintenance of Equipment or Vehicles ..... 19

5.4 Washing of Equipment and Vehicles ..... 19

5.5 Storage, Handling, and Disposal of Construction Products, Materials, and Wastes ..... 20

5.6 Washing of Applicators and Containers used for Paint, Concrete or Other Materials ..... 21

5.7 Fertilizers ..... 21

5.8 Other Pollution Prevention Practices ..... 22

**SECTION 6: INSPECTION AND CORRECTIVE ACTION ..... 23**

6.1 Inspection Personnel and Procedures ..... 23

6.2 Corrective Action ..... 23

**SECTION 7: TRAINING ..... 24**

**SECTION 8: CERTIFICATION AND NOTIFICATION ..... 25**

**SWPPP APPENDICES ..... 26**

**SECTION 1: CONTACT INFORMATION/RESPONSIBLE PARTIES**

**1.1 Operator(s) / Subcontractor(s)**

**Operator(s):**

US Army Corps of Engineers, Portland District  
Col. Jose Aguilar, Commander  
333 SW First Ave:  
Portland, OR 97204-3495:  
503-808-4500:

**Subcontractor(s):**

TBD

**Emergency 24-Hour Contact:**

TBD:

**1.2 Stormwater Team**

SWPPP Preparation  
Civil Engineer  
Michelle Rhodes  
503-808-4853  
Michelle.m.rhodes@usace.army.mil

Permit Filing  
Environmental Resource Specialist  
Barbara Cisneros  
503-808-4784  
Barbara.G.Cisneros@usace.army.mil

SWPPP Modifications  
Contractor  
TBD

**SECTION 2: SITE EVALUATION, ASSESSMENT, AND PLANNING**

**2.1 Project/Site Information**

**Project Name and Address**

Project/Site Name: Mouth of the Columbia River (MCR) Jetty A Rehabilitation

Project Street/Location: Cape Disappointment Coast Guard Station

City: Ilwaco                                      State: WA                                      Zip Code: 98264

County or Similar Subdivision: Pacific

**Project Latitude/Longitude**

Latitude: 46.2764 ° N (decimal)                                      Longitude: -124.0422° W (decimal)

Method for determining latitude/longitude:

- USGS topographic map (specify scale: \_\_\_\_\_)                                       EPA Web site                                       GPS  
 Other (please specify): Google Satellite Image

Horizontal Reference Datum:  NAD 27     NAD 83 or WGS 84     Unknown

**Additional Project Information**

Is the project/site located on Indian country lands, or located on a property of religious or cultural significance to an Indian tribe?  Yes     No

Are you applying for permit coverage as a “federal operator” as defined in Appendix A of the 2012 CGP?  
 Yes     No

**2.2 Discharge Information**

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)?  
 Yes     No

Are there any surface waters that are located within 50 feet of your construction disturbances?  
 Yes     No

**Table 1 - Names of Receiving Waters**

Name(s) of the first surface water that receives stormwater directly from your site and/or from the MS4 (note: multiple rows provided where your site has more than one point of discharge that flows to different surface waters)
<b>1. Columbia River</b>
2.
3.
4.
5.



**Table 2 – Impaired Waters / TMDLs** (Answer the following for each surface water listed in Table 1 above)

	Is this surface water listed as “impaired”?	If you answered yes, then answer the following:			
		What pollutant(s) are causing the impairment?	Has a TMDL been completed?	Title of the TMDL document	Pollutant(s) for which there is a TMDL
1.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	PCB, Dioxin, Temperature, Dissolved Oxygen	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Total Maximum Daily Loading (TMDL) to Limit Discharges of 2,3,7,8-TCDD (Dioxin) to the Columbia River Basin	Dioxin

Describe the method(s) you used to determine whether or not your project/site discharges to an impaired water: Status of receiving waters was verified on the EPA website. Information was also queried through the Washington State Department of Ecology 303(d) list.

**Table 3 – Tier 2, 2.5, or 3 Waters** (Answer the following for each surface water listed in Table 1 above)

	Is this surface water designated as a Tier 2, Tier 2.5, or Tier 3 water? (see Appendix F)	If you answered yes, specify which Tier (2, 2.5, or 3) the surface water is designated as?
1.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
2.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

### 2.3 Nature of the Construction Activity

#### General Description of Project

The MCR jetty system consists of three jetties (North Jetty, South Jetty and Jetty A) with a total length of about 10 miles constructed from 1885-1939 on massive tidal shoals to secure consistent navigation through the coastal inlet. Jetty A, positioned on the south side of the North Jetty, was constructed in 1939 to a length of 1.1 miles. Jetty A was constructed as a very large spur groin directed perpendicularly into the Columbia River to direct river and tidal currents away from the North Jetty foundation. While it is exposed to less energetic wave conditions than the other two jetties, it has suffered severe scour at its southern tip that contributes to its recession. In addition, wave modeling at the MCR entrance has identified an area of increased wave attack at the center part of the jetty length. Wave attack on Jetty A is limited to the ocean or western side of the structure. Similar to the other two jetties, Jetty A was constructed on top of a large underwater shoal, the continued erosion of which will undermine the structure, as is already evident on its southern end.

Collectively, all three jetties and the Sand Island pile dikes now function in concert to balance the large scale ocean processes affecting the entrance. Through the evolution of the inlet and its morphology, and as a result of the severe deterioration of the Sand Island pile dikes, Jetty A now also serves as a breakwater to protect Sand Island and the Ilwaco entrance into Baker Bay from large ocean waves. In addition, Jetty A is believed to play an important function for the Columbia River plume. The plume is an important food source for the 13 Columbia River salmonid evolutionarily significant units (ESUs) listed under the Endangered Species Act (ESA).

The jetty root, trunk and head are currently showing signs of deterioration. From 2006 to 2013 Jetty A has lost an average of approximately 10 feet length and 1,100 tons of stone per year.

Jetty A rehabilitation is anticipated to begin in October 2015 and conclude in September 2018. The project is to be implemented in two phases, corresponding with the construction contract's elements for staging area preparation, armor stone production and delivery, and placement of armor on Jetty A. Armor stone production (quarrying) and delivery to the Jetty A job site is expected to occur during 2015-2016 (to allow the jetty repair contractor sufficient time to produce and deliver approximately 82,000 tons of large armor stone). The construction contract will facilitate armor stone delivery by either land-based or marine-borne methods. Jetty repair by armor stone placement is anticipated to occur during 2016-2018.

**Size of Construction Project**

What is the size of the property (in acres), the total area expected to be disturbed by the construction activities (in acres), and the maximum area expected to be disturbed at any one time?

INSERT SIZE OF PROPERTY (in acres) 928

INSERT TOTAL AREA OF CONSTRUCTION DISTURBANCES (in acres) Approximately 8 acres for construction staging and rock storage; for a total of approximately 20 acres including the jetty and causeway work.

INSERT MAXIMUM AREA TO BE DISTURBED AT ANY ONE TIME (in acres) Approximately 8 acres for construction staging and rock storage; for a total of approximately 20 acres including the jetty and causeway work.

[Repeat as necessary for individual project phases.]

**Construction Support Activities**

Contact information is the same for all support activities and will be the same as the contact information for the project site, unless otherwise updated by the contractor.

Activity	Location
Staging and storage area	-124.0430 N, 46.2769 W
Jetty Repairs	-124.0384 N, 46.2659 W

**2.4 Sequence and Estimated Dates of Construction Activities**

Phase	Disturbed Area	Disturbance Dates	Stormwater control installation dates	Stabilization dates	Stormwater control removal dates
Jetty Armor Stone Storage	28 acres (8 ground disturbance, 20 jetty work)	*	*	*	*
Jetty Armor Stone Placement	28 acres (8 ground disturbance, 20 jetty work)	*	*	*	*

\*Specific dates will be updated by the contractor. All storm water controls will be installed prior to commencement of each phase and not removed until after stabilization has occurred.

**2.5 Allowable Non-Stormwater Discharges**

**List of Allowable Non-Stormwater Discharges Present at the Site**

Type of Allowable Non-Stormwater Discharge	Likely to be Present at Your Site?
Discharges from emergency fire-fighting activities	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Fire hydrant flushings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Landscape irrigation	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Waters used to wash vehicles and equipment	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Water used to control dust	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Potable water including uncontaminated water line flushings	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Routine external building wash down	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Pavement wash waters	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Uncontaminated air conditioning or compressor condensate	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Uncontaminated, non-turbid discharges of ground water or spring water	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Foundation or footing drains	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Construction dewatering water	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

**2.6 Site Maps**

Site maps are attached in Appendix A

### SECTION 3: DOCUMENTATION OF COMPLIANCE WITH OTHER FEDERAL REQUIREMENTS

#### 3.1 *Endangered Species Protection*

##### Eligibility Criterion

Under which criterion listed in Appendix D (of the Construction General Permit) are you eligible for coverage under this permit?

- A                       B                       C                       D                       E

**Supporting Documentation For criterion E:** Copies of all letters or other communication between USACE and the U.S. Fish & Wildlife Service or National Marine Fisheries Service concluding consultation or coordination activities are attached in Appendix K.

#### 3.2 *Historic Preservation*

##### Appendix E, Step 1

Do you plan on installing any of the following stormwater controls at your site? Check all that apply below, and proceed to Appendix E, Step 2.

- Dike
- Berm
- Catch Basin
- Pond
- Stormwater Conveyance Channel (e.g., ditch, trench, perimeter drain, swale, etc.)
- Culvert
- Other type of ground-disturbing stormwater control: Currently unknown, but Corps has completed consultation with WA DAHP in the event ground disturbance is required.

##### Appendix E, Step 2

If you answered yes in Step 1, have prior surveys or evaluations conducted on the site already determined that historic properties do not exist, or that prior disturbances at the site have precluded the existence of historic properties?  YES  NO

Related documents are included in Appendix K. The Corps has determined and Department of Antiquities and Historic Properties has concurred that there would be no adverse effects to historic properties.

#### 3.3 *Safe Drinking Water Act Underground Injection Control Requirements*

**Do you plan to install any of the following controls? Check all that apply below.**

- Infiltration trenches (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system)
- Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow
- Drywells, seepage pits, or improved sinkholes (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system)

None of the above will be installed.

## SECTION 4: EROSION AND SEDIMENT CONTROLS

### 4.1 *Natural Buffers or Equivalent Sediment Controls*

#### **Buffer Compliance Alternatives**

Are there any surface waters within 50 feet of your project's earth disturbances?  YES  NO

Check the compliance alternative that you have chosen:

- I will provide and maintain a 50-foot undisturbed natural buffer.
- I will provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by additional erosion and sediment controls, which in combination achieves the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.
- It is infeasible to provide and maintain an undisturbed natural buffer of any size, therefore I will implement erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.
- I qualify for one of the exceptions in Part 2.1.2.1.e.

#### **Buffer Exceptions**

Which of the following exceptions to the buffer requirements applies to your site?

- There is no discharge of stormwater to the surface water that is located 50 feet from my construction disturbances.
- No natural buffer exists due to preexisting development disturbances that occurred prior to the initiation of planning for this project.
- For a "linear project" (defined in Appendix A), site constraints (e.g., limited right-of-way) make it infeasible for me to meet any of the CGP Part 2.1.2.1.a compliance alternatives.
- The project qualifies as "small residential lot" construction (defined in Part 2.1.2.1.e.iv and in Appendix A).
- Buffer disturbances are authorized under a CWA Section 404 permit.
  - Activities under this exception include construction staging and material storage.
- Buffer disturbances will occur for the construction of a water-dependent structure or water access area (e.g., pier, boat ramp, and trail).
  - Activities under this exception include preparing the storage and staging area and jetty repair work.

## 4.2 *Perimeter Controls*

### General

- Sediment controls such as silt fences will be installed along the perimeter of the staging areas at the site that will receive storm water from earth disturbing activities. A 20-ft minimum buffer will occur around the perimeter, which should be adequate given the large stone size and low likelihood of runoff.

### Specific Perimeter Controls

#### Perimeter Control # 1: Silt Fence

##### Perimeter Control Description

- A silt fence may be installed around the perimeter of disturbed areas within the project boundary; including but not limited to staging areas.
- Refer to the fact sheet at the following link for information on installation, inspection and maintenance techniques: <http://water.epa.gov/polwaste/npdes/swbmp/upload/siltfences.pdf>

##### Installation

- Specific installation dates will be determined by contractor schedule, but will be completed before any earth disturbances occur

##### Maintenance and Inspection Requirements

- Inspect regularly and frequently, as well as after each rainfall event, to make sure that they are intact and that there are no tears along the length of the silt fence. Repair or replace damaged fabric immediately. Remove accumulated sediments from the silt fence base before it has accumulated to one half of the above ground height of any perimeter control. Remove sediment more frequently if there is noticeable strain on the fabric. When silt fence is removed, remove accumulated sediment as well.

## 4.3 *Sediment Track-Out*

### General

- Gravel is anticipated to be placed throughout the staging area and therefore specific sediment track out BMPs are not anticipated. If it is deemed necessary, the section below will be updated.

### Specific Track-Out Controls

#### Track-Out Control # 1

##### Track-Out Control Description

- Construction entrances and exits will be stabilized appropriately to avoid track out.

##### Installation

- Entrances will be stabilized using rock or other appropriate methods.

##### Maintenance Requirements

- Any track-out materials will removed daily via sweeping or other appropriate method.

#### **4.4 Stockpiled Sediment or Soil**

##### **General**

- No stockpiled sediment or soil is anticipated for this project. Only large armor stones or coarse chinking stone will be stockpiled on site. The section below will be updated if stockpiling of soil or sediment occurs.

##### **Specific Stockpile Controls**

###### Stockpile Control # 1:

###### Stockpiled Sediment/Soil Control Description

- 

###### Installation

- 

###### Maintenance Requirements

- 

#### **4.5 Minimize Dust**

##### **General**

- To the extent feasible, dust generation will be minimized through the appropriate application of water and other dust suppression techniques.

##### **Specific Dust Controls**

###### Dust Control # 1: Limit generation

###### Dust Control Description

- Limit dust generation by clearing only those areas where immediate activity will take place, leaving the remaining area(s) in original condition.

###### Installation

- Throughout construction

###### Maintenance Requirements

- N/A

###### Dust Control # 2: Water site

###### Dust Control Description

- In areas, including roadways, subject to surface and air movement of dust, sprinkle site with water until surface is wet.
- Prevent carry out of mud from project site by only using stabilized entrances and exits.

###### Installation

- As needed during construction

###### Maintenance Requirements

- Repeat as needed



#### **4.6 *Minimize the Disturbance of Steep Slopes***

##### **General**

- None are anticipated for this project. The following will be completed if slope disturbances occur.

##### **Specific Steep Slope Controls**

###### *Steep Slope Control # 1*

###### Steep Slope Control Description

- A minimum, 20-ft buffer will be maintained as a set-back from the Ordinary High Water mark to avoid the scarp face between the staging area and ocean beach.

###### Installation

- 

###### Maintenance Requirements

- 

#### **4.7 *Topsoil***

##### **General**

- Topsoil will be preserved onsite when possible. Placement of new topsoil is not anticipated for this project. The area will be regraded and hydroseeded upon completion of construction.

##### **Specific Topsoil Controls**

###### *Topsoil Control # 1:*

###### Topsoil Control Description

- 

###### Installation

- 

###### Maintenance Requirements

- 

#### **4.8 *Soil Compaction***

##### **General**

Prior to seeding or planting areas of exposed soil that have been compacted, the gravel will be removed and the ground conditioned to support vegetative growth.

##### **Specific Soil Compaction Controls**

###### *Soil Compaction Control # 1*

###### Soil Compaction Control Description

- 

###### Installation

- 

Maintenance Requirements

- 

#### **4.9 Storm Drain Inlets**

There are no storm drain inlets in the project area

#### **4.10 Constructed Stormwater Conveyance Channels**

Not planned for this project

#### **4.11 Sediment Basins**

Not planned for this project.

#### **4.12 Chemical Treatment**

Not used for this project.

#### **4.13 Dewatering Practices**

##### **General**

- None are anticipated for this project. The following will be completed if any dewatering becomes necessary.

##### **Specific Dewatering Practices**

###### Dewatering Practice # 1

Dewatering Practice Description

- 

Installation

- 

Maintenance Requirements

- 

#### **4.14 Other Stormwater Controls**

##### **General**

- Any stormwater controls that do not fit into the above categories will be described here upon plan update.

##### **Specific Stormwater Control Practices**

###### Stormwater Control Practice # 1

Description, including applicable design specifications

- A 150 foot buffer will exist between the refueling area and waters of the U.S.

Approximate Installation Date

- 

Maintenance Requirements

- 

Repeat as needed.

#### **4.15 Site Stabilization**

##### **Site Stabilization Practice**

*Vegetative*

*Non-Vegetative*

*Temporary*

*Permanent*

Description of Practice

Disturbed areas will be planted with hydroseed (native grass mix) upon completion.

To the extent necessary, non-vegetative erosion controls may be used on a temporary basis to provide cover to the area while vegetation is being established.

Relevant design specifications are included in Appendix L

Installation

Vegetative stabilization will be installed as soon as practicable, but no later than 7 calendar days after the initiation of soil stabilization measures. Activities will be documented in Appendix H.

Maintenance Requirements

Inspect seeded areas for failure and, if needed, replant as soon as possible.

The contractor will fill in the information below if uncontrollable circumstances have delayed the initiation or completion of stabilization

**SECTION 5: POLLUTION PREVENTION STANDARDS**

**5.1 Potential Sources of Pollution**

**Construction Site Pollutants**

Preliminary sources of pollution are listed below. Additional information to be updated as appropriate.

<b>Pollutant-Generating Activity</b>	<b>Pollutants or Pollutant Constituents</b> (that could be discharged if exposed to stormwater)	<b>Location on Site</b> (or reference SWPPP site map where this is shown)
Heavy equipment operation	Petroleum, oil, lubricants	Entire site

## **5.2 Spill Prevention and Response**

A copy of specification sections relevant to spill prevention and response has been included in Appendix L. Per the contract specifications, the contractor will develop a Spill Control Plan.

## **5.3 Fueling and Maintenance of Equipment or Vehicles**

### **General**

- The contractor will utilize good housekeeping practices and secondary containment to avoid fuel or other contaminants spills.

### **Specific Pollution Prevention Practices**

#### Pollution Prevention Practice # 1: Good Housekeeping

##### Description

- Utilize environmentally acceptable lubricants including hydraulic fluid when operating equipment below Ordinary High Water and when working on the jetty or over water. Exceptions include small power generators which shall be placed over secondary containment at all times and smaller site access vehicles such as John Deere Gators or similar. All mobile and non-mobile equipment shall be provided with secondary containment when not in use.
- Fuel, lubricants and oil will be managed and stored in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded will be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, or State and local laws and regulations.
- Vehicle staging, cleaning, maintenance, refueling, and fuel storage will take place in designated staging areas. Ensure staging area has sufficient stormwater runoff controls and is 150 feet or more away from waters. Use Wiggins Fast Fuel System or equivalent on equipment fueled on the jetty along with secondary containment. Additional spill response equipment and materials will be in the immediate vicinity of refueling activities.
- Auxiliary fuel tanks stored in the staging area will have secondary containment measures in place at all times.

##### Installation

- During construction.

##### Maintenance Requirements

- Maintenance must be in accordance with specifications included in Appendix L.

## **5.4 Washing of Equipment and Vehicles**

### **General**

- It is preferred vehicle washing not be conducted onsite. However, if deemed necessary during construction, the following best management practices will be implemented.

### **Specific Pollution Prevention Practices**

#### Pollution Prevention Practice #1

##### Description

-

Installation

- 

Maintenance Requirements

- 

**5.5 Storage, Handling, and Disposal of Construction Products, Materials, and Wastes**

**5.5.1 Building Products**

**General**

- Not utilized for this project.

**5.5.2 Pesticides, Herbicides, Insecticides, Fertilizers, and Landscape Materials**

**General**

- Not utilized for this project.

**5.5.3 Diesel Fuel, Oil, Hydraulic Fluids, Other Petroleum Products, and Other Chemicals**

**General**

- Materials will be kept to a minimum. If necessary to be kept onsite, they will be stored in staging areas at least 150 feet from water.

**Specific Pollution Prevention Practices**

*Pollution Prevention Practice # 1*

Description

- Materials should be stored in secondary containments such as earthen dikes, horse troughs, or wading pools for nonreactive materials such as detergents, oil, grease, and paints. Small amounts of material may be secondarily contained in “bus boy” trays or concrete mixing trays.
- Do not store chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet and in secondary containment.
- If drums must be kept uncovered, store them at a slight angle to reduce ponding of rainwater on the lids to reduce corrosion. Domed plastic covers will be considered to prevent wastewater from collecting.
- Staging areas are designated for activities such as fueling vehicles, etc. and must be 150-ft from waters.

Installation

- During Construction

Maintenance Requirements

- Inspect regularly to ensure chemical storage containers are not leaking.

**5.5.4 Hazardous or Toxic Waste**

Any barrels that are discovered during construction should be reported to the Coast Guard National Response Center <http://www.nrc.uscg.mil/Default.aspx> at 1-800-424-8802 and the U.S. Coast Guard will properly remove the materials from the project site within 24-hours of notification.

### **5.5.5 Construction and Domestic Waste**

#### **General**

- Construction and domestic waste will be kept contained during construction activities and properly disposed off site.

#### **Specific Pollution Prevention Practices**

##### *Pollution Prevention Practice # 1*

###### Description

- Provide waste containers (e.g. dumpster or trash receptacle) of sufficient size and number to contain construction and domestic wastes.
- On work days, clean up and dispose waste in designated waste containers

###### Installation

- During construction

###### Maintenance Requirements

- Inspect daily. Cleanup immediately if containers overflow

### **5.5.6 Sanitary Waste**

#### **General**

- Should temporary sanitary waste facilities be utilized, the following pollution prevention practice will be used

#### **Specific Pollution Prevention Practices**

##### *Pollution Prevention Practice # 1*

###### Description

- Position portable toilets so that they are secure and will not be tipped, blown or knocked over.
- Facilities will be located in the staging/storage area.

###### Installation

- During construction

###### Maintenance Requirements

- The contractor shall monitor the onsite facility daily to ensure there is no discharge.

### **5.6 Washing of Applicators and Containers used for Paint, Concrete or Other Materials**

Not anticipated for this project

### **5.7 Fertilizers**

Not anticipated for this project

## **5.8 Other Pollution Prevention Practices**

### **General**

Any additional pollution prevention practices not fitting into the categories listed above will be inserted here, including a description of the problem they are designed to address.

### **Specific Pollution Prevention Practices**

#### *Pollution Prevention Practice # X*

Description

- 

Installation

- 

Maintenance Requirements

- 

*Repeat as needed*



## **SECTION 6: INSPECTION AND CORRECTIVE ACTION**

### **6.1 *Inspection Personnel and Procedures***

#### **Personnel Responsible for Inspections**

The COR, Stormwater Manager, CESCL, or GQAR may perform inspections.

#### **Inspection Schedule**

##### Specific Inspection Frequency

Inspections will occur at least once every 7 days.

##### Reductions in Inspection Frequency

If, due to construction sequencing, areas of the project are stabilized while active construction is occurring, inspection frequency will be reduced to once per month in any area where stabilization has been completed. If construction activity resumes in these locations at a later date, the inspection frequency will increase to at least once every 7 days. The beginning and ending dates for periods of stabilization will be documented.

#### **Inspection Report Forms**

A copy of a sample inspection form is included in Appendix D.

### **6.2 *Corrective Action***

If modifications to the best management practices or storm water controls are required, they will be completed no later than 7 days from the time of discovery. Immediate action will be taken to minimize or prevent the discharge of pollutants until the permanent solution is made.

#### **Personnel Responsible for Corrective Actions**

Contractor Name, position (i.e. CESCL)

#### **Corrective Action Forms**

A sample correction log is included in Appendix E.

**SECTION 7: TRAINING**

See Appendix I for a log of individual(s) responsible for training and a description of training conducted. This list includes general storm water and BMP awareness training for staff and subcontractors as well as detailed training for staff and subcontractors with specific storm water responsibilities.

**SECTION 8: CERTIFICATION AND NOTIFICATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

In making this certification, I am relying on the Contractor's or Subcontractor's qualifications as a Certified Erosion and Sediment Control Lead (CESCL) on behalf of the U.S. Army Corps of Engineers.

On behalf of the U.S. Army Corps of Engineers,

Signature of Permittee or "Duly Authorized Representative": \_\_\_\_\_

Date: \_\_\_\_\_

Printed Name and Affiliation: Contracting Officer's Representative, USACE

## **SWPPP APPENDICES**

*Appendix A – Site Maps*

*Appendix B – Copy of 2012 CGP*

*Appendix C – NOI and EPA Authorization Email*

*Appendix D – Inspection Form*

*Appendix E – Corrective Action Form*

*Appendix F – SWPPP Amendment Log*

*Appendix G – Subcontractor Certifications/Agreements*

*Appendix H – Grading and Stabilization Activities Log*

*Appendix I – Training Log*

*Appendix J – Endangered Species Documentation*

*Appendix K – Historic Preservation Documentation*

*Appendix L – Relevant Design Specifications*

## **Appendix A – Site Maps**

General site maps and specific plan and location information can be found on the following plan sheets:

G-001, C-001, and C-002

## **Appendix B - Copy of 2012 CGP**

A copy of the NPDES Construction General Permit may be found at  
[http://www.epa.gov/npdes/pubs/cgp2012\\_finalpermit.pdf](http://www.epa.gov/npdes/pubs/cgp2012_finalpermit.pdf)

**National Pollutant Discharge Elimination System  
General Permit for Discharges from  
Construction Activities**

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 et. seq., (hereafter CWA or the Act), as amended by the Water Quality Act of 1987, P.L. 100-4, "operators" of construction activities (defined in Part 1.1.a and Appendix A) that meet the requirements of Part 1.1 of this National Pollutant Discharge Elimination System (NPDES) general permit, are authorized to discharge pollutants in accordance with the effluent limitations and conditions set forth herein. Permit coverage is required from the "commencement of earth-disturbing activities" (see Appendix A) until "final stabilization" (see Part 2.2).

This permit becomes effective on **February 16, 2012**.

This permit and the authorization to discharge expire at midnight, **February 16, 2017**.

Signed and issued this 16<sup>th</sup> day of February, 2012  
H. Curtis Spalding  
Regional Administrator, Region 1

Signed and issued this 16<sup>th</sup> day of February, 2012  
William K. Honker, P.E.  
Acting Director, Water Quality Protection Division,  
Region 6

Signed and issued this 16<sup>th</sup> day of February, 2012  
John Filippelli  
Director, Division of Environmental Planning &  
Protection, Region 2

Signed and issued this 16<sup>th</sup> day of February, 2012  
Karen Flournoy  
Director, Wetlands and Pesticides Division, Region  
7

Signed and issued this 16<sup>th</sup> day of February, 2012  
José C. Font  
Acting Division Director, Caribbean  
Environmental Protection Division, Region 2,  
Caribbean Office

Signed and issued this 16<sup>th</sup> day of February, 2012  
Melanie L. Pallman  
Acting Assistant Regional Administrator, Office of  
Partnerships and Regulatory Assistance, Region 8

Signed and issued this 16<sup>th</sup> day of February, 2012  
Catherine A. Libertz  
Assistant Director, Water Protection Division,  
Region 3

Signed and issued this 16<sup>th</sup> day of February, 2012  
Nancy Woo  
Deputy Director, Water Division, Region 9

Signed and issued this 16<sup>th</sup> day of February, 2012  
James D. Giattina  
Director, Water Protection Division, Region 4

Signed and issued this 16<sup>th</sup> day of February, 2012  
Michael J. Lidgard  
Acting Director, Office of Water and  
Watersheds, Region 10

Signed and issued this 16<sup>th</sup> day of February, 2012  
Tinka G. Hyde  
Director, Water Division, Region 5

The signatures are for the permit conditions in Parts 1 through 9 and Appendices A through K.

**CONTENTS**

**1. HOW TO OBTAIN PERMIT COVERAGE UNDER THE CGP..... 1**

1.1. ELIGIBILITY CONDITIONS REQUIRED OF ALL PROJECTS. .... 1

1.2. ELIGIBILITY CONDITIONS THAT APPLY DEPENDING ON TYPE OF PROJECT. .... 2

1.2.1. Eligibility for Emergency-Related Construction Activities. .... 2

1.2.2. Water Quality Standards – Eligibility for New Sources. .... 2

1.2.3. Discharging to Waters with High Water Quality – Eligibility for New Sources. .... 3

1.2.4. Use of Cationic Treatment Chemicals..... 3

1.3. Types of Discharges Authorized Under the CGP. .... 3

1.4. SUBMITTING YOUR NOTICE OF INTENT (NOI)..... 4

1.4.1. How to Submit Your NOI. .... 4

1.4.2. Deadlines for Submitting Your NOI and Your Official Date of Permit Coverage..... 5

1.4.3. Your Official End Date of Permit Coverage ..... 6

1.4.4. Continuation of Coverage for Existing Permittees After the Permit Expires. .... 6

1.4.5. Procedures for Denial of Coverage..... 7

1.5. REQUIREMENT TO POST A NOTICE OF YOUR PERMIT COVERAGE. .... 7

**2. EFFLUENT LIMITATIONS APPLICABLE TO ALL DISCHARGES FROM CONSTRUCTION SITES..... 8**

2.1. EROSION AND SEDIMENT CONTROL REQUIREMENTS..... 8

2.1.1. General Requirements Applicable to All Construction Sites..... 8

2.1.2. Erosion and Sediment Control Requirements Applicable to All Sites..... 10

2.1.3. Requirements Applicable Only to Sites Using These Specific Stormwater Controls..... 15

2.2. STABILIZATION REQUIREMENTS. .... 17

2.2.1. Deadlines for Initiating and Completing Stabilization. .... 17

2.2.2. Criteria for Stabilization..... 20

2.3. POLLUTION PREVENTION REQUIREMENTS..... 21

2.3.1. Prohibited Discharges. .... 21

2.3.2. General Maintenance Requirements. .... 21

2.3.3. Pollution Prevention Standards. .... 22

2.3.4. Emergency Spill Notification..... 25

2.3.5. Fertilizer Discharge Restrictions..... 25

**3. WATER QUALITY-BASED EFFLUENT LIMITATIONS. .... 26**

3.1. GENERAL EFFLUENT LIMITATION TO MEET APPLICABLE WATER QUALITY STANDARDS..... 26

3.2. DISCHARGE LIMITATIONS FOR IMPAIRED WATERS..... 26

3.2.1. Identify If You Discharge To An Impaired Water. .... 26

3.2.2. Requirements for Discharges to Sediment or Nutrient-Impaired Waters. .... 27

3.3. DISCHARGES TO WATERS IDENTIFIED AS TIER 2, TIER 2.5, OR TIER 3..... 27

3.3.1. Identify if You Discharge to a Tier 2, Tier 2.5, or Tier 3 Water. .... 27



3.3.2. Requirements for New Projects Discharging to Tier 2, Tier 2.5, or Tier 3 Waters. .... 27

**4. INSPECTIONS. .... 28**

4.1. SITE INSPECTIONS. .... 28

4.1.1. Person(s) Responsible for Inspecting Site. .... 28

4.1.2. Frequency of Inspections. .... 28

4.1.3. Increase in Inspection Frequency for Sites Discharging to Sensitive Waters. .... 28

4.1.4. Reductions in Inspection Frequency. .... 29

4.1.5. Areas that Need to Be Inspected. .... 30

4.1.6. Requirements for Inspections. .... 30

4.1.7. Inspection Report. .... 31

4.2. INSPECTIONS BY EPA. .... 32

**5. CORRECTIVE ACTIONS. .... 33**

5.1. "CORRECTIVE ACTIONS" DEFINED. .... 33

5.2. REQUIREMENTS FOR TAKING CORRECTIVE ACTION. .... 33

5.3. CORRECTIVE ACTION REQUIRED BY EPA. .... 33

5.4. CORRECTIVE ACTION REPORT. .... 33

**6. STAFF TRAINING REQUIREMENTS. .... 35**

**7. STORMWATER POLLUTION PREVENTION PLAN (SWPPP). .... 36**

7.1. GENERAL REQUIREMENTS. .... 36

7.1.1. Requirement to Develop a SWPPP Prior to Submitting Your NOI. .... 36

7.2. SWPPP CONTENTS. .... 36

7.2.1. Stormwater Team. .... 36

7.2.2. Nature of Construction Activities. .... 36

7.2.3. Emergency-Related Projects. .... 37

7.2.4. Identification of Other Site Operators. .... 37

7.2.5. Sequence and Estimated Dates of Construction Activities. .... 37

7.2.6. Site Map. .... 37

7.2.7. Construction Site Pollutants. .... 38

7.2.8. Non-Stormwater Discharges. .... 39

7.2.9. Buffer Documentation. .... 39

7.2.10. Description of Stormwater Control Measures. .... 39

7.2.11. Pollution Prevention Procedures. .... 40

7.2.12. Procedures for Inspection, Maintenance, and Corrective Action. .... 41

7.2.13. Staff Training. .... 41

7.2.14. Documentation of Compliance with Other Federal Requirements. .... 41

7.2.15. SWPPP Certification. .... 42

7.2.16. Post-Authorization Additions to the SWPPP. .... 42

7.3. ON-SITE AVAILABILITY OF YOUR SWPPP. .... 42

7.4. REQUIRED SWPPP MODIFICATIONS. .... 43

7.4.1. List of Conditions Requiring SWPPP Modification. .... 43

7.4.2. Deadlines for SWPPP Modifications..... 43

7.4.3. SWPPP Modification Records. .... 43

7.4.4. Certification Requirements. .... 43

7.4.5. Required Notice to Other Operators..... 43

**8. HOW TO TERMINATE COVERAGE. .... 44**

8.1. MINIMUM INFORMATION REQUIRED IN NOT. .... 44

8.2. CONDITIONS FOR TERMINATING PERMIT COVERAGE. .... 44

8.3. HOW TO SUBMIT YOUR NOT. .... 44

8.4. DEADLINE FOR SUBMITTING NOTS. .... 45

8.5. EFFECTIVE DATE OF TERMINATION OF COVERAGE..... 45

**9. PERMIT CONDITIONS APPLICABLE TO SPECIFIC STATES, INDIAN COUNTRY LANDS, OR TERRITORIES..... 46**

APPENDIX A - DEFINITIONS AND ACRONYMS.....A-1

APPENDIX B - PERMIT AREAS ELIGIBLE FOR COVERAGE .....B-1

APPENDIX C - SMALL CONSTRUCTION WAIVERS AND INSTRUCTIONS .....C-1

APPENDIX D - ENDANGERED SPECIES ACT REQUIREMENTS .....D-1

APPENDIX E - HISTORIC PROPERTY SCREENING PROCESS .....E-1

APPENDIX F - LIST OF TIER 3, TIER 2, AND TIER 2.5 WATERS .....F-1

APPENDIX G - BUFFER GUIDANCE ..... G-1

APPENDIX H - 2-YEAR, 24-HOUR STORM FREQUENCIES..... H-1

APPENDIX I - STANDARD PERMIT CONDITIONS .....I-1

APPENDIX J - NOTICE OF INTENT (NOI) FORM AND INSTRUCTIONS .....J-1

APPENDIX K - NOTICE OF TERMINATION (NOT) FORM AND INSTRUCTIONS ..... K-1

**1. HOW TO OBTAIN PERMIT COVERAGE UNDER THE CGP.**

To be covered under this permit, you must meet the eligibility conditions and follow the requirements for applying for permit coverage in this Part.

**1.1. ELIGIBILITY CONDITIONS REQUIRED OF ALL PROJECTS.**

Only those projects that meet all of the following eligibility conditions may be covered under this permit:

- a. You are an “operator” of the construction project for which discharges will be covered under this permit;

*Note: For the purposes of this permit, an “operator” is any party associated with a construction project that meets either of the following two criteria:*

- 1. *The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or*
- 2. *The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the permit).*

*Subcontractors generally are not considered operators for the purposes of this permit.*

*Note: Where there are multiple operators associated with the same project, all operators are required to obtain permit coverage. The following applies in these situations:*

- 1. *If one operator has control over plans and specifications and a different operator has control over activities at the project site, they may divide responsibility for compliance with the terms of this permit as long as they develop a group SWPPP (see Part 7.1.1), which documents which operator has responsibility for each requirement of the permit.*
- 2. *If an operator only has operational control over a portion of a larger project (e.g., one of four homebuilders in a subdivision), the operator is responsible for compliance with all applicable effluent limits, terms, and conditions of this permit as it relates to the activities on their portion of the construction site, including protection of endangered species, critical habitat, and historic properties, and implementation of control measures described in the SWPPP in the areas under their control.*
- 3. *You must ensure either directly or through coordination with other permittees, that your activities do not render another party's pollutant discharge controls ineffective.*
- 4. *If the operator of a “construction support activity” (see Part 1.3.c) is different than the operator of the main construction site, that operator is also required to obtain permit coverage.*

- b. Your project:

- i. Will disturb 1 or more acres of land, or will disturb less than 1 acre of land but is part of a common plan of development or sale that will ultimately disturb 1 or more acres of land; or
- ii. Your project's discharges have been designated by EPA as needing a permit under § 122.26(a)(1)(v) or § 122.26(b)(15)(ii);

- c. Your project is located in an area where EPA is the permitting authority (see Appendix B);

- d. Discharges from your project are not:
  - i. Already covered by a different NPDES permit for the same discharge; or
  - ii. In the process of having coverage under a different NPDES permit for the same discharge denied, terminated, or revoked.<sup>1, 2</sup>
- e. You are able to demonstrate that you meet one of the criteria listed in Appendix D with respect to the protection of species that are federally-listed as endangered or threatened under the Endangered Species Act (ESA) or federally-designated critical habitat;
- f. You have completed the screening process in Appendix E relating to the protection of historic properties and places; and
- g. You have complied with all requirements in Part 9 imposed by the applicable state, Indian tribe, or territory in which your construction activities will occur.

**1.2. ELIGIBILITY CONDITIONS THAT APPLY DEPENDING ON TYPE OF PROJECT.**

You must also satisfy, if applicable, the conditions in Parts 1.2.1 through 1.2.4 in order to obtain coverage under this permit.

**1.2.1. Eligibility for Emergency-Related Construction Activities.**

If you are conducting earth-disturbing activities in response to a public emergency (e.g., *natural disaster, widespread disruption in essential public services*), and the related work requires immediate authorization to avoid imminent endangerment to human health, public safety, or the environment, or to reestablish essential public services, you are authorized to discharge on the condition that a complete and accurate NOI is submitted within 30 calendar days after commencing earth-disturbing activities (see Table 1) establishing that you are eligible under this permit. You are also required to provide documentation in your SWPPP to substantiate the occurrence of the public emergency.

**1.2.2. Water Quality Standards – Eligibility for New Sources.**

If you are a “new source” (as defined in Appendix A), you are not eligible for coverage under this permit for discharges that EPA, prior to authorization under this permit, determines will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. Where such a determination is made prior to authorization, EPA may notify you that an individual permit application is necessary in accordance with Part 1.4.5. However, EPA may authorize your coverage under this permit after you have included appropriate controls and implementation procedures designed to bring your discharge into compliance with water quality standards. In the absence of information demonstrating otherwise, EPA expects that compliance with the stormwater control requirements of this permit, including the requirements applicable to such discharges in Part 3.2, will result in discharges that will not cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard.

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<sup>1</sup> Parts 1.1.d.i and 1.1.d.ii do not include sites currently covered under the 2003 or 2008 CGPs, which are in the process of obtaining coverage under this permit, and sites covered under this permit, which are transferring coverage to a different operator.

<sup>2</sup> Notwithstanding a project being made ineligible for coverage under this permit because it falls under the description of Parts 1.1.d.i or 1.1.d.ii, above, EPA may waive the applicable requirement after specific review if it determines that coverage under this permit is appropriate.

**1.2.3. Discharging to Waters with High Water Quality – Eligibility for New Sources.**

If you are a “new source” (as defined in Appendix A), you are eligible to discharge to a Tier 2, Tier 2.5, or Tier 3 water only if your discharge will not lower the water quality of the applicable water. In the absence of information demonstrating otherwise, EPA expects that compliance with the stormwater control requirements of this permit, including the requirements applicable to such discharges in Part 3.3.2, will result in discharges that will not lower the water quality of the applicable water. See list of Tier 2, Tier 2.5, and Tier 3 waters in Appendix F.

*Note: Your project will be considered to discharge to a Tier 2, Tier 2.5, or Tier 3 water if the first surface water to which you discharge is identified by a state, tribe, or EPA as a Tier 2, Tier 2.5, or Tier 3 water. For discharges that enter a storm sewer system prior to discharge, the first surface water to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system.*

**1.2.4. Use of Cationic Treatment Chemicals.**

If you plan to use cationic treatment chemicals (as defined in Appendix A), you are ineligible for coverage under this permit, unless you notify your applicable EPA Regional Office in advance and the EPA office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards.

**1.3. Types of Discharges Authorized Under the CGP.**

The following is a list of discharges that are allowed under the permit provided that appropriate stormwater controls are designed, installed, and maintained:

- a. Stormwater discharges, including stormwater runoff, snowmelt runoff, and surface runoff and drainage, associated with construction activity under 40 CFR § 122.26(b)(14) or § 122.26(b)(15)(i);
- b. Stormwater discharges designated by EPA as needing a permit under 40 CFR § 122.26(a)(1)(v) or § 122.26(b)(15)(ii);
- c. Stormwater discharges from construction support activities (*e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas*) provided:
  - i. The support activity is directly related to the construction site required to have permit coverage for stormwater discharges;
  - ii. The support activity is not a commercial operation, nor does it serve multiple unrelated construction projects;
  - iii. The support activity does not continue to operate beyond the completion of the construction activity at the project it supports; and
  - iv. Stormwater controls are implemented in accordance with Part 2 and, if applicable, Part 3, for discharges from the support activity areas.
- d. The following non-stormwater discharges from your construction activity, provided that, with the exception of water used to control dust and to irrigate areas to be vegetatively stabilized, these discharges are not routed to areas of exposed soil on your site and you comply with any applicable requirements for these discharges in Part 2:
  - i. Discharges from emergency fire-fighting activities;

- ii. Fire hydrant flushings;
  - iii. Landscape irrigation;
  - iv. Water used to wash vehicles and equipment, provided that there is no discharge of soaps, solvents, or detergents used for such purposes;
  - v. Water used to control dust;
  - vi. Potable water including uncontaminated water line flushings;
  - vii. Routine external building washdown that does not use detergents;
  - viii. Pavement wash waters provided spills or leaks of toxic or hazardous materials have not occurred (unless all spill material has been removed) and where detergents are not used. You are prohibited from directing pavement wash waters directly into any surface water, storm drain inlet, or stormwater conveyance, unless the conveyance is connected to a sediment basin, sediment trap, or similarly effective control;
  - ix. Uncontaminated air conditioning or compressor condensate;
  - x. Uncontaminated, non-turbid discharges of ground water or spring water;
  - xi. Foundation or footing drains where flows are not contaminated with process materials such as solvents or contaminated ground water; and
  - xii. Construction dewatering water that has been treated by an appropriate control under Part 2.1.3.4; and
- e. Discharges of stormwater listed above in Parts a, b, and c, or authorized non-stormwater discharges in Part d above, commingled with a discharge authorized by a different NPDES permit and/or a discharge that does not require NPDES permit authorization.

#### **1.4. SUBMITTING YOUR NOTICE OF INTENT (NOI).**

To be covered under this permit, you must submit to EPA a complete and accurate NOI prior to commencing construction activities. The NOI certifies to EPA that you are eligible for coverage according to Part 1.1 and 1.2, and provides information on your construction operation and discharge.

*Note: All "operators" (as defined in Appendix A) associated with your construction project, who meet the Part 1.1 eligibility requirements, and who elect to seek coverage under this permit, are required to submit an NOI.*

*Note: There are two exceptions to the requirement to submit the NOI prior to the commencement of construction activities: (1) for emergency-related projects, and (2) for new projects scheduled to commence construction activities on or after February 16, 2012, but no later than March 1, 2012. For these two types of projects, the NOI must be submitted within 30 calendar days after the commencement of earth-disturbing activities (see Part 1.4.2).*

*Note: You must complete the development of a Stormwater Pollution Prevention Plan (SWPPP) consistent with Part 7 prior to submitting your NOI for coverage under this permit.*

##### **1.4.1. How to Submit Your NOI.**

You are required to use EPA's electronic NOI system, or "eNOI system", to prepare and submit your NOI. Go to [www.epa.gov/npdes/stormwater/cgpenoi](http://www.epa.gov/npdes/stormwater/cgpenoi) to access the eNOI system and file an NOI. If you have a problem with the use of the eNOI system, contact

the EPA Regional Office that corresponds to the location of your site. If you are given approval by the EPA Regional Office to use a paper NOI, and you elect to use it, you must complete the form in Appendix J.

**1.4.2. Deadlines for Submitting Your NOI and Your Official Date of Permit Coverage.**

Table 1 provides the deadlines for submitting your NOI and your official start date of permit coverage, which differ depending on when you commence construction activities. The following terms are used in Table 1 to establish NOI deadlines:

- a. New project – a construction project that commences construction activities on or after February 16, 2012.
- b. Existing project – a construction project that commenced construction activities prior to February 16, 2012.
- c. New operator of a new or existing project – an operator that through transfer of ownership and/or operation replaces the operator of an already permitted construction project.

**Table 1 NOI Submittal Deadlines and Official Start Date for Permit Coverage.**

<b>Type of Construction Project</b>	<b>Deadlines for Operators to Submit NOI</b>	<b>Official Start Date for Permit Coverage</b>
New project	<p>You must submit your NOI at least 14 calendar days prior to commencing earth-disturbing activities.</p> <p><i>Exception:</i> If your project qualifies as an “emergency-related project” under Part 1.2.1, you must submit your NOI by no later than 30 calendar days after commencing earth-disturbing activities.</p> <p><i>Exception:</i> If you are scheduled to commence construction activities on or after February 16, 2012, but no later than March 1, 2012, you must submit your NOI by no later than 30 calendar days after commencing earth-disturbing activities.</p>	<p>You are considered covered under this permit 14 calendar days after EPA has acknowledged receipt of your NOI on the Agency's website (<a href="http://www.epa.gov/npdes/stormwater/cgpnosearch">www.epa.gov/npdes/stormwater/cgpnosearch</a>), unless EPA notifies you that your authorization has been delayed or denied.</p> <p><i>Exception:</i> If your project qualifies as an “emergency-related project” under Part 1.2.1, you are considered provisionally covered under the terms and conditions of this permit immediately, and fully covered 14 calendar days after EPA has acknowledged receipt of your NOI, unless EPA notifies you that your authorization has been delayed or denied.</p> <p><i>Exception:</i> If you are scheduled to commence construction activities on or after February 16, 2012, but no later than March 1, 2012, you are considered provisionally covered under the terms and conditions of this permit immediately, and fully covered 14 calendar days after EPA has acknowledged receipt of your NOI, unless EPA notifies you that your</p>

Type of Construction Project	Deadlines for Operators to Submit NOI	Official Start Date for Permit Coverage
		authorization has been delayed or denied.
Existing project	You must submit your NOI by no later than May 16, 2012. <sup>3</sup> However, if you have not previously obtained coverage under an NPDES permit, you must submit your NOI immediately.	You are considered covered under this permit 14 calendar days after EPA has acknowledged receipt of your NOI on the Agency's website ( <a href="http://www.epa.gov/npdes/stormwater/cgpnosearch">www.epa.gov/npdes/stormwater/cgpnosearch</a> ), unless EPA notifies you that your authorization has been delayed or denied. <sup>4</sup>
New operator of a new or existing project	You must submit your NOI at least 14 calendar days before the date the transfer to the new operator will take place.	You are considered covered under this permit 14 calendar days after EPA has acknowledged receipt of your NOI on the Agency's website ( <a href="http://www.epa.gov/npdes/stormwater/cgpnosearch">www.epa.gov/npdes/stormwater/cgpnosearch</a> ), unless EPA notifies you that your authorization has been delayed or denied.

*Note: If you have missed the deadline to submit your NOI, any and all discharges from your construction activities will continue to be unauthorized under the Clean Water Act until they are covered by this or a different NPDES permit. EPA may take enforcement action for any unpermitted discharges that occur between the commencement of earth-disturbing activities and discharge authorization.*

*Note: Discharges are not authorized if your NOI is incomplete or inaccurate or if you were never eligible for permit coverage.*

**1.4.3. Your Official End Date of Permit Coverage**

Once covered under this permit, your coverage will last until the date that:

- You terminate permit coverage consistent with Part 8; or
- Your discharges are permitted under a different NPDES permit or a reissued or replacement version of this permit after expiring on February 16, 2017; or
- For existing projects that continue after this permit has expired, the deadline has passed for the submission of an NOI for coverage under a reissued or replacement version of this permit and you have failed to submit an NOI by the required deadline.

**1.4.4. Continuation of Coverage for Existing Permittees After the Permit Expires.**

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedure Act and

<sup>3</sup> For existing projects located in the following areas, NOIs must be submitted no later than 90 days after the date of permit issuance: the State of Idaho (except Indian country); and areas in the State of Washington, except Indian country, subject to construction by a Federal Operator.

<sup>4</sup> Note that if you are currently covered under the 2003 or 2008 CGP, this coverage continues until your coverage under this permit begins, provided you have submitted an NOI by the deadline.



remain in force and effect for discharges that were covered prior to expiration. If you were granted permit coverage prior to the expiration date, you will automatically remain covered by this permit until the earliest of:

- Your authorization for coverage under a reissued or replacement version of this permit following your timely submittal of a complete and accurate NOI requesting coverage under the new permit; or

*Note: If you fail to submit a timely NOI for coverage under the reissued or replacement permit, your coverage will terminate on the date that the NOI was due.*

- Your submittal of a Notice of Termination; or
- Issuance or denial of an individual permit for the project's discharges; or
- A final permit decision by EPA not to reissue a general permit, at which time EPA will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. Coverage under this permit will terminate at the end of this time period.

EPA reserves the right to modify or revoke and reissue this permit under 40 CFR 122.62 and 63, in which case you will be notified of any relevant changes or procedures to which you may be subject.

#### **1.4.5. Procedures for Denial of Coverage.**

Following your submittal of a complete and accurate NOI, you may be notified in writing by EPA that you are not covered, and that you must either apply for and/or obtain coverage under an individual NPDES permit or an alternate general NPDES permit. This notification will include a brief statement of the reasons for this decision and will provide application information. Any interested person may request that EPA consider requiring an individual permit under this paragraph.

If you are already a permittee with coverage under this permit, the notice will set a deadline to file the permit application, and will include a statement that on the effective date of the individual NPDES permit or alternate general NPDES permit, as it applies to you, coverage under this general permit will terminate. EPA may grant additional time to submit the application if you request it. If you are covered under this permit and fail to submit an individual NPDES permit application or an NOI for an alternate general NPDES permit as required by EPA, then the applicability of this permit to you is terminated at the end of the day specified by EPA as the deadline for application submittal. EPA may take appropriate enforcement action for any unpermitted discharge. If you submit a timely permit application, then when an individual NPDES permit is issued to you or you are provided with coverage under an alternate general NPDES permit, your coverage under this permit is terminated on the effective date of the individual permit or date of coverage under the alternate general permit.

#### **1.5. REQUIREMENT TO POST A NOTICE OF YOUR PERMIT COVERAGE.**

You must post a sign or other notice conspicuously at a safe, publicly accessible location in close proximity to the project site. At a minimum, the notice must include the NPDES Permit tracking number and a contact name and phone number for obtaining additional project information. The notice must be located so that it is visible from the public road that is nearest to the active part of the construction site, and it must use a font large enough to be readily viewed from a public right-of-way.

## 2. EFFLUENT LIMITATIONS APPLICABLE TO ALL DISCHARGES FROM CONSTRUCTION SITES

You are required to comply with the following effluent limitations in this Part for discharges from your site and/or from construction support activities (see Part 1.3.c).

*Note: If your project is an “existing project” (see Part 1.4.2.b) or if you are a “new operator of an existing project” (see Part 1.4.2.c), and it is infeasible for you to comply with a specific requirement in this Part because (1) the requirement was not part of the permit you were previously covered under (i.e., the 2003 or 2008 CGP), and (2) because you are prevented from compliance due to the nature or location of earth disturbances that commenced prior to February 16, 2012, or because you are unable to comply with the requirement due to the manner in which stormwater controls have already been installed or were already designed prior to February 16, 2012, you are required to document this fact in your SWPPP and are waived from complying with that requirement. This flexibility applies only to the requirements in Parts 2.1, and 2.3.3 through 2.3.5 (except for Parts 2.3.3.1, 2.3.3.2b, 2.3.3.3c.i, and 2.3.3.4). This only applies to those portions of your site that have already commenced earth-disturbing activities or where stormwater controls implemented in compliance with the previous permit have already been installed.*

Part 2 includes the following types of requirements:

- Erosion and Sediment Control Requirements (Part 2.1)
- Stabilization Requirements (Part 2.2)
- Pollution Prevention Requirements (Part 2.3)

### 2.1. EROSION AND SEDIMENT CONTROL REQUIREMENTS.

You must design, install, and maintain erosion and sediment controls that minimize the discharge of pollutants from earth-disturbing activities. To meet this requirement, you must comply with the following provisions.

#### 2.1.1. General Requirements Applicable to All Construction Sites.

2.1.1.1 **Area of Disturbance.** You are required to minimize the amount of soil exposed during construction activities. You are also subject to the deadlines for temporarily and/or permanently stabilizing exposed portions of your site pursuant to Part 2.2.

2.1.1.2 **Design Requirements.**

- a. You must account for the following factors in designing your stormwater controls:
  - i. The expected amount, frequency, intensity, and duration of precipitation;
  - ii. The nature of stormwater runoff and run-on at the site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features. If any stormwater flow will be channelized at your site, you must design stormwater controls to control both peak flowrates and total stormwater volume to minimize erosion at outlets and to minimize downstream channel and streambank erosion; and
  - iii. The range of soil particle sizes expected to be present on the site.
- b. You must direct discharges from your stormwater controls to vegetated areas of your site to increase sediment removal and maximize stormwater

infiltration, including any natural buffers established under Part 2.1.2.1, unless infeasible. Use velocity dissipation devices if necessary to prevent erosion when directing stormwater to vegetated areas.

**2.1.1.3 Installation Requirements.**

- a. **Complete installation of stormwater controls by the time each phase of earth-disturbance has begun, unless infeasible.** By the time earth-disturbing activities in any given portion of your site have begun, unless infeasible, you must install and make operational any downgradient sediment controls (e.g., buffers or equivalent sediment controls, perimeter controls, exit point controls, storm drain inlet protection) that control discharges from the initial site clearing, grading, excavating, and other land-disturbing activities.

*Note: Where it is infeasible to install stormwater controls prior to the initial earth disturbance, it is EPA's expectation that it will be a rare circumstance that will prevent the operator from installing such controls immediately following the initial earth disturbance.*

Following the installation of these initial controls, all other stormwater controls planned for this portion of your site and described in your SWPPP must be installed and made operational as soon as conditions on the site allow.

*Note: The requirement to install stormwater controls prior to earth-disturbance for each phase of the project does not apply to the earth disturbance associated with the actual installation of these controls.*

- b. **Use good engineering practices and follow manufacturer's specifications.** You must install all stormwater controls in accordance with good engineering practices, including applicable design specifications.

*Note: Design specifications may be found in manufacturer specifications and/or in applicable erosion and sediment control manuals or ordinances. Any departures from such specifications must reflect good engineering practice and must be explained in your SWPPP.*

**2.1.1.4 Maintenance Requirements.**

- a. You must ensure that all erosion and sediment controls required in this Part remain in effective operating condition during permit coverage and are protected from activities that would reduce their effectiveness.
- b. You must inspect all erosion and sediment controls in accordance with the applicable requirements in Part 4.1, and document your findings in accordance with Part 4.1.7. If you find a problem (e.g., erosion and sediment controls need to be replaced, repaired, or maintained), you must make the necessary repairs or modifications in accordance with the following schedule:
  - i. Initiate work to fix the problem immediately after discovering the problem, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance.
  - ii. When installation of a new erosion or sediment control or a significant repair is needed, you must install the new or modified control and make it operational, or complete the repair, by no later than 7 calendar days from the time of discovery where feasible. If it

is infeasible to complete the installation or repair within 7 calendar days, you must document in your records why it is infeasible to complete the installation or repair within the 7-day timeframe and document your schedule for installing the stormwater control(s) and making it operational as soon as practicable after the 7-day timeframe. Where these actions result in changes to any of the stormwater controls or procedures documented in your SWPPP, you must modify your SWPPP accordingly within 7 calendar days of completing this work.

**2.1.2. Erosion and Sediment Control Requirements Applicable to All Sites.**

**2.1.2.1 Provide Natural Buffers or Equivalent Sediment Controls.** (These requirements only apply when a surface water is located within 50 feet of your project's earth disturbances).

*Note: EPA does not consider stormwater control features (e.g., stormwater conveyance channels, storm drain inlets, sediment basins) to constitute "surface waters" for the purposes of triggering the requirement to comply with this Part.*

*Note: Areas that you do not own or that are otherwise outside your operational control may be considered areas of undisturbed natural buffer for purposes of compliance with this part.*

You must ensure that any discharges to surface waters through the area between the disturbed portions of the property and any surface waters located within 50 feet of your site are treated by an area of undisturbed natural buffer and/or additional erosion and sediment controls in order to achieve a reduction in sediment load equivalent to that achieved by a 50-foot natural buffer. Refer to Appendix G (Buffer Guidance) for information to assist you in complying with this requirement, and to Part 2.1.2.1e for exceptions to this requirement.

a. **Compliance Alternatives.** You can comply with this requirement in one of the following ways:

i. Provide and maintain a 50-foot undisturbed natural buffer; or

*Note: If your earth disturbances are located 50 feet or further from a surface water, then you have complied with this alternative.*

ii. Provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by additional erosion and sediment controls, which in combination achieves the sediment load reduction equivalent to a 50-foot undisturbed natural buffer; or

iii. If it is infeasible to provide and maintain an undisturbed natural buffer of any size, you must implement erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

*Note: For the compliance alternatives in Parts 2.1.2.1a.i and 2.1.2.1a.ii, you are not required to enhance the quality of the vegetation that already exists in the buffer, or provide vegetation if none exists (e.g., arid and semi-arid areas). You only need to retain and protect from disturbance the natural buffer that existed prior to the commencement of construction. Any preexisting structures or impervious surfaces are allowed in the natural buffer provided you retain and*

*protect from disturbance the natural buffer area outside the preexisting disturbance. Similarly, for alternatives 2.1.2.1a.ii and 2.1.2.1a.iii, you are required to implement and maintain sediment controls that achieve the sediment load reduction equivalent to the undisturbed natural buffer that existed on the site prior to the commencement of construction. In determining equivalent sediment load reductions, you may consider naturally non-vegetated areas and prior disturbances. See Appendix G for a discussion of how to determine equivalent reductions.*

You must document the compliance alternative you have selected in your SWPPP, and comply with the applicable additional requirements described in Parts 2.1.2.1b and 2.1.2.1c below.

The compliance alternative selected above must be maintained throughout the duration of permit coverage, except that you may select a different compliance alternative during your period of permit coverage, in which case you must modify your SWPPP to reflect this change.

- b. **Additional Requirements for the Compliance Alternatives in Parts 2.1.2.1a.i and 2.1.2.1a.ii.** If you choose either of the compliance alternatives in Parts 2.1.2.1a.i or 2.1.2.1a.ii above, throughout your period of coverage under this permit, you must comply with the following additional requirements:
  - i. Ensure that all discharges from the area of earth disturbance to the natural buffer are first treated by the site's erosion and sediment controls, and use velocity dissipation devices if necessary to prevent erosion caused by stormwater within the buffer;
  - ii. Document in your SWPPP the natural buffer width retained on the property, and show the buffer boundary on your site plan; and
  - iii. Delineate, and clearly mark off, with flags, tape, or other similar marking device all natural buffer areas.
- c. **Additional Requirements for the Compliance Alternatives in Parts 2.1.2.1a.ii and 2.1.2.1a.iii.** If you choose either of the compliance alternatives in Parts 2.1.2.1a.ii and 2.1.2.1a.iii, you must document in your SWPPP the erosion and sediment control(s) you will use to achieve an equivalent sediment reduction, and any information you relied upon to demonstrate the equivalency.
- d. **Additional Requirement for the Compliance Alternative in Part 2.1.2.1a.iii.** If you choose the compliance alternative in Part 2.1.2.1a.iii, you must also include in your SWPPP a description of why it is infeasible for you to provide and maintain an undisturbed natural buffer of any size.
- e. **Exceptions.**
  - i. If there is no discharge of stormwater to surface waters through the area between your site and any surface waters located within 50 feet of your site, you are not required to comply with the requirements in this Part. This includes situations where you have implemented control measures, such as a berm or other barrier, that will prevent such discharges.

- ii. Where no natural buffer exists due to preexisting development disturbances (e.g., structures, impervious surfaces) that occurred prior to the initiation of planning for the current development of the site, you are not required to comply with the requirements in this Part, unless you will remove portions of the preexisting development.

Where some natural buffer exists but portions of the area within 50 feet of the surface water are occupied by preexisting development disturbances, you are required to comply with the requirements in this Part. For the purposes of calculating the sediment load reduction for either Part 2.1.2.1a.ii or 2.1.2.1a.iii above, you are not expected to compensate for the reduction in buffer function from the area covered by these preexisting disturbances. See Appendix G for further information on how to comply with the compliance alternatives in Part 2.1.2.1a.ii or 2.1.2.1a.iii above.

If during your project, you will disturb any portion of these preexisting disturbances, the area disturbed will be deducted from the area treated as natural buffer. For "linear construction projects" (see Appendix A), you are not required to comply with the requirements in this Part if site constraints (e.g., limited right-of-way) prevent you from meeting any of the compliance alternatives in Part 2.1.2.1a, provided that, to the extent practicable, you limit disturbances within 50 feet of the surface water and/or you provide supplemental erosion and sediment controls to treat stormwater discharges from earth disturbances within 50 feet of the surface water. You must also document in your SWPPP your rationale as to why it is infeasible for you to comply with the requirements in Part 2.1.2.1a, and describe any buffer width retained and/or supplemental erosion and sediment controls installed.

- iv. For "small residential lot" construction (i.e., a lot being developed for residential purposes that will disturb less than 1 acre of land, but is part of a larger residential project that will ultimately disturb greater than or equal to 1 acre), you have the option of complying with the requirements in Appendix G (Part G.2.3).
- v. The following disturbances within 50 feet of a surface water are exempt from the requirements in this Part:
  - Construction approved under a CWA Section 404 permit; or
  - Construction of a water-dependent structure or water access area (e.g., pier, boat ramp, trail).

You must document in your SWPPP if any of the above disturbances will occur within the buffer area on your site.

#### 2.1.2.2 **Install Perimeter Controls.**

- a. **Installation Requirements:** You must install sediment controls along those perimeter areas of your site that will receive stormwater from earth-disturbing activities.<sup>5</sup>

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<sup>5</sup> Examples of perimeter controls include, but are not limited to, filter berms, silt fences, and temporary diversion dikes.

For linear projects with rights-of-way that restrict or prevent the use of such perimeter controls, you must maximize the use of these controls where practicable and document in your SWPPP why it is impracticable in other areas of the project.

- b. **Maintenance Requirements:** You must remove sediment before it has accumulated to one-half of the above-ground height of any perimeter control.

2.1.2.3 **Minimize Sediment Track-Out.** You must minimize the track-out of sediment onto off-site streets, other paved areas, and sidewalks from vehicles exiting your construction site. To comply with this requirement, you must:

- a. Restrict vehicle use to properly designated exit points;
- b. Use appropriate stabilization techniques<sup>6</sup> at all points that exit onto paved roads so that sediment removal occurs prior to vehicle exit;
- c. Where necessary, use additional controls<sup>7</sup> to remove sediment from vehicle tires prior to exit; and
- d. Where sediment has been tracked-out from your site onto the surface of off-site streets, other paved areas, and sidewalks, you must remove the deposited sediment by the end of the same work day in which the track-out occurs or by the end of the next work day if track-out occurs on a non-work day. You must remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked-out sediment into any stormwater conveyance (unless it is connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, or surface water.

*Note: EPA recognizes that some fine grains may remain visible on the surfaces of off-site streets, other paved areas, and sidewalks even after you have implemented sediment removal practices. Such "staining" is not a violation of Part 2.1.2.3.*

2.1.2.4 **Control Discharges from Stockpiled Sediment or Soil.** For any stockpiles or land clearing debris composed, in whole or in part, of sediment or soil, you must comply with the following requirements:

*Note: For the purposes of this permit, sediment or soil stockpiles are defined as the storage for multiple days of soil or other sediment material to be used in the construction project.*

- a. Locate the piles outside of any natural buffers established under Part 2.1.2.1a and physically separated from other stormwater controls implemented in accordance with Part 2.1;
- b. Protect from contact with stormwater (including run-on) using a temporary perimeter sediment barrier;<sup>8</sup>

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<sup>6</sup> Examples of appropriate stabilization techniques include the use of aggregate stone with an underlying geotextile or non-woven filter fabric, or turf mats.

<sup>7</sup> Examples of additional controls to remove sediment from vehicle tires include, but are not limited to, wheel washing, rumble strips, and rattle plates.

<sup>8</sup> Examples include berms, dikes, fiber rolls, silt fences, sandbag, gravel bags, or straw bale.

- c. Where practicable, provide cover or appropriate temporary stabilization to avoid direct contact with precipitation or to minimize sediment discharge;
- d. Do not hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance (unless connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, or surface water; and
- e. Unless infeasible, contain and securely protect from wind.

2.1.2.5 **Minimize Dust.** In order to avoid pollutants from being discharged into surface waters, to the extent feasible, you must minimize the generation of dust through the appropriate application of water or other dust suppression techniques.

2.1.2.6 **Minimize the Disturbance of Steep Slopes.** You must minimize the disturbance of "steep slopes" (see definition in Appendix A).

*Note: The permit does not prevent or prohibit disturbance on steep slopes. For some projects, disturbance on steep slopes may be necessary for construction (e.g., a road cut in mountainous terrain). If a disturbance to steep slopes is required for the project, EPA would recognize that it is not economically achievable to avoid the disturbance to steep slopes. However, in cases where steep slope disturbances are required, minimizing the disturbances to steep slopes consistent with this requirement can be accomplished through the implementation of a number of standard erosion and sediment control practices, such as by phasing disturbances to these areas and using stabilization practices designed to be used on steep grades.*

2.1.2.7 **Preserve Topsoil.** You must preserve native topsoil on your site, unless infeasible.

*Note: Some projects may be designed to be highly impervious after construction, and therefore little or no vegetation is intended to remain. In these cases, preserving topsoil at the site would not be feasible. Some sites may not have space to stockpile topsoil on site for later use, in which case, it may also not be feasible to preserve topsoil.*

*Note: Stockpiling of topsoil at off-site locations, or transfer of topsoil to other locations, is an example of a practice that is consistent with the requirements in this Part.*

2.1.2.8 **Minimize Soil Compaction.** In areas of your site where final vegetative stabilization will occur or where infiltration practices will be installed, you must either:

- a. **Restrict vehicle / equipment use.** Restrict vehicle and equipment use in these locations to avoid soil compaction; or
- b. **Use soil conditioning techniques.** Prior to seeding or planting areas of exposed soil that have been compacted, use techniques that condition the soils to support vegetative growth, if necessary and feasible.

2.1.2.9 **Protect Storm Drain Inlets.** If you discharge to any storm drain inlet that carries stormwater flow from your site directly to a surface water (and it is not first directed to a sediment basin, sediment trap, or similarly effective control), and you have authority to access the storm drain inlet, you must:



- a. **Installation Requirements.** Install inlet protection measures<sup>9</sup> that remove sediment from your discharge prior to entry into the storm drain inlet.  
*Note: Inlet protection measures can be removed in the event of flood conditions or to prevent erosion.*
- b. **Maintenance Requirements.** Clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, you must remove the deposited sediment by the end of the same work day in which it is found or by the end of the following work day if removal by the same work day is not feasible.

### 2.1.3. Requirements Applicable Only to Sites Using These Specific Stormwater Controls.

You are required to comply with the following requirements if you will install any of the following stormwater controls at your site:

2.1.3.1 **Constructed Stormwater Conveyance Channels.** Design stormwater conveyance channels to avoid unstabilized areas on the site and to reduce erosion, unless infeasible. Minimize erosion of channels and their embankments, outlets, adjacent streambanks, slopes, and downstream waters during discharge conditions through the use of erosion controls and velocity dissipation devices<sup>10</sup> within and along the length of any constructed stormwater conveyance channel, and at any outlet to provide a non-erosive flow velocity.

2.1.3.2 **Sediment Basins.** If you install a sediment basin, you must comply with the following:

- a. **Design requirements.**
  - i. Provide storage for either (1) the calculated volume of runoff from a 2-year, 24-hour storm (see Appendix H), or (2) 3,600 cubic feet per acre drained;
  - ii. When discharging from the sediment basin, utilize outlet structures that withdraw water from the surface in order to minimize the discharge of pollutants, unless infeasible;

*Note: EPA believes that the circumstances in which it is infeasible to design outlet structures in this manner are rare. Exceptions may include areas with extended cold weather, where surface outlets may not be feasible during certain time periods (although it is expected that they would be used during other periods). If you have determined that it is infeasible to meet this requirement, you must provide documentation in your SWPPP to support your determination.*

- iii. Prevent erosion of (1) the sediment basin using stabilization controls (e.g., erosion control blankets), and (2) the inlet and outlet using erosion controls and velocity dissipation devices; and

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<sup>9</sup> Examples of inlet protection measures include fabric filters, sandbags, concrete blocks, and gravel barriers.

<sup>10</sup> Examples of velocity dissipation devices include check dams, sediment traps, riprap, or grouted riprap at outlets.

- iv. Sediment basins must be situated outside of surface waters and any natural buffers established under Part 2.1.2.1a, and must be designed to avoid collecting water from wetlands.
  - b. **Maintenance requirements.** Keep in effective operating condition and remove accumulated sediment to maintain at least ½ of the design capacity of the sediment basin at all times.
- 2.1.3.3 **Use of Treatment Chemicals.** If you are using polymers, flocculants, or other treatment chemicals at your site, you must comply with the following minimum requirements:
  - a. **Use conventional erosion and sediment controls prior to and after the application of treatment chemicals.** Use conventional erosion and sediment controls prior to chemical addition to ensure effective treatment. Chemicals may only be applied where treated stormwater is directed to a sediment control (*e.g., sediment basin, perimeter control*) prior to discharge.
  - b. **Select appropriate treatment chemicals.** Chemicals must be selected that are appropriately suited to the types of soils likely to be exposed during construction and discharged to locations where chemicals will be applied, and to the expected turbidity, pH, and flow rate of stormwater flowing into the chemical treatment system or area.
  - c. **Minimize discharge risk from stored chemicals.** Store all treatment chemicals in leak-proof containers that are kept under storm-resistant cover and surrounded by secondary containment structures (*e.g., spill berms, decks, spill containment pallets*), or provide equivalent measures, designed and maintained to minimize the potential discharge of treatment chemicals in stormwater or by any other means (*e.g., storing chemicals in covered area or having a spill kit available on site*).
  - d. **Comply with state/local requirements.** Comply with relevant state and local requirements affecting the use of treatment chemicals.
  - e. **Use chemicals in accordance with good engineering practices and specifications of the chemical provider/supplier.** You must also use treatment chemicals and chemical treatment systems in accordance with good engineering practices, and with dosing specifications and sediment removal design specifications provided by the provider/supplier of the applicable chemicals, or document specific departures from these practices or specifications and how they reflect good engineering practice.
  - f. **Ensure proper training.** Ensure that all persons who handle and use treatment chemicals at the construction site are provided with appropriate, product-specific training. Among other things, the training must cover proper dosing requirements.
  - g. **Comply with additional requirements for the approved use of cationic chemicals.** If you have been authorized to use cationic chemicals at your site pursuant to Part 1.2.4, and the authorization is conditioned on your compliance with additional requirements necessary to ensure that the use of such chemicals will not cause an exceedance of water quality standards, you are required to comply with all such requirements.

- h. **Provide proper SWPPP documentation.** You must include documentation in your SWPPP consistent with Parts 7.2.6.9 and 7.2.10.2 on the specific chemicals and chemical treatment systems you will use, and how you will comply with the requirements in this Part.

2.1.3.4 **Dewatering Practices.** You are prohibited from discharging ground water or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation, unless such waters are first effectively managed by appropriate controls.<sup>11</sup> Uncontaminated, non-turbid dewatering water can be discharged without being routed to a control.

You must also meet the following requirements for dewatering activities:

- a. **Discharge requirements.**
  - i. Do not discharge visible floating solids or foam;
  - ii. Use an oil-water separator or suitable filtration device (such as a cartridge filter) that is designed to remove oil, grease, or other products if dewatering water is found to contain these materials;
  - iii. To the extent feasible, utilize vegetated, upland areas of the site to infiltrate dewatering water before discharge. In no case will surface waters be considered part of the treatment area;
  - iv. At all points where dewatering water is discharged, comply with the velocity dissipation requirements of Part 2.1.3.1;
  - v. With backwash water, either haul it away for disposal or return it to the beginning of the treatment process; and
  - vi. Replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.
- b. **Treatment chemical restrictions.** If you are using polymers, flocculants, or other treatment chemicals to treat dewatering water, you must comply with the requirements in Parts 2.1.3.3.

## 2.2. STABILIZATION REQUIREMENTS.

You are required to stabilize exposed portions of your site in accordance with the requirements of this Part.

*Note: For the purposes of this permit, "exposed portions of your site" means areas of exposed soil that are required to be stabilized. Note that EPA does not expect that temporary or permanent stabilization measures to be applied to areas that are intended to be left unvegetated or unstabilized following construction (e.g., dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, or materials).*

### 2.2.1. Deadlines for Initiating and Completing Stabilization.

- 2.2.1.1 **Deadline to Initiate Stabilization.** You must initiate soil stabilization measures immediately whenever earth-disturbing activities have permanently or temporarily ceased on any portion of the site.

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<sup>11</sup> Examples of appropriate controls include, but are not limited to, sediment basins or sediment traps, sediment socks, dewatering tanks, tube settlers, weir tanks, or filtration systems (e.g., bag or sand filters) that are designed to remove sediment.

Note: Earth-disturbing activities have permanently ceased when clearing and excavation within any area of your construction site that will not include permanent structures has been completed.

Note: Earth-disturbing activities have temporarily ceased when clearing, grading, and excavation within any area of the site that will not include permanent structures will not resume (i.e., the land will be idle) for a period of 14 or more calendar days, but such activities will resume in the future.

The 14 calendar day timeframe above begins counting as soon as you know that construction work on a portion of your site will be temporarily ceased. In circumstances where you experience unplanned or unanticipated delays in construction due to circumstances beyond your control (e.g., sudden work stoppage due to unanticipated problems associated with construction labor, funding, or other issues related to the ability to work on the site; weather conditions rendering the site unsuitable for the continuation of construction work) and you do not know at first how long the work stoppage will continue, your requirement to immediately initiate stabilization is triggered as soon as you know with reasonable certainty that work will be stopped for 14 or more additional calendar days. At that point, you must comply with Parts 2.2.1.1 and 2.2.1.2.

Note: For the purposes of this permit, EPA will consider any of the following types of activities to constitute the initiation of stabilization:

1. prepping the soil for vegetative or non-vegetative stabilization;
2. applying mulch or other non-vegetative product to the exposed area;
3. seeding or planting the exposed area;
4. starting any of the activities in # 1 – 3 on a portion of the area to be stabilized, but not on the entire area; and
5. finalizing arrangements to have stabilization product fully installed in compliance with the applicable deadline for completing stabilization in Parts 2.2.1.2 and 2.2.1.3.

This list of examples is not exhaustive.

Note: The term "immediately" is used to define the deadline for initiating stabilization measures. In the context of this provision, "immediately" means as soon as practicable, but no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased.

**2.2.1.2 Deadline to Complete Stabilization Activities.** As soon as practicable, but no later than 14 calendar days after the initiation of soil stabilization measures consistent with Part 2.2.1.1<sup>12</sup>, you are required to have completed:

- a. For vegetative stabilization, all activities<sup>13</sup> necessary to initially seed or plant the area to be stabilized; and/or
- b. For non-vegetative stabilization, the installation or application of all such non-vegetative measures.

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<sup>12</sup> EPA may determine, based on an inspection carried out under Part 4.2 and corrective actions required under Part 5.3, that the level of sediment discharge on the site makes it necessary to require a faster schedule for completing stabilization. For instance, if sediment discharges from an area of exposed soil that is required to be stabilized are compromising the performance of existing stormwater controls, EPA may require stabilization to correct this problem.

<sup>13</sup> For example, such activities might include, but are not limited to, soil conditioning, application of seed or sod, planting of seedlings or other vegetation, application of fertilizer, and, as deemed appropriate, watering.

**2.2.1.3 Exceptions to the Deadlines for Initiating and Completing Stabilization.**

- a. *Deadlines for projects occurring in arid or semi-arid areas, or drought-stricken areas.* These requirements apply if (1) your site is located in an arid area, a semi-arid area, or a drought-stricken area, as these terms are defined in Appendix A, (2) construction will occur during the seasonally dry period or during a period in which drought is predicted to occur, and (3) you are using vegetative cover for temporary or permanent stabilization. You may also comply with the deadlines in Part 2.2.1.1 instead. The deadlines for these types of projects are as follows:
  - i. Immediately initiate, and within 14 calendar days of a temporary or permanent cessation of work in any portion of your site complete, the installation of temporary non-vegetative stabilization measures to the extent necessary to prevent erosion;
  - ii. As soon as practicable, given conditions or circumstances on your site, complete all activities necessary to initially seed or plant the area to be stabilized; and
  - iii. If construction is occurring during the seasonally dry period, indicate in your SWPPP the beginning and ending dates of the seasonally dry period and your site conditions. You must also include the schedule you will follow for initiating and completing vegetative stabilization.
- b. *Deadlines for projects that are affected by circumstances beyond the control of the permittee that delay the initiation and/or completion of vegetative stabilization as required in Parts 2.2.1.1 and/or 2.2.1.2.* If you are unable to meet the deadlines in Parts 2.2.1.1 and/or 2.2.1.2 due to circumstances beyond your control<sup>14</sup>, and you are using vegetative cover for temporary or permanent stabilization, you may comply with the following stabilization deadlines instead:
  - i. Immediately initiate, and within 14 calendar days complete, the installation of temporary non-vegetative stabilization measures to prevent erosion;
  - ii. Complete all soil conditioning, seeding, watering or irrigation installation, mulching, and other required activities related to the planting and initial establishment of vegetation as soon as conditions or circumstances allow it on your site; and  
*Note: You are required to have stabilized the exposed portions of your site consistent with Part 2.2.2 prior to terminating permit coverage under Part 8.2.*
  - iii. Document the circumstances that prevent you from meeting the deadlines required in Parts 2.2.1.1 and/or 2.2.1.2 and the schedule you will follow for initiating and completing stabilization.
- c. *Deadlines for sites discharging to sensitive waters.* For any portion of the site that discharges to a sediment or nutrient-impaired water (see Part 3.2) or to a water that is identified by your state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes (see Part 3.3), you are required

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<sup>14</sup> Examples include problems with the supply of seed stock or with the availability of specialized equipment, unsuitability of soil conditions due to excessive precipitation and/or flooding.

to complete the stabilization activities specified in Parts 2.2.1.2a and/or 2.2.1.2b within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities.

*Note: If you qualify for the deadlines for initiating and completing stabilization in Part 2.2.1.3a or b, you may comply with the stabilization deadlines in Part 2.2.1.3a or b for any portion of your site that discharges to a sensitive water.*

## **2.2.2. Criteria for Stabilization.**

To be considered adequately stabilized, you must meet the criteria below depending on the type of cover you are using, either vegetative or non-vegetative.

### **2.2.2.1 Vegetative Stabilization.**

- a. **For all sites, except those located in arid or semi-arid areas or on agricultural lands.**
  - i. If you are vegetatively stabilizing any exposed portion of your site through the use of seed or planted vegetation, you must provide established uniform vegetation (*e.g., evenly distributed without large bare areas*), which provides 70 percent or more of the density of coverage that was provided by vegetation prior to commencing earth-disturbing activities. You should avoid the use of invasive species;
  - ii. For final stabilization, vegetative cover must be perennial; and
  - iii. Immediately after seeding or planting the area to be vegetatively stabilized, to the extent necessary to prevent erosion on the seeded or planted area, you must select, design, and install non-vegetative erosion controls that provide cover (*e.g., mulch, rolled erosion control products*) to the area while vegetation is becoming established.
- b. **For sites located in arid or semi-arid areas, or drought-stricken areas.** If you are located in an arid or semi-arid area, or a drought-stricken area, as these terms are defined in Appendix A, you are considered to have completed final stabilization if both of the following criteria are met:
  - i. The area you have seeded or planted must within 3 years provide established vegetation that covers 70 percent or more of the density of vegetation prior to commencing earth-disturbing activities; and
  - ii. In addition to seeding or planting the area to be vegetatively stabilized, to the extent necessary to prevent erosion on the seeded or planted area, you must select, design, and install non-vegetative erosion controls that provide cover for at least 3 years without active maintenance by you.
- c. **For sites located on land used for agriculture.** Disturbed areas on land used for agricultural purposes (*e.g., pipelines across crop or range land, staging areas for highway construction*) that are restored to their pre-construction agricultural use are not subject to these final stabilization criteria. Areas disturbed that were not previously used for agricultural activities, and areas that are not being returned to preconstruction agricultural use, must meet the conditions for stabilization in this Part.

2.2.2.2 **Non-Vegetative Stabilization.** If you are using non-vegetative controls to stabilize exposed portions of your site, or if you are using such controls to temporarily protect areas that are being vegetatively stabilized, you must provide effective non-vegetative cover<sup>15</sup> to stabilize any such exposed portions of your site.

### 2.3. POLLUTION PREVENTION REQUIREMENTS.

You are required to design, install, and maintain effective pollution prevention measures in order to prevent the discharge of pollutants. Consistent with this requirement, you must:

- Eliminate certain pollutant discharges from your site (see Part 2.3.1);
- Properly maintain all pollution prevention controls (see Part 2.3.2); and
- Comply with pollution prevention standards for pollutant-generating activities that occur at your site (see Part 2.3.3).

These requirements apply to all areas of your construction site and any and all support activities covered by this permit consistent with Part 1.3.c.

#### 2.3.1. Prohibited Discharges.

You are prohibited from discharging the following from your construction site:

- 2.3.1.1 Wastewater from washout of concrete, unless managed by an appropriate control as described in Part 2.3.3.4;
- 2.3.1.2 Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials, unless managed by an appropriate control as described in Part 2.3.3.4;
- 2.3.1.3 Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
- 2.3.1.4 Soaps, solvents, or detergents used in vehicle and equipment washing; and
- 2.3.1.5 Toxic or hazardous substances from a spill or other release.

#### 2.3.2. General Maintenance Requirements.

You must ensure that all pollution prevention controls installed in accordance with this Part remain in effective operating condition and are protected from activities that would reduce their effectiveness. You must inspect all pollutant-generating activities and pollution prevention controls in accordance with your inspection frequency requirements in Parts 4.1.2 or 3.2.2.1 to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater discharges to receiving waters, and must document your findings in accordance with Part 4.1.7. If you find that controls need to be replaced, repaired, or maintained, you must make the necessary repairs or modifications in accordance with the following:

- 2.3.2.1 Initiate work to fix the problem immediately after discovering the problem, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance.

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<sup>15</sup> For temporary stabilization, examples of temporary non-vegetative stabilization methods include, but are not limited to, hydromulch and erosion control blankets. For final stabilization, examples of permanent non-vegetative stabilization methods include, but are not limited to, riprap, gabions, and geotextiles.

2.3.2.2 When installation of a new pollution prevention control or a significant repair is needed, you must install the new or modified control and make it operational, or complete the repair, by no later than 7 calendar days from the time of discovery. If it is infeasible to complete the installation or repair within 7 calendar days, you must document in your records why it is infeasible to complete the installation or repair within the 7 calendar day timeframe and document your schedule for installing the stormwater control(s) and making it operational as soon as practicable after the 7 calendar day timeframe. Where these actions result in changes to any of the pollution prevention controls or procedures documented in your SWPPP, you must modify your SWPPP accordingly within 7 calendar days of completing this work.

### 2.3.3. Pollution Prevention Standards.

You are required to comply with the pollution prevention standards in this Part if you conduct any of the following activities at your site or at any construction support activity areas covered by this permit (see Part 1.3.c):

- Fueling and maintenance of equipment or vehicles;
- Washing of equipment and vehicles;
- Storage, handling, and disposal of construction materials, products, and wastes; and
- Washing of applicators and containers used for paint, concrete, or other materials.

#### The pollution prevention standards are as follows:

2.3.3.1 **Fueling and Maintenance of Equipment or Vehicles.** If you conduct fueling and/or maintenance of equipment or vehicles at your site, you must provide an effective means of eliminating the discharge of spilled or leaked chemicals, including fuel, from the area where these activities will take place.<sup>16</sup>

To comply with the prohibition in Part 2.3.1.3, you must:

- a. If applicable, comply with the Spill Prevention Control and Countermeasures (SPCC) requirements in 40 CFR 112 and Section 311 of the CWA;
- b. Ensure adequate supplies are available at all times to handle spills, leaks, and disposal of used liquids;
- c. Use drip pans and absorbents under or around leaky vehicles;
- d. Dispose of or recycle oil and oily wastes in accordance with other federal, state, tribal, or local requirements;
- e. Clean up spills or contaminated surfaces immediately, using dry clean up measures where possible, and eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge; and
- f. Do not clean surfaces by hosing the area down.

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<sup>16</sup> Examples of effective controls include, but are not limited to, locating activities away from surface waters and stormwater inlets or conveyances, providing secondary containment (e.g., spill berms, decks, spill containment pallets) and cover where appropriate, and/or having spill kits readily available.



2.3.3.2 **Washing of Equipment and Vehicles.**

- a. You must provide an effective means of minimizing the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other types of washing;<sup>17</sup> and
- b. To comply with the prohibition in Part 2.3.1.4, for storage of soaps, detergents, or solvents, you must provide either (1) cover (e.g., *plastic sheeting or temporary roofs*) to prevent these detergents from coming into contact with rainwater, or (2) a similarly effective means designed to prevent the discharge of pollutants from these areas.

2.3.3.3 **Storage, Handling, and Disposal of Construction Products, Materials, and Wastes.** You must minimize the exposure to stormwater of any of the products, materials, or wastes specified below that are present at your site by complying with the requirements in this Part.

*Note: These requirements do not apply to those products, materials, or wastes that are not a source of stormwater contamination or that are designed to be exposed to stormwater.*

To ensure you meet this requirement, you must:

- a. *For building products*<sup>18</sup>: In storage areas, provide either (1) cover (e.g., *plastic sheeting or temporary roofs*) to prevent these products from coming into contact with rainwater, or (2) a similarly effective means designed to prevent the discharge of pollutants from these areas.
- b. *For pesticides, herbicides, insecticides, fertilizers, and landscape materials*:
  - i. In storage areas, provide either (1) cover (e.g., *plastic sheeting or temporary roofs*) to prevent these chemicals from coming into contact with rainwater, or (2) a similarly effective means designed to prevent the discharge of pollutants from these areas; and
  - ii. Comply with all application and disposal requirements included on the registered pesticide, herbicide, insecticide, and fertilizer label.
- c. *For diesel fuel, oil, hydraulic fluids, other petroleum products, and other chemicals*:
  - i. To comply with the prohibition in Part 2.3.1.3, store chemicals in water-tight containers, and provide either (1) cover (e.g., *plastic sheeting or temporary roofs*) to prevent these containers from coming into contact with rainwater, or (2) a similarly effective means designed to prevent the discharge of pollutants from these areas (e.g., *spill kits*), or provide secondary containment (e.g., *spill berms, decks, spill containment pallets*); and
  - ii. Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly. Do not clean

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<sup>17</sup> Examples of effective controls include, but are not limited to, locating activities away from surface waters and stormwater inlets or conveyances and directing wash waters to a sediment basin or sediment trap, using filtration devices, such as filter bags or sand filters, or using other similarly effective controls.

<sup>18</sup> Some examples of building products that are typically stored at construction sites include, but are not limited to, asphalt sealants, copper flashing, roofing materials, adhesives, concrete admixtures.

surfaces or spills by hosing the area down. Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.

- d. *For hazardous or toxic waste*<sup>19</sup>:
  - i. Separate hazardous or toxic waste from construction and domestic waste;
  - ii. Store waste in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, tribal, or local requirements;
  - iii. Store all containers that will be stored outside within appropriately-sized secondary containment (*e.g., spill berms, decks, spill containment pallets*) to prevent spills from being discharged, or provide a similarly effective means designed to prevent the discharge of pollutants from these areas (*e.g., storing chemicals in covered area or having a spill kit available on site*);
  - iv. Dispose of hazardous or toxic waste in accordance with the manufacturer's recommended method of disposal and in compliance with federal, state, tribal, and local requirements; and
  - v. Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly. Do not clean surfaces or spills by hosing the area down. Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.
- e. *For construction and domestic waste*<sup>20</sup>: Provide waste containers (*e.g., dumpster or trash receptacle*) of sufficient size and number to contain construction and domestic wastes. In addition, you must:
  - (1) On work days, clean up and dispose of waste in designated waste containers; and
  - (2) Clean up immediately if containers overflow.
- f. *For sanitary waste*: Position portable toilets so that they are secure and will not be tipped or knocked over.

2.3.3.4 **Washing of Applicators and Containers used for Paint, Concrete, or Other Materials.** To comply with the prohibition in Parts 2.3.1.1 and 2.3.1.2, you must provide an effective means of eliminating the discharge of water from the washout and cleanout of stucco, paint, concrete, form release oils, curing compounds, and other construction materials. To comply with this requirement, you must:

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<sup>19</sup> Examples of hazardous or toxic waste that may be present at construction sites include, but are not limited to, paints, solvents, petroleum-based products, wood preservatives, additives, curing compounds, acids.

<sup>20</sup> Examples of construction and domestic waste include, but are not limited to, packaging materials, scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, styrofoam, concrete, and other trash or building materials.

- a. Direct all washwater into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation;
- b. Handle washout or cleanout wastes as follows:
  - i. Do not dump liquid wastes in storm sewers;
  - ii. Dispose of liquid wastes in accordance with applicable requirements in Part 2.3.3.3; and
  - iii. Remove and dispose of hardened concrete waste consistent with your handling of other construction wastes in Part 2.3.3.3; and
- c. Locate any washout or cleanout activities as far away as possible from surface waters and stormwater inlets or conveyances, and, to the extent practicable, designate areas to be used for these activities and conduct such activities only in these areas.

**2.3.4. Emergency Spill Notification.**

You are prohibited from discharging toxic or hazardous substances from a spill or other release, consistent with Part 2.3.1.5. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, you must notify the National Response Center (NRC) at (800) 424-8802 or, in the Washington, DC metropolitan area, call (202) 267-2675 in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302 as soon as you have knowledge of the discharge. You must also, within 7 calendar days of knowledge of the release, provide a description of the release, the circumstances leading to the release, and the date of the release. State, tribal, or local requirements may necessitate additional reporting of spills or discharges to local emergency response, public health, or drinking water supply agencies.

**2.3.5. Fertilizer Discharge Restrictions.**

You are required to minimize discharges of fertilizers containing nitrogen or phosphorus. To meet this requirement, you must comply with the following requirements:

- 2.3.5.1 Apply at a rate and in amounts consistent with manufacturer's specifications, or document departures from the manufacturer specifications where appropriate in Part 7.2.7.3 of the SWPPP;
- 2.3.5.2 Apply at the appropriate time of year for your location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth;
- 2.3.5.3 Avoid applying before heavy rains that could cause excess nutrients to be discharged;
- 2.3.5.4 Never apply to frozen ground;
- 2.3.5.5 Never apply to stormwater conveyance channels with flowing water; and
- 2.3.5.6 Follow all other federal, state, tribal, and local requirements regarding fertilizer application.

**3. WATER QUALITY-BASED EFFLUENT LIMITATIONS.**

**3.1. GENERAL EFFLUENT LIMITATION TO MEET APPLICABLE WATER QUALITY STANDARDS**

Your discharge must be controlled as necessary to meet applicable water quality standards. You must also comply with any additional requirements that your state or tribe requires you to meet in Part 9.

In the absence of information demonstrating otherwise, EPA expects that compliance with the conditions in this permit will result in stormwater discharges being controlled as necessary to meet applicable water quality standards. If at any time you become aware, or EPA determines, that your discharge is not being controlled as necessary to meet applicable water quality standards, you must take corrective action as required in Part 5.2.1, and document the corrective actions as required in Part 5.2.2 and Part 5.4.

EPA will also impose additional water quality-based limitations on a site-specific basis, or require you to obtain coverage under an individual permit, if information in your NOI, or from other sources indicates that your discharges are not controlled as necessary to meet applicable water quality standards. This includes situations where additional controls are necessary to comply with a wasteload allocation in an EPA established or approved TMDL.

**3.2. DISCHARGE LIMITATIONS FOR IMPAIRED WATERS**

If you discharge to a surface water that is impaired for (1) sediment or a sediment-related parameter, such as total suspended solids (TSS) or turbidity, and/or (2) nutrients, including impairments for nitrogen and/or phosphorus, you are required to comply with the requirements in Part 3.2.2.

*Note: For the purposes of this Part, "impaired waters" are waters identified as impaired on the appropriate CWA Section 303(d) list, or waters with an EPA-approved or established TMDL. Your construction site will be considered to discharge to an impaired water if the first surface water to which you discharge is identified by a state, tribe, or EPA pursuant to Section 303(d) of the CWA as not meeting an applicable water quality standard, or is included in an EPA-approved or established total maximum daily load (TMDL). For discharges that enter a storm sewer system prior to discharge, the first surface water to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system.*

If you discharge to an impaired water that is impaired for a parameter other than a sediment-related parameter or nutrients, EPA will inform you if any additional limits or controls are necessary for your discharge to be controlled as necessary to meet water quality standards, including for it to be consistent with the assumptions of any available wasteload allocation in any applicable TMDL, or if coverage under an individual permit is necessary in accordance with Part 1.4.5.

If during your coverage under a previous permit, you were required to install and maintain stormwater controls specifically to meet the assumptions and requirements of an EPA-approved or established TMDL (for any parameter) or to otherwise control your discharge to meet water quality standards, you must continue to implement such controls as part of this permit.

**3.2.1. Identify If You Discharge To An Impaired Water.**

If you discharge to an impaired water, you must provide the following information in your NOI:

- A list of all impaired waters to which you discharge;
- The pollutant(s) for which the surface water is impaired; and

- Whether a TMDL has been approved or established for the waters to which you discharge.

### 3.2.2. Requirements for Discharges to Sediment or Nutrient-Impaired Waters.

If you discharge to a surface water that is impaired for (1) sediment or a sediment-related parameter (e.g., *total suspended solids (TSS) or turbidity*) and/or (2) nutrients (e.g., *nitrogen and/or phosphorus*), including impaired waters for which a TMDL has been approved or established for the impairment, you are required to comply with the following stormwater control requirements, which supplement the requirements applicable to your site in other corresponding parts of the permit

- 3.2.2.1 **Frequency of Site Inspection.** You must conduct inspections at the frequency specified in Part 4.1.3.
- 3.2.2.2 **Deadline to Complete Stabilization.** You must comply with the deadlines for completing site stabilization as specified in Part 2.2.1.3c.
- 3.2.2.3 **State and Tribal Requirements.** You must comply with any additional state or tribal impairment-related requirements included in Part 9.

EPA will also impose additional water quality-based limitations on a site-specific basis, or require you to obtain coverage under an individual permit, if it is determined that the controls in the Part will not be sufficient to control discharges consistent with the assumptions and requirements of an applicable wasteload allocation of an approved or established TMDL or to prevent the site from contributing to the impairment.

### 3.3. DISCHARGES TO WATERS IDENTIFIED AS TIER 2, TIER 2.5, OR TIER 3.

#### 3.3.1. Identify if You Discharge to a Tier 2, Tier 2.5, or Tier 3 Water.

If you discharge to a water identified by a state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 water, you must provide on your NOI a list of waters identified as Tier 2, Tier 2.5, or Tier 3 to which you discharge. See Appendix F for a list of Tier 2 and 3 waters in Idaho, Massachusetts, New Hampshire, and New Mexico.

*Note: For the purposes of this permit, you are considered to discharge to a Tier 2, Tier 2.5, or Tier 3 water if the first surface water to which you discharge is identified by a state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3. Tiers 2, 2.5 and 3 refer to waters either identified by the state as high quality waters or Outstanding National Resource Waters under 40 CFR §131.12(a)(2) and (3). For discharges that enter a storm sewer system prior to discharge, the surface water to which you discharge is the first surface water that receives the stormwater discharge from the storm sewer system.*

#### 3.3.2. Requirements for New Projects Discharging to Tier 2, Tier 2.5, or Tier 3 Waters.

For new projects, if you will discharge to a Tier 2, Tier 2.5, or Tier 3 water, you are required to comply with the requirements in Parts 4.1.3 (inspection frequencies) and 2.2.1.3c (stabilization deadlines), and, if applicable, Part 9 (relevant state or tribal requirements). In addition, on a case-by-case basis, EPA may notify operators of such new projects or operators of existing projects with increased discharges that additional analyses, stormwater controls, or other permit conditions are necessary to comply with the applicable antidegradation requirements, or notify you that an individual permit application is necessary in accordance with Part 1.4.5.

**4. INSPECTIONS.**

**4.1. SITE INSPECTIONS.**

**4.1.1. Person(s) Responsible for Inspecting Site.**

The person(s) inspecting your site may be a person on your staff or a third party you hire to conduct such inspections. You are responsible for ensuring that the person who conducts inspections is a "qualified person."

*Note: A "qualified person" is a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the skills to assess conditions at the construction site that could impact stormwater quality, and the skills to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit.*

**4.1.2. Frequency of Inspections.**

At a minimum, you must conduct a site inspection in accordance with one of the two schedules listed below, unless you are subject to Part 4.1.3 or Part 4.1.4:

4.1.2.1 At least once every 7 calendar days; or

4.1.2.2 Once every 14 calendar days and within 24 hours of the occurrence of a storm event of 0.25 inches or greater. To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day in accordance with Part 4.1.7.1d.

*Note: Inspections are only required during the project's normal working hours.*

*Note: You are required to specify in your SWPPP which schedule you will be following.*

*Note: "Within 24 hours of the occurrence of a storm event" means that you are required to conduct an inspection within 24 hours once a storm event has produced 0.25 inches, even if the storm event is still continuing. Thus, if you have elected to inspect bi-weekly in accordance with Part 4.1.2.2 and there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, you are required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.*

**4.1.3. Increase in Inspection Frequency for Sites Discharging to Sensitive Waters.**

For any portion of the site that discharges to a sediment or nutrient-impaired water (see Part 3.2) or to a water that is identified by your state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes (see Part 3.3), instead of the inspection frequency specified in Part 4.1.2, you must conduct inspections in accordance with the following inspection frequencies:

4.1.3.1 Once every 7 calendar days; and

4.1.3.2 Within 24 hours of the occurrence of a storm event of 0.25 inches or greater. To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that

measures 0.25 inches or greater, you must record the total rainfall measured for that day in accordance with Part 4.1.7.1d.

*Note: Inspections are only required during the project's normal working hours.*

*Note: "Within 24 hours of the occurrence of a storm event" means that you are required to conduct an inspection within 24 hours once a storm event has produced 0.25 inches, even if the storm event is still continuing. Thus, if there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, you are required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.*

*Note: If you qualify for any of the reduced inspection frequencies in Part 4.1.4, you may conduct inspections in accordance with Part 4.1.4 for any portion of your site that discharges to a sensitive water.*

#### **4.1.4. Reductions in Inspection Frequency.**

Your inspection frequency may be reduced as follows:

4.1.4.1 **For Stabilized Areas.** You may reduce the frequency of inspections to once per month in any area of your site where the stabilization steps in Parts 2.2.1.2a and 2.2.1.2b have been completed. If construction activity resumes in this portion of the site at a later date, the inspection frequency immediately increases to that required in Parts 4.1.2 or 4.1.3, if applicable. You must document the beginning and ending dates of this period in your records.

4.1.4.2 **For Arid, Semi-Arid, or Drought-Stricken Areas.** You may reduce the frequency of inspections to once per month and within 24 hours of the occurrence of a storm event of 0.25 inches or greater if your site is located in an arid, semi-arid, or drought-stricken area, as these terms are defined in Appendix A, and construction is occurring during the seasonally dry period or during a period in which drought is predicted to occur. You must document that you are using this reduced schedule and the beginning and ending dates of the seasonally dry period in your SWPPP. To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day in accordance with Part 4.1.7.1d.

*Note: Inspections are only required during the project's normal working hours.*

*Note: "Within 24 hours of the occurrence of a storm event" means that you are required to conduct an inspection within 24 hours once a storm event has produced 0.25 inches, even if the storm event is still continuing. Thus, if there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, you are required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.*

#### 4.1.4.3 **For Frozen Conditions.**

- a. If you are suspending earth-disturbing activities due to frozen conditions, you may temporarily suspend inspections on your site until thawing conditions (see Appendix A) begin to occur if:

- i. Runoff is unlikely due to continuous frozen conditions that are likely to continue at your site for at least 3 months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain on snow events) make discharges likely, you must immediately resume your regular inspection frequency as described in Parts 4.1.2 or 4.1.3, if applicable;
  - ii. Land disturbances have been suspended; and
  - iii. All disturbed areas of the site have been temporarily or permanently stabilized in accordance with Part 2.2.
- b. If you are still conducting earth-disturbing activities during frozen conditions, you may reduce your inspection frequency to once per month if:
- i. Runoff is unlikely due to continuous frozen conditions that are likely to continue at your site for at least 3 months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain on snow events) make discharges likely, you must immediately resume your regular inspection frequency as described in Parts 4.1.2 or 4.1.3 if applicable; and
  - ii. Except for areas in which you are actively conducting earth-disturbing activities, disturbed areas of the site have been temporarily or permanently stabilized in accordance with Part 2.2.

You must document the beginning and ending dates of this period in your SWPPP.

**4.1.5. Areas that Need to Be Inspected.** During your site inspection, you must at a minimum inspect the following areas of your site:

- 4.1.5.1 All areas that have been cleared, graded, or excavated and that have not yet completed stabilization consistent with Part 2.2;
- 4.1.5.2 All stormwater controls (including pollution prevention measures) installed at the site to comply with this permit;
- 4.1.5.3 Material, waste, borrow, or equipment storage and maintenance areas that are covered by this permit;
- 4.1.5.4 All areas where stormwater typically flows within the site, including drainageways designed to divert, convey, and/or treat stormwater;
- 4.1.5.5 All points of discharge from the site; and
- 4.1.5.6 All locations where stabilization measures have been implemented.

You are not required to inspect areas that, at the time of the inspection, are considered unsafe to your inspection personnel.

**4.1.6. Requirements for Inspections.** During your site inspection, you must at a minimum:

- 4.1.6.1 Check whether all erosion and sediment controls and pollution prevention controls are installed, appear to be operational, and are working as intended to minimize pollutant discharges. Determine if any controls need to be replaced, repaired, or maintained in accordance with Parts 2.1.1.4 and 2.3.2;



- 4.1.6.2 Check for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site;
- 4.1.6.3 Identify any locations where new or modified stormwater controls are necessary to meet the requirements of Parts 2 and/or 3;
- 4.1.6.4 At points of discharge and, if applicable, the banks of any surface waters flowing within your property boundaries or immediately adjacent to your property, check for signs of visible erosion and sedimentation (*i.e.*, *sediment deposits*) that have occurred and are attributable to your discharge; and
- 4.1.6.5 Identify any and all incidents of noncompliance observed.
- 4.1.6.6 If a discharge is occurring during your inspection, you are required to:
  - a. Identify all points of the property from which there is a discharge;
  - b. Observe and document the visual quality of the discharge, and take note of the characteristics of the stormwater discharge, including color, odor, floating, settled, or suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollutants; and
  - c. Document whether your stormwater controls are operating effectively, and describe any such controls that are clearly not operating as intended or are in need of maintenance.
- 4.1.6.7 Based on the results of your inspection, initiate corrective action under Part 5.

#### **4.1.7. Inspection Report.**

- 4.1.7.1 **Requirement to Complete Inspection Report.** You must complete an inspection report within 24 hours of completing any site inspection. Each inspection report must include the following:
  - a. The inspection date;
  - b. Names and titles of personnel making the inspection;
  - c. A summary of your inspection findings, covering at a minimum the observations you made in accordance with Part 4.1.6;
  - d. If you are inspecting your site at the frequency specified in Part 4.1.2.2, Part 4.1.3, or Part 4.1.4.2, and you conducted an inspection because of rainfall measuring 0.25 inches or greater, you must include the applicable rain gauge or weather station readings that triggered the inspection; and
  - e. If you have determined that it is unsafe to inspect a portion of your site, you must describe the reason you found it to be unsafe and specify the locations that this condition applied to.
- 4.1.7.2 **Signature Requirements.** Each inspection report must be signed in accordance with Appendix I, Part I.11 of this permit.
- 4.1.7.3 **Recordkeeping Requirements.** You are required to keep a current, copy of all inspection reports at the site or at an easily accessible location, so that it can be made available at the time of an onsite inspection or upon request by EPA. For purposes of this permit, your inspection reports may be kept electronically if the records are:
  - a. In a format that can be read in a similar manner as a paper record;

- b. Legally dependable with no less evidentiary value than their paper equivalent; and
- c. Accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be, if the records were stored in paper form.

*Note: See Section IX.1.7 of the Fact Sheet for a discussion on ways to ensure that electronic records satisfy this requirement. See Appendix I, Part I.11.5 for requirements relating to electronic signature of these documents.*

All inspection reports completed for this Part must be retained for at least 3 years from the date that your permit coverage expires or is terminated.

**4.2. INSPECTIONS BY EPA.**

You must allow EPA, or an authorized representative of the EPA, to conduct the following activities at reasonable times:

- 4.2.1.** Enter onto areas of your site, including any construction support activity areas covered by this permit (see Part 1.3.c), and onto locations where records are kept under the conditions of this permit;
- 4.2.2.** Access and copy any records that must be kept under the conditions of this permit;
- 4.2.3.** Inspect your construction site, including any construction support activity areas covered by this permit (see Part 1.3.c) and any stormwater controls installed and maintained at the site; and
- 4.2.4.** Sample or monitor for the purpose of ensuring compliance.

**5. CORRECTIVE ACTIONS.**

**5.1. "CORRECTIVE ACTIONS" DEFINED.**

Corrective actions are actions you take in compliance with this Part to:

- Repair, modify, or replace any stormwater control used at the site;
- Clean up and properly dispose of spills, releases, or other deposits; or
- Remedy a permit violation.

**5.2. REQUIREMENTS FOR TAKING CORRECTIVE ACTION.**

You must complete the following corrective actions in accordance with the deadlines specified in this Part. In all circumstances, you must immediately take all reasonable steps to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational, including cleaning up any contaminated surfaces so that the material will not discharge in subsequent storm events.

*Note: In this context, the term "immediately" requires construction operators to, on the same day a condition requiring corrective action is found, take all reasonable steps to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational. However, if the problem is identified at a time in the work day when it is too late to initiate corrective action, the initiation of corrective action must begin on the following work day.*

**5.2.1.** For any of the following conditions on your site, you must install a new or modified control and make it operational, or complete the repair, by no later than 7 calendar days from the time of discovery. If it is infeasible to complete the installation or repair within 7 calendar days, you must document in your records why it is infeasible to complete the installation or repair within the 7 calendar day timeframe and document your schedule for installing the stormwater control(s) and making it operational as soon as practicable after the 7-day timeframe.

5.2.1.1 A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in Parts 2 and/or 3; or

5.2.1.2 You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.1. In this case, you must notify your EPA Regional Office by the end of the next work day. You are required to submit your notification through EPA's electronic NOI system, or "eNOI", at [www.epa.gov/npdes/cgpenoi](http://www.epa.gov/npdes/cgpenoi); or

5.2.1.3 One of the prohibited discharges in Part 2.3.1 is occurring or has occurred.

**5.2.2.** Where your corrective actions result in changes to any of the stormwater controls or procedures documented in your SWPPP, you must modify your SWPPP accordingly within 7 calendar days of completing corrective action work.

**5.3. CORRECTIVE ACTION REQUIRED BY EPA.**

You must comply with any corrective actions required by EPA as a result of permit violations found during an inspection carried out under Part 4.2.

**5.4. CORRECTIVE ACTION REPORT.**

For each corrective action taken in accordance with this Part, you must complete a corrective action report, which includes the applicable information in Parts 5.4.1 and 5.4.2. Note that these reports must be maintained in your records but do not need to be provided to EPA except upon request.

- 5.4.1.** Within 24 hours of discovering the occurrence of one of the triggering conditions in Part 5.2.1 at your site, you must complete a report of the following:
- 5.4.1.1 Which condition was identified at your site;
  - 5.4.1.2 The nature of the condition identified; and
  - 5.4.1.3 The date and time of the condition identified and how it was identified.
- 5.4.2.** Within 7 calendar days of discovering the occurrence of one of the triggering conditions in Part 5.2.1 at your site, you must complete a report of the following:
- 5.4.2.1 Any follow-up actions taken to review the design, installation, and maintenance of stormwater controls, including the dates such actions occurred;
  - 5.4.2.2 A summary of stormwater control modifications taken or to be taken, including a schedule of activities necessary to implement changes, and the date the modifications are completed or expected to be completed; and
  - 5.4.2.3 Notice of whether SWPPP modifications are required as a result of the condition identified or corrective action.
- 5.4.3. Signature Requirements.** Each corrective action report must be signed and certified in accordance with Appendix I, Part I.11 of this permit.
- 5.4.4. Recordkeeping Requirements.** You are required to keep a current copy of all corrective action reports at the site or at an easily accessible location, so that it can be made available at the time of an onsite inspection or upon request by EPA. For purposes of this permit, your corrective action reports may be kept electronically if the records are:
- 5.4.4.1 In a format that can be read in a similar manner as a paper record;
  - 5.4.4.2 Legally dependable with no less evidentiary value than their paper equivalent; and
  - 5.4.4.3 Accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be, if the records were stored in paper form.

*Note: See Section IX.1.7 of the Fact Sheet for a discussion on ways to ensure that electronic records satisfy this requirement. See Appendix I, Part I.11.5 for requirements relating to electronic signature of these documents.*

All corrective action reports completed for this Part must be retained for at least 3 years from the date that your permit coverage expires or is terminated.

**6. STAFF TRAINING REQUIREMENTS.**

Prior to the commencement of earth-disturbing activities or pollutant-generating activities, whichever occurs first, you must ensure that the following personnel understand the requirements of this permit and their specific responsibilities with respect to those requirements:

- Personnel who are responsible for the design, installation, maintenance, and/or repair of stormwater controls (including pollution prevention measures);
- Personnel responsible for the application and storage of treatment chemicals (if applicable);
- Personnel who are responsible for conducting inspections as required in Part 4.1.1; and
- Personnel who are responsible for taking corrective actions as required in Part 5.

*Notes: (1) If the person requiring training is a new employee, who starts after you commence earth-disturbing or pollutant-generating activities, you must ensure that this person has the proper understanding as required above prior to assuming particular responsibilities related to compliance with this permit.*

*(2) For emergency-related construction activities, the requirement to train personnel prior to commencement of earth-disturbing activities does not apply, however, such personnel must have the required training prior to NOI submission.*

You are responsible for ensuring that all activities on the site comply with the requirements of this permit. You are not required to provide or document formal training for subcontractors or other outside service providers, but you must ensure that such personnel understand any requirements of the permit that may be affected by the work they are subcontracted to perform.

At a minimum, personnel must be trained to understand the following if related to the scope of their job duties (e.g., only personnel responsible for conducting inspections need to understand how to conduct inspections):

- The location of all stormwater controls on the site required by this permit, and how they are to be maintained;
- The proper procedures to follow with respect to the permit's pollution prevention requirements; and
- When and how to conduct inspections, record applicable findings, and take corrective actions.

**7. STORMWATER POLLUTION PREVENTION PLAN (SWPPP).**

**7.1. GENERAL REQUIREMENTS.**

**7.1.1. Requirement to Develop a SWPPP Prior to Submitting Your NOI.**

All operators associated with a construction project to be covered under this permit must develop a SWPPP.

*Note: You have the option of developing a group SWPPP where you are one of several operators who will be engaged in construction activities at your site. For instance, if both the owner and the general contractor of the construction site are permitted, the owner may be the party responsible for SWPPP development, and the general contractor can choose to use this same SWPPP, as long as the SWPPP addresses the general contractor's scope of construction work and obligations under this permit.*

You are required to develop your site's SWPPP prior to submitting your NOI. At a minimum, your SWPPP must include the information required in Part 7.2 and as specified in other parts of the permit.<sup>21</sup> You must also update the SWPPP as required in Part 7.4.

*Note: If your project is an "existing project" (see Part 1.4.2.b) or if you are a new operator of an existing project" (see Part 1.4.2.c), and it is infeasible for you to comply with a specific requirement in this Part or in Parts 2.1, and 2.3.3 through 2.3.5 (except for Parts 2.3.3.1, 2.3.3.2b, 2.3.3.3c.i, and 2.3.3.4) because (1) the provision was not part of the permit you were previously covered under (i.e., the 2003 or 2008 CGP), and (2) because you are prevented from compliance due to the nature or location of earth disturbances that commenced prior to February 16, 2012, or because you are unable to comply with the requirement due to the manner in which stormwater controls have already been installed or were already designed prior to February 16, 2012, you are required to include documentation of the reasons why it is infeasible for you to meet the specific requirement, and then you may be waived from complying with this requirement. You must include a separate justification why it is infeasible for you to meet each of the applicable requirements.*

If you prepared a SWPPP for coverage under a previous version of this NPDES permit, you must review and update your SWPPP to ensure that this permit's requirements are addressed prior to submitting your NOI.

**7.2. SWPPP CONTENTS.**

Your SWPPP must include the following information, at a minimum.

**7.2.1. Stormwater Team.**

Each operator, or group of multiple operators, must assemble a "stormwater team," which is responsible for overseeing the development of the SWPPP, any later modifications to it, and for compliance with the requirements in this permit.

The SWPPP must identify the personnel (by name or position) that are part of the stormwater team, as well as their individual responsibilities. Each member of the stormwater team must have ready access to an electronic or paper copy of applicable portions of this permit, the most updated copy of your SWPPP, and other relevant documents or information that must be kept with the SWPPP.

**7.2.2. Nature of Construction Activities.**

The SWPPP must describe the nature of your construction activities, including the size of the property (in acres) and the total area expected to be disturbed by the construction

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<sup>21</sup> The SWPPP does not establish the effluent limits that apply to your site's discharges; these limits are established in this permit in Parts 2 and 3.

activities (in acres), construction support activity areas covered by this permit (see Part 1.3.c), and the maximum area expected to be disturbed at any one time.

**7.2.3. Emergency-Related Projects.**

If you are conducting earth-disturbing activities in response to a public emergency (see Part 1.2), you must document the cause of the public emergency (e.g., *natural disaster, extreme flooding conditions, etc.*), information substantiating its occurrence (e.g., *state disaster declaration or similar state or local declaration*), and a description of the construction necessary to reestablish effected public services.

**7.2.4. Identification of Other Site Operators.**

The SWPPP must include a list of all other operators who will be engaged in construction activities at your site, and the areas of the site over which each operator has control.

**7.2.5. Sequence and Estimated Dates of Construction Activities.**

The SWPPP must include a description of the intended sequence of construction activities, including a schedule of the estimated start dates and the duration of the activity, for the following activities:

- 7.2.5.1 Installation of stormwater control measures, and when they will be made operational, including an explanation of how the sequence and schedule for installation of stormwater control measures complies with Part 2.1.1.3a and of any departures from manufacturer specifications pursuant to Part 2.1.1.3b;
- 7.2.5.2 Commencement and duration of earth-disturbing activities, including clearing and grubbing, mass grading, site preparation (i.e., excavating, cutting and filling), final grading, and creation of soil and vegetation stockpiles requiring stabilization;
- 7.2.5.3 Cessation, temporarily or permanently, of construction activities on the site, or in designated portions of the site;
- 7.2.5.4 Final or temporary stabilization of areas of exposed soil. The dates for stabilization must reflect the applicable deadlines to which you are subject in Part 2.2.1; and
- 7.2.5.5 Removal of temporary stormwater conveyances/channels and other stormwater control measures, removal of construction equipment and vehicles, and cessation of any pollutant-generating activities.

*Note: If plans change due to unforeseen circumstances or for other reasons, the requirement to describe the sequence and estimated dates of construction activities is not meant to "lock in" the operator to meeting these projections. When departures from initial projections are necessary, this should be documented in the SWPPP itself or in associated records, as appropriate.*

**7.2.6. Site Map.**

The SWPPP must include a legible site map, or series of maps, showing the following features of your project:

*Note: Included in the project site are any construction support activities covered by this permit (see Part 1.3.c).*

- 7.2.6.1 Boundaries of the property and of the locations where construction activities will occur, including:

- a. Locations where earth-disturbing activities will occur, noting any phasing of construction activities;
  - b. Approximate slopes before and after major grading activities. Note areas of steep slopes, as defined in Appendix A;
  - c. Locations where sediment, soil, or other construction materials will be stockpiled;
  - d. Locations of any crossings of surface waters;
  - e. Designated points on the site where vehicles will exit onto paved roads;
  - f. Locations of structures and other impervious surfaces upon completion of construction; and
  - g. Locations of construction support activity areas covered by this permit (see Part 1.3.c).
- 7.2.6.2 Locations of all surface waters, including wetlands, that exist within or in the immediate vicinity of the site. Indicate which waterbodies are listed as impaired, and which are identified by your state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 waters;
- 7.2.6.3 The boundary lines of any natural buffers provided consistent with Part 2.1.2.1a;
- 7.2.6.4 Areas of federally-listed critical habitat for endangered or threatened species;
- 7.2.6.5 Topography of the site, existing vegetative cover (e.g., forest, pasture, pavement, structures), and drainage pattern(s) of stormwater and authorized non-stormwater flow onto, over, and from the site property before and after major grading activities;
- 7.2.6.6 Stormwater and allowable non-stormwater discharge locations, including:
- a. Locations of any storm drain inlets on the site and in the immediate vicinity of the site; and
    - Note: The requirement to show storm drain inlets in the immediate vicinity of the site on your site map only applies to those inlets that are easily identifiable from your site or from a publicly accessible area immediately adjacent to your site.*
  - b. Locations where stormwater or allowable non-stormwater will be discharged to surface waters (including wetlands) on or near the site.
- 7.2.6.7 Locations of all potential pollutant-generating activities identified in Part 7.2.7;
- 7.2.6.8 Locations of stormwater control measures; and
- 7.2.6.9 Locations where polymers, flocculants, or other treatment chemicals will be used and stored.

**7.2.7. Construction Site Pollutants.**

The SWPPP must include the following:

- 7.2.7.1 A list and description of all the pollutant-generating activities<sup>22</sup> on your site.

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<sup>22</sup> Examples of pollutant-generating activities include, but are not limited to: paving operations; concrete, paint, and stucco washout and waste disposal; solid waste storage and disposal; and dewatering operations.



7.2.7.2 For each pollutant-generating activity, an inventory of pollutants or pollutant constituents (e.g., sediment, fertilizers and/or pesticides, paints, solvents, fuels) associated with that activity, which could be exposed to rainfall, or snowmelt, and could be discharged from your construction site. You must take into account where potential spills and leaks could occur that contribute pollutants to stormwater discharges. You must also document any departures from the manufacturer's specifications for applying fertilizers containing nitrogen and phosphorus, as required in Part 2.3.5.1.

**7.2.8. Non-Stormwater Discharges.**

The SWPPP must also identify all sources of allowable non-stormwater discharges listed in Part 1.3.d.

**7.2.9. Buffer Documentation.**

If you are required to comply with Part 2.1.2.1 because a surface water is located within 50 feet of your project's earth disturbances, you must describe which compliance alternative you have selected for your site, and comply with any additional requirements to provide documentation in Part 2.1.2.1.

**7.2.10. Description of Stormwater Control Measures.**

7.2.10.1 **Stormwater Control Measures to be Used During Construction Activity.** The SWPPP must describe all stormwater control measures that are or will be installed and maintained at your site to meet the requirements of Part 2. For each stormwater control measure, you must document:

- a. Information on the type of stormwater control measure to be installed and maintained, including design information;
- b. What specific sediment controls will be installed and made operational prior to conducting earth-disturbing activities in any given portion of your site to meet the requirement of Part 2.1.2.2a;
- c. For exit points on your site, document stabilization techniques you will use and any additional controls that are planned to remove sediment prior to vehicle exit consistent with Part 2.1.2.3; and
- d. For linear projects, where you have determined that the use of perimeter controls in portions of the site is impracticable, document why you believe this to be the case (see Part 2.1.2.2a).

7.2.10.2 **Use of Treatment Chemicals.** If you will use polymers, flocculants, or other treatment chemicals at your site, the SWPPP must include:

- a. A listing of all soil types<sup>23</sup> that are expected to be exposed during construction and that will be discharged to locations where chemicals will be applied. Also include a listing of soil types expected to be found in fill material to be used in these same areas, to the extent you have this information prior to construction.
- b. A listing of all treatment chemicals to be used at the site, and why the selection of these chemicals is suited to the soil characteristics of your site;

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<sup>23</sup> Information on soils may be obtained at <http://websoilsurvey.nrcs.usda.gov/app/>.

- c. If you have been authorized by your applicable EPA Regional Office to use cationic treatment chemicals, include the specific controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards;
- d. The dosage of all treatment chemicals you will use at the site or the methodology you will use to determine dosage;
- e. Information from any applicable Material Safety Data Sheets (MSDS);
- f. Schematic drawings of any chemically-enhanced stormwater controls or chemical treatment systems to be used for application of the treatment chemicals;
- g. A description of how chemicals will be stored consistent with Part 2.1.3.3b;
- h. References to applicable state or local requirements affecting the use of treatment chemicals, and copies of applicable manufacturer's specifications regarding the use of your specific treatment chemicals and/or chemical treatment systems; and
- i. A description of the training that personnel who handle and apply chemicals have received prior to permit coverage, or will receive prior to use of the treatment chemicals at your site.

7.2.10.3 **Stabilization Practices.** The SWPPP must describe the specific vegetative and/or non-vegetative practices that will be used to comply with the requirements in Part 2.2, including:

- a. If you will be complying with the stabilization deadlines specified in Part 2.2.1.3a, you must indicate in your SWPPP the beginning and ending dates of the seasonally dry period and your site conditions; and
- b. If you will be complying with the stabilization deadlines specified in Part 2.2.1.3b, you must document the circumstances that prevent you from meeting the deadlines specified in Parts 2.2.1.1 and/or 2.2.1.2.

#### **7.2.11. Pollution Prevention Procedures.**

7.2.11.1 **Spill Prevention and Response Procedures.** The SWPPP must describe procedures that you will follow to prevent and respond to spills and leaks consistent with Part 2.3, including:

- a. Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. Identify the name or position of the employee(s) responsible for detection and response of spills or leaks; and
- b. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity consistent with Part 2.3.4 and established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurs during a 24-hour period. Contact information must be in locations that are readily accessible and available.

You may also reference the existence of Spill Prevention Control and Countermeasure (SPCC) plans developed for the construction activity under Part 311 of the CWA, or spill control programs otherwise required

by an NPDES permit for the construction activity, provided that you keep a copy of that other plan onsite.

*Note: Even if you already have an SPCC or other spill prevention plan in existence, your plans will only be considered adequate if they meet all of the requirements of this Part, either as part of your existing plan or supplemented as part of the SWPPP.*

**7.2.11.2 Waste Management Procedures.** The SWPPP must describe procedures for how you will handle and dispose of all wastes generated at your site, including, but not limited to, clearing and demolition debris, sediment removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste.

### **7.2.12. Procedures for Inspection, Maintenance, and Corrective Action.**

The SWPPP must describe the procedures you will follow for maintaining your stormwater control measures, conducting site inspections, and, where necessary, taking corrective actions, in accordance with Part 2.1.1.4, Part 2.3.2, Part 4, and Part 5 of the permit. The following information must also be included in your SWPPP:

7.2.12.1 Personnel responsible for conducting inspections;

7.2.12.2 The inspection schedule you will be following, which is based on whether your site is subject to Part 4.1.2 or Part 4.1.3, and whether your site qualifies for any of the allowances for reduced inspection frequencies in Part 4.1.4. If you will be conducting inspections in accordance with the inspection schedule in Part 4.1.2.2 or Part 4.1.3, the location of the rain gauge on your site or the address of the weather station you will be using to obtain rainfall data;

7.2.12.3 If you will be reducing your inspection frequency in accordance with Part 4.1.4.2, the beginning and ending dates of the seasonally-defined arid period for your area or the valid period of drought. If you will be reducing your inspection frequency in accordance with Part 4.1.4.3, the beginning and ending dates of frozen conditions on your site; and

7.2.12.4 Any inspection or maintenance checklists or other forms that will be used.

### **7.2.13. Staff Training.**

The SWPPP must include documentation that the required personnel were trained in accordance with Part 6.

### **7.2.14. Documentation of Compliance with Other Federal Requirements.**

7.2.14.1 *Endangered Species Act.* The SWPPP must include documentation supporting your determination with respect to Part 1.1.e and Appendix D.

7.2.14.2 *Historic Properties.* The SWPPP must include documentation required by Appendix E in relation to potential impacts to historic properties.

7.2.14.3 *Safe Drinking Water Act Underground Injection Control (UIC) Requirements for Certain Subsurface Stormwater Controls.* If you are using any of the following stormwater controls at your site, as they are described below, you must document any contact you have had with the applicable state agency or EPA Regional Office responsible for implementing the requirements for underground injection wells in the Safe Drinking Water Act and EPA's implementing regulations at 40 CFR Parts 144 -147. Such controls would generally be considered Class V UIC wells:

- a. Infiltration trenches (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system);
- b. Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow; and
- c. Drywells, seepage pits, or improved sinkholes (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system).

*Note: For state UIC program contacts, refer to the following EPA website:  
<http://water.epa.gov/type/groundwater/uic/whereyoulive.cfm>.*

#### **7.2.15. SWPPP Certification.**

You must sign and date your SWPPP in accordance with Appendix I, Part I.11.

#### **7.2.16. Post-Authorization Additions to the SWPPP.**

Once you are notified of your coverage under this permit, you must include the following documents as part of your SWPPP:

- 7.2.16.1 A copy of your NOI submitted to EPA along with any correspondence exchanged between you and EPA related to coverage under this permit;
- 7.2.16.2 A copy of the acknowledgment letter you receive from the NOI Processing Center or eNOI system assigning your permit tracking number;
- 7.2.16.3 A copy of this permit (an electronic copy easily available to the stormwater team is also acceptable).

#### **7.3. ON-SITE AVAILABILITY OF YOUR SWPPP.**

You are required to keep a current copy of your SWPPP at the site or at an easily accessible location so that it can be made available at the time of an on-site inspection or upon request by EPA; a state, tribal, or local agency approving stormwater management plans; the operator of a storm sewer system receiving discharges from the site; or representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS).

EPA may provide access to portions of your SWPPP to a member of the public upon request. Confidential Business Information (CBI) will be withheld from the public, but may not be withheld from EPA, USFWS, or NMFS.

*Note: Information covered by a claim of confidentiality will be disclosed by EPA only to the extent of, and by means of, the procedures set forth in 40 CFR Part 2, Subpart B. In general, submitted information protected by a business confidentiality claim may be disclosed to other employees, officers, or authorized representatives of the United States concerned with implementing the CWA. The authorized representatives, including employees of other executive branch agencies, may review CBI during the course of reviewing draft regulations.*

If an onsite location is unavailable to keep the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance of your construction site.

**7.4. REQUIRED SWPPP MODIFICATIONS.**

**7.4.1. List of Conditions Requiring SWPPP Modification.**

You must modify your SWPPP, including the site map(s), in response to any of the following conditions:

- 7.4.1.1 Whenever new operators become active in construction activities on your site, or you make changes to your construction plans, stormwater control measures, pollution prevention measures, or other activities at your site that are no longer accurately reflected in your SWPPP. This includes changes made in response to corrective actions triggered under Part 5. You do not need to modify your SWPPP if the estimated dates in Part 7.2.5 change during the course of construction;
- 7.4.1.2 To reflect areas on your site map where operational control has been transferred (and the date of transfer) since initiating permit coverage;
- 7.4.1.3 If inspections or investigations by site staff, or by local, state, tribal, or federal officials determine that SWPPP modifications are necessary for compliance with this permit;
- 7.4.1.4 Where EPA determines it is necessary to impose additional requirements on your discharge, the following must be included in your SWPPP:
  - a. A copy of any correspondence describing such requirements; and
  - b. A description of the stormwater control measures that will be used to meet such requirements.
- 7.4.1.5 To reflect any revisions to applicable federal, state, tribal, or local requirements that affect the stormwater control measures implemented at the site; and
- 7.4.1.6 If applicable, if a change in chemical treatment systems or chemically-enhanced stormwater control is made, including use of a different treatment chemical, different dosage rate, or different area of application.

**7.4.2. Deadlines for SWPPP Modifications.**

You must complete required revisions to the SWPPP within 7 calendar days following the occurrence of any of the conditions listed in Part 7.4.1.

**7.4.3. SWPPP Modification Records.**

You are required to maintain records showing the dates of all SWPPP modifications. The records must include the name of the person authorizing each change (see Part 7.2.15 above) and a brief summary of all changes.

**7.4.4. Certification Requirements.**

All modifications made to the SWPPP consistent with Part 7.4 must be authorized by a person identified in Appendix I, Part I.11.b.

**7.4.5. Required Notice to Other Operators.**

Upon determining that a modification to your SWPPP is required, if there are multiple operators covered under this permit, you must immediately notify any operators who may be impacted by the change to the SWPPP.

**8. HOW TO TERMINATE COVERAGE.**

Until you terminate coverage under this permit, you are required to comply with all conditions and effluent limitations in the permit. To terminate permit coverage, you must submit to EPA a complete and accurate Notice of Termination (NOT), which certifies that you have met the requirements for terminating in Part 8.

**8.1. MINIMUM INFORMATION REQUIRED IN NOT.**

You will be required to provide the following in your NOT:

- 8.1.1. NPDES permit tracking number provided by EPA when you received coverage under this permit;
- 8.1.2. Basis for submission of the NOT (see Part 8.2);
- 8.1.3. Operator contact information;
- 8.1.4. Name of project and address (or a description of location if no street address is available); and
- 8.1.5. NOT certification.

**8.2. CONDITIONS FOR TERMINATING PERMIT COVERAGE.**

You may terminate permit coverage only if one of the following conditions occurs at your site:

**8.2.1. You have completed all earth-disturbing activities at your site and, if applicable, construction support activities covered by this permit (see Part 1.3.c), and you have met the following requirements:**

- 8.2.1.1 For any areas that (1) were disturbed during construction, (2) are not covered over by permanent structures, and (3) over which you had control during the construction activities, you have met the requirements for final vegetative or non-vegetative stabilization in Part 2.2.2;
- 8.2.1.2 You have removed and properly disposed of all construction materials, waste and waste handling devices, and have removed all equipment and vehicles that were used during construction, unless intended for long-term use following your termination of permit coverage;
- 8.2.1.3 You have removed all stormwater controls that were installed and maintained during construction, except those that are intended for long-term use following your termination of permit coverage or those that are biodegradable; and
- 8.2.1.4 You have removed all potential pollutants and pollutant-generating activities associated with construction, unless needed for long-term use following your termination of permit coverage; or

**8.2.2.** You have transferred control of all areas of the site for which you are responsible under this permit to another operator, and that operator has submitted an NOI and obtained coverage under this permit; or

**8.2.3.** Coverage under an individual or alternative general NPDES permit has been obtained.

**8.3. HOW TO SUBMIT YOUR NOT.**

You are required to use EPA's electronic NOI system, or "eNOI system", to prepare and submit your NOT. The electronic NOT form you are required to complete is found at [www.epa.gov/npdes/stormwater/cgpenoi](http://www.epa.gov/npdes/stormwater/cgpenoi). You will use your NOI tracking number (*i.e.*, the EPA number you were assigned upon authorization under the permit) to upload the

fillable NOT form, which will ensure that EPA properly records your termination of coverage. If you have a problem with the use of the eNOI system, contact the EPA Regional Office that corresponds to the location of your site. If you are given approval by the EPA Regional Office to use a paper NOT, you must complete the form in Appendix K.

**8.4. DEADLINE FOR SUBMITTING NOTS.**

You must submit your NOT within 30 calendar days after any one of the triggering conditions in Part 8.2 occur.

**8.5. EFFECTIVE DATE OF TERMINATION OF COVERAGE.**

Your authorization to discharge under this permit terminates at midnight of the calendar day that a complete NOT is processed and posted on EPA's website ([www.epa.gov/npdes/stormwater/cgpnoisearch](http://www.epa.gov/npdes/stormwater/cgpnoisearch)).

**9. PERMIT CONDITIONS APPLICABLE TO SPECIFIC STATES, INDIAN COUNTRY LANDS, OR TERRITORIES**

The provisions in this Part provide modifications or additions to the applicable conditions of this permit to reflect specific additional conditions required as part of the state or tribal CWA Section 401 certification process, or the Coastal Zone Management Act (CZMA) certification process, or as otherwise established by the permitting authority. The specific additional revisions and requirements only apply to activities in those specific states, Indian country, and areas in certain states subject to construction projects by Federal Operators. States, Indian country, and areas subject to construction by Federal Operators not included in this Part do not have any modifications or additions to the applicable conditions of this permit

**9.1. Region 1**

**9.1.1. MAR120000: Commonwealth of Massachusetts (except Indian country).**

- 9.1.1.1 You must comply with the Massachusetts Clean Waters Act (Ch. 21, ss. 26-53).
- 9.1.1.2 You must comply with the conditions in 314 CMR 4.00- Massachusetts Surface Water Quality Standards.
- 9.1.1.3 You must comply with the conditions in 314 CMR 3.00- Massachusetts Surface Water Discharge Permit Program.
- 9.1.1.4 You must comply with the Wetlands Protection Act (Ch. 131 s. 40) and its regulations, 310 CMR 10.00 and any Order of Conditions issued by a Conservation Commission or a Superseding Order of Conditions issued by the Massachusetts Department of Environmental Protection.
- 9.1.1.5 You must comply with the Massachusetts Storm Water Performance Standards, as prescribed by state regulations promulgated under the authority of the Massachusetts Clean Waters Act, MGL Ch. 21, ss 26-53 and the Wetlands Protection Act, Ch. 131, s. 40.
- 9.1.1.6 You must comply with the conditions in 314 CMR 9.00 – Water Quality Certification for Discharges of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States within the Commonwealth.
- 9.1.1.7 You must comply with the Massachusetts Endangered Species Act (MESA), MGL Ch. 313A and regulations at 321 CMR 10.00 and any actions undertaken to comply with this stormwater general permit shall not result in non-compliance with the MESA.
- 9.1.1.8 Activities covered under this general permit shall not interfere with the implementation of mosquito control work conducted in accordance with Chapter 252 including s. 5A thereunder and MassDEP Guideline Number BRP G01-02, West Nile Virus Application of Pesticides to Wetland Resource Areas and Buffer Zones, and Public Water Supplies.
- 9.1.1.9 The Department may request a copy of the Stormwater Pollution Prevention Plan (SWPPP) and the permittee is required to submit the SWPPP to the Department within 14 days of such request. The Department may conduct an inspection of any facility covered by this permit to ensure compliance with state law requirements, including state water quality standards. The Department may enforce its certification conditions.



- 9.1.1.10 The Department may require the permit holder to perform water quality monitoring during the permit term if monitoring is necessary for the protection of public health or the environment as designated under the authority at 314 CMR 3.00.
- 9.1.1.11 The Department may require the permit holder to provide measurable verification of the effectiveness of Best Management Practices (BMPs) and other control measures used in the stormwater management program, including water quality monitoring.
- 9.1.1.12 The Department has determined that compliance with this permit does not protect the permit holder from enforcement actions deemed necessary by the Department under its associated regulations to address an imminent threat to public health or a significant adverse environmental impact which results in a violation of the Massachusetts Clean Waters Act, Ch. 21, ss. 26-53.
- 9.1.1.13 The Department reserves the right to modify this 401 Water Quality Certification if any changes, modifications, or deletions are made to this general permit. In addition, the Department reserves the right to add and/or alter the terms and conditions of this 401 Water Quality Certification to carry out its responsibilities during the term of this general permit with respect to water quality, including any revisions to 314 CMR 4.00, Massachusetts Surface Water Quality Standards.
- 9.1.1.14 Should any violation of the Massachusetts Surface Water Quality Standards, 314 CMR 4.00, or the conditions of this 401 Water Quality Certification occur, the Department will direct the permit holder to correct the violation(s). The Department has the right to take any action as authorized by the General Laws of the Commonwealth to address the violation(s) of this permit or the Massachusetts Clean Waters Act and the regulations promulgated thereunder. Substantial civil and criminal penalties are authorized under MGL Ch. 21, s. 42 for discharging into Massachusetts' waters in violation of an order or permit issued by this Department. This 401 Water Quality Certification does not relieve the permit holder of the duty to comply with other applicable Massachusetts statutes and regulations.

**9.1.2. NHR120000: State of New Hampshire.**

- 9.1.2.1 If you disturb 100,000 square feet or more of contiguous area, you must also apply for an Alteration of Terrain (AoT) permit from DES pursuant to RSA 485-A:17 and Env-Ws 1500. This requirement also applies to a lower disturbance threshold of 50,000 square feet or more when construction occurs within the protected shoreline under the Shoreland Water Quality Protection Act (see RSA 483-B and Env-Ws 1400). A permit application must also be filed if your project disturbs an area of greater than 2,500 square feet, is within 50 feet of any surface water, and has a flow path of 50 feet or longer disturbing a grade of 25 percent or greater. Project sites with disturbances smaller than those discussed above, that have the potential to adversely affect state surface waters, are subject to the conditions of an AoT General Permit by Rule.
- 9.1.2.2 You must determine that any excavation dewatering discharges are not contaminated before they will be authorized as an allowable non-stormwater discharge under this permit (see Part 1.3.d). The water is considered uncontaminated if there is no groundwater contamination within 1,000 feet of the source of the groundwater to be treated and discharged.

Information on groundwater contamination can be generated over the Internet via the NHDES web site <http://des.nh.gov/> at the OneStop Web Geographic Information System at <http://www2.des.state.nh.us/gis/onestop>. If it is determined that the groundwater to be dewatered is near a remediation or other waste site you must apply for the Remediation General Permit (see <http://www.epa.gov/region1/npdes/rgp.html>.)

- 9.1.2.3 You must treat any uncontaminated excavation dewatering discharges as necessary to remove suspended solids and turbidity. The discharges must be sampled at a location prior to mixing with stormwater at least once per week during weeks when discharges occur. Samples must be analyzed for total suspended solids (TSS) and must meet monthly average and daily maximum TSS limits of 50 milligrams per liter (mg/L) and 100 mg/L, respectively. TSS (a.k.a. Residue, Nonfilterable) sampling and analysis must be performed in accordance with Tables IB and II in 40 CFR 136.3 (see: [http://www.access.gpo.gov/nara/cfr/waisidx\\_02/40cfr136\\_02.html](http://www.access.gpo.gov/nara/cfr/waisidx_02/40cfr136_02.html)). Records of any sampling and analysis must be maintained and kept with the SWPPP for at least three years after final site stabilization.
- 9.1.2.4 Construction site owners and operators must consider opportunities for post-construction groundwater recharge using infiltration best management practices (BMPs) during site design and preparation of the stormwater pollution prevention plan (SWPPP). If your construction site is in a town that is required to obtain coverage under the NPDES General Permit for discharges from Municipal Separate Storm Sewer Systems (MS4) you may be required to use such practices. The SWPPP must include a description of any on-site infiltration that will be installed as a post-construction stormwater management measure or reasons for not employing such measures such as 1) The facility is located in a wellhead protection area as defined in RSA 485-C:2; or 2) The facility is located in an area where groundwater has been reclassified to GAA, GAI or GA2 pursuant to RSA 485-C and Env-Ws 420; or 3) Any areas that would be exempt from the groundwater recharge requirements contained in Env-Ws 1507.04(e), including all land uses or activities considered to be a "High-load Area" (see Env-Wq 1502.26). For design considerations for infiltration measures see Volume II of the NH Stormwater Manual.
- 9.1.2.5 Appendix F contains a list of Tier 2, or high quality waters. Although there is no official list of tier 2 waters, it can be assumed that all NH surface waters are tier 2 for turbidity unless 1) the surface water that you are proposing to discharge into is listed as impaired for turbidity in the states listing of impaired waters (see Surface Water Quality Watershed Report Cards at [http://des.nh.gov/organization/divisions/water/wmb/swqa/report\\_cards.htm](http://des.nh.gov/organization/divisions/water/wmb/swqa/report_cards.htm) or 2) sampling upstream of the proposed discharge location shows turbidity values greater than 10 NTU. A single grab sample collected during dry weather (no precipitation within 48 hours) is acceptable.
- 9.1.2.6 To ensure compliance with RSA 485-C, RSA 485-A, RSA 485-A:13, I(a), Env-Wq 1700 and Env-Wq 302, the following information may be requested by NHDES. This information must be kept on site unless you receive a written request from NHDES that it be sent to the address shown in Part 9.1.2.7.
- a. A site map required in Part 7.2.6, showing the type and location of all post-construction infiltration BMPs utilized at the facility or the reason(s) why none were installed;

- b. A list of all non-stormwater discharges that occur at the facility, including their source locations and the control measures being used (see Part 1.3.d).
- c. Records of sampling and analysis of TSS required for construction dewatering discharges (see Part 9.1.2.3).

9.1.2.7 All required or requested documents must be sent to:

NH Department of Environmental Services, Wastewater Engineering Bureau,  
Permits & Compliance Section  
P.O. Box 95  
Concord, NH 03302-0095

9.1.2.8 When NHDES determines that additional water quality certification requirements are necessary to protect water quality, it may require individual discharges to meet additional conditions to obtain or continue coverage under the CGP. Any such conditions must be supplied to the permittee in writing. Any required pollutant loading analyses and any designs for structural best management practices necessary to protect water quality must be prepared by a civil or sanitary engineer registered in New Hampshire.

## 9.2. Region 4

### 9.2.1. FLR12000I: Indian country within the State of Florida.

- 9.2.1.1 **Seminole Tribe of Florida.** The following conditions apply only for discharges on federal trust lands of the Seminole Tribe of Florida (Big Cypress, Brighton, Hollywood, Immokalee, and Tampa Reservations):
  - a. Any discharges into waters of the Seminole Tribe of Florida shall not cause an exceedance in Turbidity of 29 NTU above natural background conditions.
  - b. Unless otherwise specified by previous permits or criteria, a storm event of three (3) day duration and twenty five (25) year return frequency shall be used in computing off-site discharge on Seminole Lands as agreed upon in the Water Rights Compact agreement attached to Public Law 100-228 (December 31, 1987), Seminole Indian Land Claims Settlement Act of 1987.
  - c. The Seminole Tribe of Florida accepts a 20' X 20' stabilization at entry/exit points.

## 9.3. Region 5

9.3.1. **MIR12000I: Indian country within the State of Michigan.** Projects on Indian country within the State of Michigan are not eligible for coverage under this permit. Contact EPA Region 5 for an individual permit application.

9.3.2. **MNR12000I: Indian country within the State of Minnesota.** Projects on Indian country within the State of Minnesota are not eligible for coverage under this permit. Contact EPA Region 5 for an individual permit application.

9.3.3. **WIR12000I: Indian country within the State of Wisconsin, except the Sokaogon Chippewa (Mole Lake) Community.** Projects in Indian country within the State of Wisconsin, are not eligible for coverage under this permit. Contact EPA Region 5 for an individual permit application.

**9.4. Region 6**

**9.4.1. NMR120000: State of New Mexico, except Indian country.**

- 9.4.1.1 In addition to all other provisions of this permit, operators who intend to obtain authorization under this permit for all new and existing stormwater discharges must satisfy the following condition:

The SWPPP must include site-specific interim and permanent stabilization, managerial, and structural solids, erosion, and sediment control best management practices (BMPs) and/or other controls that are designed to prevent to the maximum extent practicable an increase in the sediment yield and flow velocity from pre-construction, pre-development conditions to assure that applicable standards in 20.6.4 NMAC, including the antidegradation policy, or waste load allocations (WLAs) are met. This requirement applies to discharges both during construction and after construction operations have been completed. The SWPPP must identify, and document the rationale for selecting these BMPs and/or other controls. The SWPPP must also describe design specifications, construction specifications, maintenance schedules (including a long term maintenance plan), criteria for inspections, and expected performance and longevity of these BMPs. BMP selection must be made based on the use of appropriate soil loss prediction models (e.g., SEDCAD 4.0, RUSLE, SEDIMOT II, MULTISED, etc.), or equivalent, generally accepted (by professional erosion control specialists), soil loss prediction tools. The operator(s) must demonstrate, and include documentation in the SWPPP, that implementation of the site-specific practices will assure that the applicable standards or WLAs are met, and will result in sediment yields and flow velocities that, to the maximum extent practicable, will not be greater than the sediment yield levels and flow velocities from pre-construction, pre-development conditions. The SWPPP must be prepared in accordance with good engineering practices by qualified (e.g., CPESC certified, engineers with appropriate training, etc.) erosion control specialists familiar with the use of soil loss prediction models and design of erosion and sediment control systems based on these models (or equivalent soil loss prediction tools). Qualifications of the preparer (e.g., professional certifications, description of appropriate training) must be documented in the SWPPP. The operator(s) must design, implement, and maintain BMPs in the manner specified in the SWPPP.

- 9.4.1.2 Operators are not eligible to obtain authorization under this permit for all new and existing stormwater discharges to outstanding national resource waters (ONRWs) (also referred to as "Tier 3" waters).
- 9.4.1.3 The criteria for final stabilization in Part 2.2.2.1a is a "uniform vegetation (e.g., evenly distributed without large bare areas), which provides 70 percent or more of the density of coverage that was provided by vegetation prior to commencing earth-disturbing activities." The adjustment to allow for less than 100 % native vegetative cover (e.g., 50 % native vegetative cover x 70 % = 35 %) is acceptable.
- 9.4.1.4 Permittees can only use the criteria for final stabilization in Part 2.2.2.1b ("The area you have seeded or planted must within 3 years provide established vegetation that covers 70 percent or more of the density of vegetation prior to commencing earth-disturbing activities; and in addition to seeding or planting the area to be vegetatively stabilized, to the extent necessary to

prevent erosion on the seeded or planted area, you must select, design, and install non-vegetative erosion controls that provide cover for at least 3 years without active maintenance by you") as a method for final vegetative stabilization for purposes of filing a Notice of Termination (NOT) under the following conditions:

If this option is selected, you must notify NMED at the address listed in Part 9.4.1.5 at the time the NOT is submitted to EPA. The information to be submitted includes:

- A copy of the NOT;
- Contact information, including individual name or title, address, and phone number for the party responsible for implementing the final stabilization measures; and
- The date that the permanent vegetative stabilization practice was implemented and the projected timeframe that the 70 % native vegetative cover requirements are expected to be met. (Note that if more than three years is required to establish 70 percent of the natural vegetative cover, this technique cannot be used or cited for fulfillment of the final stabilization requirement – you remain responsible for establishment of final stabilization).

NMED also requires that operators periodically (minimum once/year) inspect and properly maintain the area until the criteria for final stabilization, as specified in Part 2.2 of the CGP, have been met. Operators must prepare an inspection report documenting the findings of these inspections and signed in accordance with Appendix I, Part I.11. This inspection record must be retained along with the SWPPP for three years after the NOT is submitted for the site and additionally submitted to NMED at the address listed in Part 9.4.1.5. The inspections at a minimum must include the following:

- Observations of all areas of the site disturbed by construction activity;
- Best Management Practices (BMPs)/post-construction stormwater controls must be observed to ensure they are effective;
- An assessment of the status of vegetative re-establishment; and
- Corrective actions required to ensure vegetative success within three years, and control of pollutants in stormwater runoff from the site, including implementation dates.

9.4.1.5 Copies of all documents submitted to EPA in non-electronic format must be sent to the following address:

Program Manager  
Point Source Regulation Section  
Surface Water Quality Bureau  
New Mexico Environment Department  
P.O. Box 5469  
Santa Fe, New Mexico 87502

**9.4.2. NMR12000I: Indian country within the State of New Mexico.**

9.4.2.1 **Pueblo of Sandia.** The following conditions apply only to discharges on the Pueblo of Sandia Reservation:

- a. Copies of all Notices of Intent submitted to the EPA must also be sent concurrently to the Pueblo of Sandia at the following address. Discharges are not authorized by this permit unless an accurate and complete NOI has been submitted to the Pueblo of Sandia.

Regular U.S. Delivery Mail:

Pueblo of Sandia Environment Department  
Attention: Water Quality Manager  
481 Sandia Loop  
Bernalillo, New Mexico 87004

- b. The Pueblo of Sandia will not allow the Rainfall Erosivity Waivers (see Appendix C) to be granted for any small construction activities.
- c. The Stormwater Pollution Prevention Plan (SWPPP) must be available to the Pueblo of Sandia Environment either electronically or hard copy upon request for review. The SWPPP must be made available at least fourteen (14) days before construction begins. The fourteen (14) day period will give Tribal staff time to become familiar with the project site, prepare for construction inspections, and determine compliance with the Pueblo of Sandia Water Quality Standards. Failure to provide a SWPPP to the Pueblo of Sandia may result in denial of the discharge or construction delay.
- d. An "Authorization to Proceed Letter" with site specific mitigation, site and project requirements will be sent out to the permittee when a review of the NOI and SWPPP is completed by the Pueblo of Sandia Environment Department. This approval will allow the construction to proceed if all applicable requirements are met.
- e. Before submitting a Notice of Termination (NOT), permittees must clearly demonstrate to the Pueblo of Sandia Environment Department through a site visit or documentation that requirements for site stabilization have been met and any temporary erosion control structures have been removed. A short letter stating the stabilization requirements have been met will be sent to the permittee to add to the permittees NOT submission to EPA.
- f. Copies of all NOT submitted to the EPA must also be sent concurrently to the Pueblo of Sandia at the following address:

Regular U.S. Delivery Mail:

Pueblo of Sandia Environment Department  
Attention: Water Quality Manager  
481 Sandia Loop  
Bernalillo, New Mexico 87004

**9.4.3. OKR12000F: Discharges in the State of Oklahoma that are not under the authority of the Oklahoma Department of Environmental Quality, including activities associated with oil and gas exploration, drilling, operations, and pipelines (includes SIC Groups 13 and 46,**

**and SIC codes 492 and 5171), and point source discharges associated with agricultural production, services, and silviculture (includes SIC Groups 01, 02, 07, 08, 09).**

In accordance with Section 303 of the Clean Water Act and Oklahoma's Water Quality Standards (OAC 785: 45):

- 9.4.3.1 For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Big Lee Creek or any water or watershed designated "ORW" (Outstanding Resource Water) in Oklahoma's Water Quality Standards, this permit may only be used to authorize discharges from temporary construction activities. Certification is denied for any on-going activities such as sand and gravel mining or any mineral mining.
- 9.4.3.2 For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Big Lee Creek or any water or watershed designated "ORW" (Outstanding Resource Water) in Oklahoma's Water Quality Standards, certification is denied for any discharges originating from support activities, including concrete and asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, or borrow areas.

**9.5. Region 8**

**9.5.1. MTR12000I: Indian country within the State of Montana**

9.5.1.1 **The Confederated Salish and Kootenai Tribes of the Flathead Nation.** The following conditions apply only to discharges on the Confederated Salish and Kootenai Tribes of the Flathead Nation Reservation:

- a. Permittees must send the Stormwater Pollution Prevention Plan (SWPPP) to the Tribes at least 30 days before construction starts.
- b. Before submitting the Notice of Termination (NOT), permittees must clearly demonstrate to an appointed tribal staff person during an on-site inspection that requirements for site stabilization have been met.
- c. The permittee must send a copy of the Notice of Intent (NOI) and the Notice of Termination (NOT) to the tribes.
- d. Permittees may submit their SWPPPs and NOTs electronically to [clintf@cst.org](mailto:clintf@cst.org).

Written NOI's, SWPPPs and NOT's may be mailed to:  
Clint Folden, Water Quality Regulatory Specialist  
Confederated Salish and Kootenai Tribes  
Natural Resources Department  
P.O. Box 278  
Pablo, MT 59855

9.5.1.2 Fort Peck Tribes. The following conditions apply only to discharges on the Fort Peck Reservation:

Permittees must notify the Fort Peck Office of Environmental Protection (OEP) two weeks prior to commencing construction.

**9.6. Region 9**

**9.6.1. AZR12000I: Indian country within the State of Arizona.**

9.6.1.1 **Hualapai Tribal Lands.** The following condition applies only for discharges on the Hualapai Reservation:

All notices of intent for proposed stormwater discharges under the CGP and all pollution prevention plans for stormwater discharges on Hualapai Tribal lands shall be submitted to Water Resources Program through the Tribal Chairman for review and approval, P.O. Box 179, Peach Springs, AZ 86434.

**9.6.2. CAR12000I: Indian country within the State of California.**

9.6.2.1 **Big Pine Paiute Tribe of the Owens Valley.** Big Pine Tribal Water Quality Standards Section VII(e): If a proposed action has the possibility to adversely affect the water quality of Big Pine Creek, an application must be filed with the Tribal Environmental Office. The application must describe the action proposed and its effects on the creek, how this information was derived, and a justification for the action. Upon satisfying these requirements, the Tribal Environmental Office will recommend or not recommend this proposal to be considered by the Tribal Council. Tribal Council will make a determination whether to consider the proposal further. If the Tribal Council wishes to consider the application further, the public participation process will take place (see paragraph VII(d)). The Tribal Council has the sole authority in permitting degradation to Big Pine Creek. If the Tribal Council makes the decision to allow degradation, they will submit their decision to the USEPA for review and approval.

**9.6.3. GUR120000: The Island of Guam.** Permittees must adhere with imposed conditions for the project, in accordance with section 307(c)(1), of the Coastal Zone Management Act, 15 CFR part 930.

**9.6.4. MPR120000: Commonwealth of the Northern Mariana Islands (CNMI).**

- 9.6.4.1 An Earthmoving and Erosion Control Permit must be obtained from DEQ prior to any construction activity covered under the NPDES General Permit.
- 9.6.4.2 All conditions and requirements set forth in the United States Environmental Protection Agency (USEPA), National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Construction Activities must be complied with.
- 9.6.4.3 A stormwater pollution prevention plan (SWPPP) for stormwater discharges from construction activities must be approved by the Director of DEQ prior to submission of the Notice of Intent (NOI).
- 9.6.4.4 A NOI to be covered by the General Permit for Discharges from Construction Activities must be submitted to DEQ and USEPA, Region IX, in the form prescribed by USEPA, accompanied by a SWPPP approval letter from DEQ.
- 9.6.4.5 The NOI must be postmarked fourteen (14) calendar days prior to any stormwater discharges and a copy is submitted to the Director of DEQ no later than seven (7) calendar days prior to any stormwater discharges.
- 9.6.4.6 Copies of all monitoring reports required by the NPDES General Permit are submitted to DEQ.
- 9.6.4.7 In accordance with Section 10.3(h) and (i) of the CNMI Water Quality Standards, DEQ reserves the right to deny coverage under this permit and



require submittal of an application for an individual NPDES permit based on review of the NOI or other information made available to the Director.

**9.6.5. NVR12000I: Indian country within the State of Nevada.**

9.6.5.1 **Pyramid Lake Paiute Tribe.** The following conditions apply only for discharges on the Pyramid Lake Paiute Reservation:

- a. A SWPPP for stormwater discharges from project construction activities must be submitted to, and approved by, the PLPT Environmental Department director, prior to the submission of a Notice of Intent (NOI or eNOI) to EPA.
- b. The applicant is to submit a hard copy of the Notice of Intent (NOI or eNOI) and a draft or final copy of the Stormwater Pollution Prevention Plan (SWPPP) by U.S. Mail to the Pyramid Lake Environmental Department at the address below:

Pyramid Lake Tribe Environmental Department  
P.O. Box 256  
Nixon, NV 89424

- c. The applicant is to concurrently submit to the PLPT Environmental Department, hard copies of any other forms submitted to the EPA, including waivers, reporting, and Notice of Termination (NOT).

**9.7. Region 10**

**9.7.1. IDR120000: The State of Idaho, except those located on Indian country.** Projects in the State of Idaho, except those located on Indian country, are not eligible for coverage under this permit. Contact EPA Region 10 for an individual permit application.

**9.7.2. ORR12000I: Indian country within the State of Oregon.**

9.7.2.1 **Confederated Tribes of the Umatilla Indian Reservation.** The following conditions apply only to discharges on the Umatilla Indian Reservation:

- a. The operator shall be responsible for achieving compliance with the Confederated Tribes of the Umatilla Indian Reservations (CTUIR) Water Quality Standards.
- b. The operator shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to the CTUIR Water Resources Program at the address below, at the same time it is submitted to EPA.
- c. The operator shall be responsible for submitting all Stormwater Pollution Prevention Plans (SWPPP) required under this permit to the CTUIR Water Resources Program for review and determination that the SWPPP is sufficient to meet Tribal Water Quality Standards, prior to the beginning of any discharge activities taking place.
- d. The operator shall be responsible for reporting an exceedance to Tribal Water Quality Standards to the CTUIR Water Resources Program at the same time it is reported to EPA.

Confederated Tribes of the Umatilla Indian Reservation  
Water Resources Program  
46411 Timine Way  
Pendleton, OR 97801

- e. The CTUIR Tribal Historic Preservation Office (THPO) requests copies of each NOI which will define whether or not the undertaking has the potential to affect historic properties, and if so, define the undertaking's area of potential effect (APE).
- f. The THPO must be provided 30 days to comment on the APE as defined in the permit application.
- g. If the project is an undertaking, a cultural resource investigation must occur. All fieldwork must be conducted by qualified personnel (as outlined by the Secretary of Interior's Standards and Guidelines; [http://www.nps.gov/history/local-law/arch\\_stnds\\_0.htm](http://www.nps.gov/history/local-law/arch_stnds_0.htm)) and documented using Oregon Reporting Standards ([http://egov.oregon.gov/OPRD/HCD/ARCH/arch\\_pubsandlinks.shtml](http://egov.oregon.gov/OPRD/HCD/ARCH/arch_pubsandlinks.shtml)). The resulting report must be submitted to the THPO and the THOP must concur with the findings and recommendations before any ground disturbing work can occur. The THPO requires 30 days to review all reports.
- h. The operator must obtain THPO concurrence in writing. If historic properties are present, this written concurrence will outline measures to be taken to prevent or mitigate effects to historic properties.
- i. For more information regarding the specifics of the cultural resources process, see 36 CFR Part 800.

Confederated Tribes of the Umatilla Indian Reservation  
Cultural Resources Protection Program  
Tribal Historic Preservation Office  
46411 Timine Way  
Pendleton, OR 97801

9.7.2.2 Confederated Tribes of the Warm Springs Reservation of Oregon. The following conditions apply only for discharges on the Warm Springs Reservation:

- a. All activities covered by this NPDES general permit occurring within a designated riparian buffer zone as established in Ordinance 74 (Integrated Resource Management Plan or IRMP) must be reviewed, approved and permitted through the Tribe's Hydraulic Permit Application process, including payment of any applicable fees.
- b. All activities covered by this NPDES permit must follow all applicable land management and resource conservation requirements specified in the IRMP.
- c. Operators of activities covered by this NPDES general permit must submit a Storm Water Pollution Prevention Plan to the Tribe's Water Control Board at the following address for approval at least 30 days prior to beginning construction activity:  

Chair, Warm Springs Water Control Board  
P.O. Box C  
Warm Springs, Oregon 97761
- d. The operator shall be responsible for achieving compliance with the Water Quality Standards of the Confederated Tribes of the Warm Springs Reservation of Oregon. The operator shall be responsible for

reporting an exceedance to Tribal Water Quality Standards to the Water Control Board at the address above.

- e. The operator shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to the CTWS, Branch of Natural Resources, Tribal Environmental Office at the address above, at the same time it is submitted to EPA.
- f. The CTWS Tribal Historic Preservation Officer (THPO) requests copies of each NOI which will define whether or not the undertaking has the potential to affect historic properties, and if so, define the undertaking's area of potential effect (APE).
- g. The THPO must be provided 30 days to comment on the APE as defined in the permit application.
- h. If the project is an undertaking, a cultural resource investigation must occur. All fieldwork must be conducted by qualified personnel (as outlined by the Secretary of Interior's Standards and Guidelines; [http://www.nps.gov/history/local-law/arch\\_stnds\\_0.htm](http://www.nps.gov/history/local-law/arch_stnds_0.htm)) and documented using Oregon Reporting Standards ([http://egov.oregon.gov/OPRD/HCD/ARCH/arch\\_pubsandlinks.shtml](http://egov.oregon.gov/OPRD/HCD/ARCH/arch_pubsandlinks.shtml)). The resulting report must be submitted to the THPO and the THOP must concur with the findings and recommendations before any ground disturbing work can occur. The THPO requires 30 days to review all reports.
- i. The operator must obtain THPO concurrence in writing. If historic properties are present, this written concurrence will outline measures to be taken to prevent or mitigate effects to historic properties.
- j. For more information regarding the specifics of the cultural resources process, see 36 CFR Part 800.

**9.7.3. WAR12000F: Areas in the State of Washington, except those located on Indian country, subject to construction by Federal Operators.** Areas in the State of Washington, except those located on Indian country, subject to construction by Federal Operators are not eligible for coverage under this permit. Contact EPA Region 10 for an individual permit application.

**9.7.4. WAR12000I: Indian country within the State of Washington**

9.7.4.1 **Kalispel Tribe.** The following conditions apply only for discharges on the Kalispel Reservation:

- a. The operator shall be responsible for achieving compliance with the Kalispel Tribe's Water Quality Standards, and;
- b. The operator shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to the Kalispel Tribe Natural Resources Department (KNRD) at the same time as it is submitted to the EPA, and;
- c. The operator shall submit all Storm Water Pollution Prevention Plans (SWPPP) to KNRD thirty (30) days prior to beginning any discharge activities for review, and;
- d. The operator shall be responsible for reporting any exceedance of Tribal Water Quality Standards to KNRD at the same time it is reported to EPA, and;

- e. Prior to any land disturbing activities on the Kalispel Indian Reservation and its dependent communities, the operator shall attain a cultural resource clearance letter from KNRD.
- f. All tribal correspondence pertaining to the General Permit for Discharges from Construction Activities shall be sent to:

Kalispel Tribe Natural Resources Department  
Water Resources Program  
PO Box 39  
Usk, WA 99180

9.7.4.2 **Lummi Nation.** The following conditions apply only for discharges on the Lummi Reservation:

- a. Pursuant to Lummi Code of Laws (LCL) 17.05.020(a), the operator must also obtain a land use permit from the Lummi Planning Department as provided in Title 15 of the Lummi Code of Laws and regulations adopted thereunder.
- b. Pursuant to LCL 17.05.020(a), each operator shall develop and submit a Stormwater Pollution Prevention Plan to the Lummi Water Resources Division for review and approval by the Water Resources Manager prior to beginning any discharge activities.
- c. Pursuant to LCL Title 17, each operator shall be responsible for achieving compliance with the Water Quality Standards for Surface Waters of the Lummi Indian Reservation (Lummi Administrative Regulations [LAR] 17 LAR 07.010 together with supplements and amendments thereto).
- d. Each operator shall submit a signed hard copy of the Notice of Intent (NOI) to the Lummi Water Resources Division at the same time it is submitted electronically to the Environmental Protection Agency (EPA) and shall provide the Lummi Water Resources Division the acknowledgement of receipt of the NOI from the EPA and the associated NPDES tracking number provided by the EPA within 7 calendar days of receipt by EPA.
- e. Each operator shall submit a signed hard copy of the Notice of Termination (NOT) to the Lummi Water Resources Division at the same time it is submitted electronically to the EPA and shall provide the Lummi Water Resources Division the EPA acknowledgement of receipt of the NOT.
- f. Stormwater Pollution Prevention Plans, Notice of intent, Notice of Termination and associated correspondence with the EPA shall be submitted to:

Lummi Natural Resources Department  
ATTN: Water Resources Manager  
2616 Kwina Road  
Bellingham, WA 98226-9298

- g. Please see the Lummi Nation website ([www.lummi-nsn.gov](http://www.lummi-nsn.gov)) and/or the Lummi Natural Resources Department website (<http://lnnr.lummi-nsn.gov/LummiWebsite/Website.php?PageID=53>) to review a copy of Title 17 of the Lummi Code of Laws, associated regulations, and the references upon which the conditions identified above are based.

- 9.7.4.3 **Makah Tribe.** The following conditions apply only for discharges on the Makah Reservation:
- a. The operator shall be responsible for achieving compliance with the Makah Tribe's Water Quality Standards.
  - b. The operator shall submit a Storm Water Pollution Prevention Plan to the Makah Tribe Water Quality Program and Makah Fisheries Habitat Division for review and approval at least thirty (30) days prior to beginning any discharge activities.
  - c. The operator shall submit a copy of the Notice of Intent to the Makah Tribe Water Quality Program and Makah Fisheries Habitat Division at the same time it is submitted to EPA.
  - d. Storm Water Pollution Prevention Plans and Notices of Intent shall be submitted to:  
Ray Colby  
Makah Tribal Water Quality  
Water Quality Specialist  
(360) 645-3162  
colby.ray@centurytel.net  
PO Box 115  
Neah Bay, WA 98357

- 9.7.4.4 **Puyallup Tribe of Indians.** The following conditions apply only for discharges on the Puyallup Reservation:
- a. Each permittee shall be responsible for achieving compliance with the Puyallup Tribe's Water Quality Standards, including antidegradation provisions. The Puyallup Natural Resources Department will conduct an antidegradation review for permitted activities that have the potential to lower water quality. The antidegradation review will be consistent with the Tribe's Antidegradation Implementation Procedures.
  - b. The permittee shall be responsible for meeting any additional permit requirements imposed by EPA necessary to comply with the Puyallup Tribe's antidegradation policies if the discharge point is located within 1 linear mile upstream of waters designated by the Tribe.
  - c. Each permittee shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to the Puyallup tribal Natural Resources Department at the address listed below at the same time it is submitted to EPA.  
  
Puyallup Tribe of Indians  
3009 E. Portland Avenue  
Tacoma, WA 98404  
ATTN: Natural Resources Department – Bill Sullivan and Char Naylor
  - d. All supporting documentation and certifications in the NOI related to coverage under the general permit for Endangered Species Act purposes shall be submitted to Bill Sullivan and Char Naylor in the Puyallup Tribal Natural Resources Department for review.
  - e. If EPA requires coverage under an individual or alternative permit, the permittee shall submit a copy of the permit to Bill Sullivan and Char

Naylor in the Puyallup Tribal Natural Resources Department at the address listed above.

- f. The permittee shall submit all stormwater pollution prevention plans to Bill Sullivan and Char Naylor in the Puyallup Tribal Natural Resources Department for review and approval prior to beginning any activities resulting in a discharge to tribal waters.
- g. The permittee shall conduct benchmark monitoring for turbidity and nutrients, complying with Section 3 monitoring requirements.
- h. The permittee shall notify Bill Sullivan and Char Naylor prior to conducting inspections at construction sites generating stormwater discharged to tribal waters.

## Appendix A - Definitions and Acronyms

### Definitions

"Action Area" – all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. See 50 CFR 402. For the purposes of this permit and for application of the Endangered Species Act requirements, the following areas are included in the definition of action area:

- The areas on the construction site where stormwater discharges originate and flow toward the point of discharge into the receiving waters (including areas where excavation, site development, or other ground disturbance activities occur) and the immediate vicinity. (Example: Where bald eagles nest in a tree that is on or bordering a construction site and could be disturbed by the construction activity or where grading causes stormwater to flow into a small wetland or other habitat that is on the site that contains listed species.)
- The areas where stormwater discharges flow from the construction site to the point of discharge into receiving waters. (Example: Where stormwater flows into a ditch, swale, or gully that leads to receiving waters and where listed species (such as listed amphibians) are found in the ditch, swale, or gully.)
- The areas where stormwater from construction activities discharge into receiving waters and the areas in the immediate vicinity of the point of discharge. (Example: Where stormwater from construction activities discharges into a stream segment that is known to harbor listed aquatic species.)
- The areas where stormwater controls will be constructed and operated, including any areas where stormwater flows to and from the stormwater controls. (Example: Where a stormwater retention pond would be built.)
- The areas upstream and/or downstream from the stormwater discharge into a stream segment that may be affected by these discharges. (Example: Where sediment discharged to a receiving stream settles downstream and impacts a breeding area of a listed aquatic species.)

"Agricultural Land" - cropland, grassland, rangeland, pasture, and other agricultural land, on which agricultural and forest-related products or livestock are produced and resource concerns may be addressed. Agricultural lands include cropped woodland, marshes, incidental areas included in the agricultural operation, and other types of agricultural land used for the production of livestock.

"Antidegradation Policy" or "Antidegradation Requirements" - the water quality standards regulation that requires States and Tribes to establish a three-tiered antidegradation program:

1. Tier 1 maintains and protects existing uses and water quality conditions necessary to support such uses. An existing use can be established by demonstrating that fishing, swimming, or other uses have actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur. Where an existing use is established, it must be protected even if it is not listed in the water quality standards as a designated use. Tier 1 requirements are applicable to all surface waters.
2. Tier 2 maintains and protects "high quality" waters -- water bodies where existing conditions are better than necessary to support CWA § 101(a)(2) "fishable/swimmable"

uses. Water quality can be lowered in such waters. However, State and Tribal Tier 2 programs identify procedures that must be followed and questions that must be answered before a reduction in water quality can be allowed. In no case may water quality be lowered to a level which would interfere with existing or designated uses.

3. Tier 3 maintains and protects water quality in outstanding national resource waters (ONRWs). Except for certain temporary changes, water quality cannot be lowered in such waters. ONRWs generally include the highest quality waters of the United States. However, the ONRW classification also offers special protection for waters of exceptional ecological significance, i.e., those which are important, unique, or sensitive ecologically. Decisions regarding which water bodies qualify to be ONRWs are made by States and authorized Indian Tribes.

“Arid Areas” – areas with an average annual rainfall of 0 to 10 inches.

“Bank” (e.g., stream bank or river bank) – the rising ground bordering the channel of a water of the U.S.

“Bluff” – a steep headland, promontory, riverbank, or cliff.

“Borrow Areas” – the areas where materials are dug for use as fill, either onsite or off-site.

“Bypass” – the intentional diversion of waste streams from any portion of a treatment facility. See 40 CFR 122.41(m)(1)(i).

“Cationic Treatment Chemical” – polymers, flocculants, or other chemicals that contain an overall positive charge. Among other things, they are used to reduce turbidity in stormwater discharges by chemically bonding to the overall negative charge of suspended silts and other soil materials and causing them to bind together and settle out. Common examples of cationic treatment chemicals are chitosan and cationic PAM.

“Commencement of Earth-Disturbing Activities” - the initial disturbance of soils (or ‘breaking ground’) associated with clearing, grading, or excavating activities or other construction-related activities (e.g., stockpiling of fill material).

“Commencement of Pollutant-Generating Activities” – at construction sites (for the purposes of this permit) occurs in any of the following circumstances:

- Clearing, grubbing, grading, and excavation has begun;
- Raw materials related to your construction activity, such as building materials or products, landscape materials, fertilizers, pesticides, herbicides, detergents, fuels, oils, or other chemicals have been placed at your site;
- Use of authorized non-stormwater for washout activities, or dewatering activities, have begun; or
- Any other activity has begun that causes the generation of or the potential generation of pollutants.

“Construction Activities” – earth-disturbing activities, such as the clearing, grading, and excavation of land.

“Construction and Development Effluent Limitations and New Source Performance Standards” (C&D Rule) – as published in 40 CFR § 450 is the regulation requiring effluent limitations guidelines



(ELG's) and new source performance standards (NSPS) for controlling the discharge of pollutants from construction sites.

"Construction Site" – the land or water area where construction activities will occur and where stormwater controls will be installed and maintained. The construction site includes construction support activities, which may be located at a different part of the property from where the primary construction activity will take place, or on a different piece of property altogether. The construction site is often a smaller subset of the lot or parcel within which the project is taking place.

"Construction Support Activities" – a construction-related activity that specifically supports the construction activity and involves earth disturbance or pollutant-generating activities of its own, and can include activities associated with concrete or asphalt batch plants, equipment staging yards, materials storage areas, excavated material disposal areas, and borrow areas.

"Construction Waste" – discarded material (such as packaging materials, scrap construction materials, masonry products, timber, steel, pipe, and electrical cuttings, plastics, and styrofoam).

"Conveyance Channel" – a temporary or permanent waterway designed and installed to safely convey stormwater flow within and out of a construction site.

"Corrective Action" – for the purposes of the permit, any action taken to (1) repair, modify, or replace any stormwater control used at the site; (2) clean up and dispose of spills, releases, or other deposits found on the site; and (3) remedy a permit violation.

"Critical Habitat" – as defined in the Endangered Species Act at 16 U.S.C. 1531 for a threatened or endangered species, (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

"CWA" – the Clean Water Act or the Federal Water Pollution Control Act, 33 U.S.C. section 1251 et seq.

"Dewatering" – the act of draining rainwater and/or groundwater from building foundations, vaults, and trenches.

"Discharge" – when used without qualification, means the "discharge of a pollutant."

"Discharge of a Pollutant" – any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. See 40 CFR 122.2.

"Discharge Point" – for the purposes of this permit, the location where collected and concentrated stormwater flows are discharged from the construction site.

“Discharge-Related Activity” – activities that cause, contribute to, or result in stormwater and allowable non-stormwater point source discharges, and measures such as the siting, construction, and operation of stormwater controls to control, reduce, or prevent pollutants from being discharged.

“Discharge to an Impaired Water” – for the purposes of this permit, a discharge to an impaired water occurs if the first water of the U.S. to which you discharge is identified by a State, Tribe, or EPA pursuant to Section 303(d) of the Clean Water Act as not meeting an applicable water quality standard, or is included in an EPA-approved or established total maximum daily load (TMDL). For discharges that enter a storm sewer system prior to discharge, the water of the U.S. to which you discharge is the first water of the U.S. that receives the stormwater discharge from the storm sewer system.

“Domestic Waste” – for the purposes of this permit, typical household trash, garbage or rubbish items generated by construction activities.

“Drainageway” – an open linear depression, whether constructed or natural, that functions for the collection and drainage of surface water.

“Drought-Stricken Area” – for the purposes of this permit, an area in which the National Oceanic and Atmospheric Administration’s U.S. Seasonal Drought Outlook indicates for the period during which the construction will occur that any of the following conditions are likely: (1) “Drought to persist or intensify”, (2) “Drought ongoing, some improvement”, (3) “Drought likely to improve, impacts ease”, or (4) “Drought development likely”. See [http://www.cpc.ncep.noaa.gov/products/expert\\_assessment/season\\_drought.gif](http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.gif).

“Earth-Disturbing Activity” or “Land-Disturbing Activity” – actions taken to alter the existing vegetation and/or underlying soil of a site, such as clearing, grading, site preparation (e.g., excavating, cutting, and filling), soil compaction, and movement and stockpiling of top soils.

“Effective Operating Condition” – for the purposes of this permit, a stormwater control is kept in effective operating condition if it has been implemented and maintained in such a manner that it is working as designed to minimize pollutant discharges.

“Effluent Limitations” – for the purposes of this permit, any of the Part 2 or Part 3 requirements.

“Effluent Limitations Guideline” (ELG) – defined in 40 CFR § 122.2 as a regulation published by the Administrator under section 304(b) of CWA to adopt or revise effluent limitations.

“Electronic Notice of Intent” (eNOI) – EPA’s online system for submitting electronic Construction General Permit forms.

“Eligible” – for the purposes of this permit, refers to stormwater and allowable non-stormwater discharges that are authorized for coverage under this general permit.

“Emergency-Related Project” – a project initiated in response to a public emergency (e.g., natural disaster, disruption in essential public services), for which the related work requires immediate authorization to avoid imminent endangerment to human health or the environment, or to reestablish essential public services.

“Endangered Species” – defined in the Endangered Species Act at 16 U.S.C. 1531 as any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose

protection under the provisions of this Act would present an overwhelming and overriding risk to man.

“Excursion” – a measured value that exceeds a specified limit.

“Existing Project” – a construction project that commenced construction activities prior to February 15, 2012.

“Exit Points” – any points of egress from the construction site to be used by vehicles and equipment during construction activities.

“Exposed Soils” – for the purposes of this permit, soils that as a result of earth-disturbing activities are left open to the elements.

“Federal Operator” – an entity that meets the definition of “Operator” in this permit and is either any department, agency or instrumentality of the executive, legislative, and judicial branches of the Federal government of the United States, or another entity, such as a private contractor, performing construction activity for any such department, agency, or instrumentality.

“Final Stabilization” – on areas not covered by permanent structures, either (1) vegetation has been established, or for arid or semi-arid areas, will be established that provides a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the natural background vegetative cover, or (2) non-vegetative stabilization methods have been implemented to provide effective cover for exposed portions of the site.

“Hazardous Materials” or “Hazardous Substances” or “Hazardous or Toxic Waste” – for the purposes of this permit, any liquid, solid, or contained gas that contain properties that are dangerous or potentially harmful to human health or the environment. See also 40 CFR §261.2.

“Historic Property” – as defined in the National Historic Preservation Act regulations means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

“Impaired Water” or “Water Quality Impaired Water” or “Water Quality Limited Segment” – for the purposes of this permit, waters identified as impaired on the CWA Section 303(d) list, or waters with an EPA-approved or established TMDL. Your construction site will be considered to discharge to an impaired water if the first water of the U.S. to which you discharge is identified by a state, tribe, or EPA pursuant to Section 303(d) of the CWA as not meeting an applicable water quality standard, or is included in an EPA-approved or established total maximum daily load (TMDL). For discharges that enter a storm sewer system prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system.

“Impervious Surface” – for the purpose of this permit, any land surface with a low or no capacity for soil infiltration including, but not limited to, pavement, sidewalks, parking areas and driveways, packed gravel or soil, or rooftops.

“Indian Country” or “Indian Country Lands” – defined at 40 CFR §122.2 as:

1. All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation;
2. All dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and
3. All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-ways running through the same.

“Infeasible” – for the purpose of this permit, infeasible means not technologically possible or not economically practicable and achievable in light of best industry practices. EPA notes that it does not intend for any permit requirement to conflict with state water rights law.

“Install” or “Installation” – when used in connection with stormwater controls, to connect or set in position stormwater controls to make them operational.

“Intermittent (or Seasonal) Stream” – one which flows at certain times of the year when groundwater provides water for stream flow, as well as during and immediately after some precipitation events or snowmelt.

“Jar test” – a test designed to simulate full-scale coagulation/flocculation/sedimentation water treatment processes by taking into account the possible conditions.

“Landward” – positioned or located away from a waterbody, and towards the land.

“Level Spreader” – a temporary stormwater control used to spread stormwater flow uniformly over the ground surface as sheet flow to prevent concentrated, erosive flows from occurring.

“Linear Project” – includes the construction of roads, bridges, conduits, substructures, pipelines, sewer lines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities in a long, narrow area.

“Minimize” – to reduce and/or eliminate to the extent achievable using stormwater controls that are technologically available and economically practicable and achievable in light of best industry practices.

“Municipal Separate Storm Sewer System” or “MS4” – defined at 40 CFR §122.26(b)(8) as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

1. Owned and operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
2. Designed or used for collecting or conveying stormwater;
3. Which is not a combined sewer; and
4. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

"National Pollutant Discharge Elimination System" (NPDES) – defined at 40 CFR §122.2 as the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA. The term includes an 'approved program.'

"Native Topsoil" – the uppermost layer of naturally occurring soil for a particular area, and is often rich in organic matter, biological activity, and nutrients.

"Native Vegetation" – the species of plants that have developed for a particular region or ecosystem and are considered endemic to that region or ecosystem.

"Natural Buffer" – for the purposes of this permit, an area of undisturbed natural cover surrounding surface waters within which construction activities are restricted. Natural cover includes the vegetation, exposed rock, or barren ground that exists prior to commencement of earth-disturbing activities.

"Natural Vegetation" – vegetation that occurs spontaneously without regular management, maintenance or species introductions, removals, and that generally has a strong component of native species.

"New Operator of a New or Existing Project" – an operator that through transfer of ownership and/or operation replaces the operator of an already permitted construction project.

"New Project" – a construction project that commences construction activities on or after February 15.

"New Source" – for the purpose of this permit, a construction project that commenced construction activities after February 1, 2010.

"New Source Performance Standards (NSPS)" – for the purposes of this permit, NSPS are technology-based standards that apply to construction sites that are new sources under 40 CFR 450.24.

"Non-Stormwater Discharges" – discharges that do not originate from storm events. They can include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, sanitary wastes, concrete washout water, paint wash water, irrigation water, or pipe testing water.

"Non-Turbid" – a discharge that does not cause or contribute to an exceedence of turbidity-related water quality standards.

"Notice of Intent" (NOI) – the form (electronic or paper) required for authorization of coverage under the Construction General Permit.

"Notice of Termination" (NOT) – the form (electronic or paper) required for terminating coverage under the Construction General Permit.

"Operational" – for the purpose of this permit, stormwater controls are made "operational" when they have been installed and implemented, are functioning as designed, and are properly maintained.

“Operator” – for the purpose of this permit and in the context of stormwater discharges associated with construction activity, any party associated with a construction project that meets either of the following two criteria:

1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
2. The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the permit).

This definition is provided to inform permittees of EPA's interpretation of how the regulatory definitions of “owner or operator” and “facility or activity” are applied to discharges of stormwater associated with construction activity.

“Ordinary High Water Mark” – the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and/or the presence of litter and debris.

“Outfall” – see “Discharge Point.”

“Permitting Authority” – for the purposes of this permit, EPA, a Regional Administrator of EPA, or an authorized representative.

“Point(s) of Discharge” – see “Discharge Point.”

“Point Source” – any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

“Pollutant” – defined at 40 CFR §122.2. A partial listing from this definition includes: dredged spoil, solid waste, sewage, garbage, sewage sludge, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial or municipal waste.

“Pollutant-Generating Activities” – at construction sites (for the purposes of this permit), those activities that lead to or could lead to the generation of pollutants, either as a result of earth-disturbance or a related support activity. Some of the types of pollutants that are typically found at construction sites are:

- sediment;
- nutrients;
- heavy metals;
- pesticides and herbicides;
- oil and grease;
- bacteria and viruses;
- trash, debris, and solids;
- treatment polymers; and
- any other toxic chemicals.

“Pollution Prevention Measures” – stormwater controls designed to reduce or eliminate the addition of pollutants to construction site discharges through analysis of pollutant sources, implementation of proper handling/disposal practices, employee education, and other actions.

“Polymers” – for the purposes of this permit, coagulants and flocculants used to control erosion on soil or to enhance the sediment removal capabilities of sediment traps or basins. Common construction site polymers include polyacrylamide (PAM), chitosan, alum, polyaluminum chloride, and gypsum.

“Prohibited Discharges” – discharges that are not allowed under this permit, including:

1. Wastewater from washout of concrete;
2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
4. Soaps or solvents used in vehicle and equipment washing;
5. Toxic or hazardous substances from a spill or other release; and
6. Waste, garbage, floatable debris, construction debris, and sanitary waste from pollutant-generating activities.

“Provisionally Covered Under this Permit” – for the purposes of this permit, EPA provides temporary coverage under this permit for emergency-related projects prior to receipt of a complete and accurate NOI. Discharges from earth-disturbing activities associated with the emergency-related projects are subject to the terms and conditions of the permit during the period of temporary coverage.

“Receiving Water” – a “Water of the United States” as defined in 40 CFR §122.2 into which the regulated stormwater discharges.

“Run-On” – sources of stormwater that drain from land located upslope or upstream from the regulated site in question.

“Semi-Arid Areas” – areas with an average annual rainfall of 10 to 20 inches.

“Site” – for construction activities, the land or water area where earth-disturbing activities take place, including construction support activities.

“Small Construction Activity” – defined at 40 CFR §122.26(b)(15) and incorporated here by reference. A small construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than one (1) acre and less than five (5) acres of land or will disturb less than one (1) acre of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one (1) acre and less than five (5) acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site.

“Small Residential Lot” – for the purpose of this permit, a lot being developed for residential purposes that will disturb less than 1 acre of land, but is part of a larger residential project that will ultimately disturb greater than or equal to 1 acre.

“Snowmelt” – the conversion of snow into overland stormwater and groundwater flow as a result of warmer temperatures.

“Spill” – for the purpose of this permit, the release of a hazardous or toxic substance from its container or containment.

“Stabilization” – the use of vegetative and/or non-vegetative cover to prevent erosion and sediment loss in areas exposed through the construction process.

“Steep Slopes” – where a state, Tribe, local government, or industry technical manual (e.g., stormwater BMP manual) has defined what is to be considered a “steep slope”, this permit's definition automatically adopts that definition. Where no such definition exists, steep slopes are automatically defined as those that are 15 percent or greater in grade.

“Storm Sewer System” – a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) designed or used for collecting or conveying stormwater.

“Stormwater” – stormwater runoff, snow melt runoff, and surface runoff and drainage.

“Stormwater Control Measure” - refers to any stormwater control, BMP, or other method (including narrative effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the United States.

“Stormwater Controls” – see “Stormwater Control measure.”

“Stormwater Discharge Associated with Construction Activity” – as used in this permit, a discharge of pollutants in stormwater to waters of the United States from areas where land-disturbing activities (e.g., clearing, grading, or excavation) occur, or where construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck chute washdown, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants), are located.

“Stormwater Inlet” – a structure placed below grade to conduct water used to collect stormwater runoff for conveyance purposes.

“Stormwater Team” – the group of individuals responsible for oversight of the development and modifications of the SWPPP, and oversight of compliance with the permit requirements. The individuals on the “Stormwater Team” must be identified in the SWPPP.

“Storm Event” – a precipitation event that results in a measurable amount of precipitation.

“Storm Sewer” – a system of pipes (separate from sanitary sewers) that carries stormwater runoff from buildings and land surfaces.

“Subcontractor” – for the purposes of this permit, an individual or company that takes a portion of a contract from the general contractor or from another subcontractor.

“Surface Water” – a “Water of the United States” as defined in 40 CFR § 122.2.

“SWPPP” (Stormwater Pollution Prevention Plan) – a site-specific, written document that, among other things: (1) identifies potential sources of stormwater pollution at the construction site; (2) describes stormwater control measures to reduce or eliminate pollutants in stormwater



discharges from the construction site; and (3) identifies procedures the operator will implement to comply with the terms and conditions of this general permit.

"Temporary Stabilization" – a condition where exposed soils or disturbed areas are provided a temporary vegetative and/or non-vegetative protective cover to prevent erosion and sediment loss. Temporary stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either final stabilization can be achieved or until further construction activities take place to re-disturb this area.

"Thawing Conditions" – for the purposes of this permit, thawing conditions are expected based on the historical likelihood of two or more days with daytime temperatures greater than 32°F. This date can be determined by looking at historical weather data. Note: the estimation of thawing conditions is for planning purposes only. During construction the permittee will be required to conduct site inspections based upon actual conditions (i.e., if thawing conditions occur sooner than expected, the permittee will be required to conduct inspections at the regular frequency).

"Threatened Species" – defined in the Endangered Species Act at 16 U.S.C. 1531 as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

"Tier 2 Waters" – for antidegradation purposes, pursuant to 40 CFR 131.12(a)(2), those waters that are characterized as having water quality that exceeds the levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water.

"Tier 2.5 Waters" – for antidegradation purposes, those waters designated by States or Tribes as requiring a level of protection equal to and above that given to Tier 2 waters, but less than that given Tier 3 waters. Some States have special requirements for these waters.

"Tier 3 Waters" – for antidegradation purposes, pursuant to 40 CFR 131.12(a)(3), Tier 3 waters are identified by states as having high quality waters constituting an Outstanding Natural Resource Water (ONRW), such as waters of National Parks and State Parks, wildlife refuges, and waters of exceptional recreational or ecological significance.

"Total Maximum Daily Load" or "TMDL" – the sum of the individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background. If receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure.

"Toxic Waste" – see "Hazardous Materials."

"Turbidity" – a condition of water quality characterized by the presence of suspended solids and/or organic material.

"Uncontaminated Discharge" – a discharge that does not cause or contribute to an exceedence of applicable water quality standards.

"Upland" - the dry land area above and 'landward' of the ordinary high water mark.

"Upset" – Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond your reasonable control. An upset does not include noncompliance to the extent caused by

operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See 40 CFR 122.41(n)(1).

“Water-Dependent Structures” – structures or facilities that are required to be located directly adjacent to a waterbody or wetland, such as a marina, pier, boat ramp, etc.

“Water Quality Standards” – defined in 40 CFR § 131.3, and are provisions of State or Federal law which consist of a designated use or uses for the waters of the United States, water quality criteria for such waters based upon such uses, and an antidegradation policy to protect high-quality waters. Water quality standards protect the public health or welfare, enhance the quality of water and serve the purposes of the Act.

“Waters of the United States” – defined at 40 CFR §122.2 as:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters, including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
  - a. Which are or could be used by interstate or foreign travelers for recreational or other purposes;
  - b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - c. Which are used or could be used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs (1) through (4) of this definition;
6. The territorial sea; and
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

In applying this definition, EPA will consider applicable Court cases and current guidance.

“Wetland” – those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support,

a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. On-site evaluations are typically required to confirm the presence and boundaries of wetlands.

“Work day” – for the purposes of this permit, a work day is a calendar day on which construction activities will take place.

**Acronyms**

- C&D – Construction & Development
- CGP – Construction General Permit
- CFR – Code of Federal Regulations
- CWA – Clean Water Act
- eNOI – Electronic Notice of Intent
- EPA – United States Environmental Protection Agency
- ESA – Endangered Species Act
- FWS – United States Fish and Wildlife Service
- MS4 – Municipal Separate Storm Sewer System
- MSGP – Multi-Sector General Permit
- NMFS – United States National Marine Fisheries Service
- NOI – Notice of Intent
- NOT – Notice of Termination
- NPDES – National Pollutant Discharge Elimination System
- NRC – National Response Center
- NRCS – National Resources Conservation Service
- POTW – Publicly Owned Treatment Works
- SPCC – Spill Prevention Control and Countermeasure
- SWPPP – Stormwater Pollution Prevention Plan
- TMDL – Total Maximum Daily Load
- USGS – United States Geological Survey
- WQS – Water Quality Standard

**Appendix B - Permit Areas Eligible for Coverage**

Permit coverage for stormwater discharges from construction activity occurring within the following areas is provided by legally separate and distinctly numbered permits:

**B.1 EPA Region 1: CT, MA, ME, NH, RI, VT**

US EPA, Region 01  
 Office of Ecosystem Protection  
 NPDES Stormwater Program  
 5 Post Office Square  
 Boston, MA 02109-3912

The States of Connecticut, Maine, Rhode Island, and Vermont are the NPDES Permitting Authority for the majority of discharges within their respective states.

<b>Permit No.</b>	<b>Areas of Coverage/Where EPA is Permitting Authority</b>
<b>CTR12000I</b>	Indian country within the State of Connecticut
<b>MAR120000</b>	Commonwealth of Massachusetts (except Indian country)
<b>MAR12000I</b>	Indian country within the State of Massachusetts
<b>NHR120000</b>	State of New Hampshire
<b>RIR12000I</b>	Indian country within the State of Rhode Island
<b>VTR12000F</b>	Areas in the State of Vermont subject to construction by a Federal Operator

**B.2 EPA Region 2: NJ, NY, PR, VI**

For NJ, NY, and VI:  
 US EPA, Region 02  
 NPDES Stormwater Program  
 290 Broadway, 24th Floor  
 New York, NY 10007-1866

For PR:  
 US EPA, Region 02  
 Caribbean Environmental Protection Division  
 NPDES Stormwater Program  
 1492 Ponce de Leon Ave  
 Central Europa Building, Suite 417  
 San Juan, PR 00907-4127

The State of New York is the NPDES Permitting Authority for the majority of discharges within its state. The State of New Jersey and the Virgin Islands are the NPDES Permitting Authority for all discharges within their respective states.

<b>Permit No.</b>	<b>Areas of Coverage/Where EPA is Permitting Authority</b>
<b>NYR12000I</b>	Indian country within the State of New York
<b>PRR120000</b>	Commonwealth of Puerto Rico

**B.3 EPA Region 3: DE, DC, MD, PA, VA, WV**

US EPA, Region 03  
NPDES Stormwater Program  
1650 Arch St  
Philadelphia, PA 19103

The State of Delaware is the NPDES Permitting Authority for the majority of discharges within its state. Maryland, Pennsylvania, Virginia, and West Virginia are the NPDES Permitting Authority for all discharges within their respective states.

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
<b>DCR120000</b>	District of Columbia
<b>DER12000F</b>	Areas in the State of Delaware subject to construction by a Federal Operator

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**B.4 EPA Region 4: AL, FL, GA, KY, MS, NC, SC, TN**

US EPA, Region 04  
Water Protection Division  
NPDES Stormwater Program  
61 Forsyth St SW  
Atlanta, GA 30303-3104

The States of Alabama, Florida, Mississippi, and North Carolina are the NPDES Permitting Authority for the majority of discharges within their respective States. EPA Region 4 is the NPDES Permitting Authority for all Indian country lands within any other Region 4 State except Catawba lands in South Carolina.

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
<b>ALR12000I</b>	Indian country within the State of Alabama
<b>FLR12000I</b>	Indian country within the State of Florida
<b>MSR12000I</b>	Indian country within the State of Mississippi
<b>NCR12000I</b>	Indian country within the State of North Carolina
<b>RE412000I</b>	Indian country within any other Region 4 State (except Catawba lands in South Carolina)

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**B.5 EPA Region 5: IL, IN, MI, MN, OH, WI**

US EPA, Region 05  
NPDES & Technical Support  
NPDES Stormwater Program  
77 W Jackson Blvd  
(WN-16J)  
Chicago, IL 60604-3507

The States of Michigan, Minnesota, and Wisconsin are the NPDES Permitting Authority for the majority of discharges within their respective states. The States of Illinois, Indiana, and Ohio are the NPDES Permitting Authorities for all discharges within their respective states.

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
<b>MIR12000I</b>	Indian country within the State of Michigan
<b>MNR12000I</b>	Indian country within the State of Minnesota, except the Fond Du Lac Band and Grand Portage Band of Lake Superior Chippewa
<b>WIR12000I</b>	Indian country within the State of Wisconsin, except the Bad River , Lac Du Flambeau and Sokaogon Chippewa (Mole Lake) Community

**B.6 EPA Region 6: AR, LA, OK, TX, NM (except see Region 9 for Navajo lands, and see Region 8 for Ute Mountain Reservation lands)**

US EPA, Region 06  
 NPDES Stormwater Program  
 1445 Ross Ave, Suite 1200  
 Dallas, TX 75202-2733

The States of Louisiana, Oklahoma, and Texas are the NPDES Permitting Authority for the majority of discharges within their respective state. The State of Arkansas is the NPDES Permitting Authority for all discharges within its respective state.

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
<b>LAR12000I</b>	Indian country within the State of Louisiana
<b>NMR120000</b>	State of New Mexico, except Indian country
<b>NMR12000I</b>	Indian country within the State of New Mexico, except Navajo Reservation Lands that are covered under Arizona permit AZR10000I and Ute Mountain Reservation Lands that are covered under Colorado permit COR10000I.
<b>OKR12000I</b>	Indian country within the State of Oklahoma
<b>OKR12000F</b>	Discharges in the State of Oklahoma that are not under the authority of the Oklahoma Department of Environmental Quality, including activities associated with oil and gas exploration, drilling, operations, and pipelines (includes SIC Groups 13 and 46, and SIC codes 492 and 5171), and point source discharges associated with agricultural production, services, and silviculture (includes SIC Groups 01, 02, 07, 08, 09).
<b>TXR12000F</b>	Discharges in the State of Texas that are not under the authority of the Texas Commission on Environmental Quality (formerly TNRCC), including activities associated with the exploration, development, or production of oil or gas or geothermal resources, including transportation of crude oil or natural gas by pipeline.
<b>TXR12000I</b>	Indian country within the State of Texas

**B.7 EPA Region 7: IA, KS, MO, NE (except see Region 8 for Pine Ridge Reservation Lands)**

US EPA, Region 07  
 NPDES Stormwater Program  
 901 N 5th St  
 Kansas City, KS 66101

The States of Iowa, Kansas, and Nebraska are the NPDES Permitting Authority for the majority of discharges within their respective states. The State of Missouri is the NPDES Permitting Authority for all discharges within its state.

<b><u>Permit No.</u></b>	<b><u>Areas of Coverage/Where EPA is Permitting Authority</u></b>
<b>IAR12000I</b>	Indian country within the State of Iowa
<b>KSR12000I</b>	Indian country within the State of Kansas
<b>NER12000I</b>	Indian country within the State of Nebraska, except Pine Ridge Reservation lands (see Region 8)

**B.8 EPA Region 8: CO, MT, ND, SD, WY, UT (except see Region 9 for Goshute Reservation and Navajo Reservation Lands), the Ute Mountain Reservation in NM, and the Pine Ridge Reservation in NE.**

US EPA, Region 08  
 NPDES Stormwater Program  
 999 18th St, Suite 300  
 (EPR-EP)  
 Denver, CO 80202-2466

The States of Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming are the NPDES Permitting Authority for the majority of discharges within their respective states.

<b><u>Permit No.</u></b>	<b><u>Areas of Coverage/Where EPA is Permitting Authority</u></b>
<b>COR12000F</b>	Areas in the State of Colorado, except those located on Indian country, subject to construction activity by a Federal Operator
<b>COR12000I</b>	Indian country within the State of Colorado, as well as the portion of the Ute Mountain Reservation located in New Mexico
<b>MTR12000I</b>	Indian country within the State of Montana
<b>NDR12000I</b>	Indian country within the State of North Dakota, as well as that portion of the Standing Rock Reservation located in South Dakota (except for the portion of the lands within the former boundaries of the Lake Traverse Reservation which is covered under South Dakota permit SDR10000I listed below)
<b>SDR12000I</b>	Indian country within the State of South Dakota, as well as the portion of the Pine Ridge Reservation located in Nebraska and the portion of the lands within the former boundaries of the Lake Traverse Reservation located in North Dakota (except for the Standing Rock Reservation which is covered under North Dakota permit NDR10000I listed above)
<b>UTR12000I</b>	Indian country within the State of Utah, except Goshute and Navajo Reservation lands (see Region 9)
<b>WYR12000I</b>	Indian country within the State of Wyoming

**B.9 EPA Region 9: CA, HI, NV, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Goshute Reservation in UT and NV, the Navajo Reservation in UT, NM, and AZ, the Duck Valley Reservation in ID, and the Fort McDermitt Reservation in OR.**

US EPA, Region 09  
 NPDES Stormwater Program  
 75 Hawthorne St  
 San Francisco, CA 94105-3901

The States of Arizona, California and Nevada are the NPDES Permitting Authority for the majority of discharges within their respective states. The State of Hawaii is the NPDES Permitting Authority for all discharges within its state.

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
<b>ASR120000</b>	Island of American Samoa
<b>AZR12000I</b>	Indian country within the State of Arizona, as well as Navajo Reservation lands in New Mexico and Utah
<b>CAR12000I</b>	Indian country within the State of California
<b>GUR120000</b>	Island of Guam
<b>JAR120000</b>	Johnston Atoll
<b>MPR120000</b>	Commonwealth of the Northern Mariana Islands
<b>MWR120000</b>	Midway Island and Wake Island
<b>NVR12000I</b>	Indian country within the State of Nevada, as well as the Duck Valley Reservation in Idaho, the Fort McDermitt Reservation in Oregon and the Goshute Reservation in Utah

**B.10 EPA Region 10: AK, WA, ID (except see Region 9 for Duck Valley Reservation Lands), and OR (except see Region 9 for Fort McDermitt Reservation).**

US EPA, Region 10  
 NPDES Stormwater Program  
 1200 6th Ave (OW-130)  
 Seattle, WA 98101-1128  
 Phone: (206) 553-6650

The States of Oregon and Washington are the NPDES Permitting Authority for the majority of discharges within their respective states.

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
<b>AKR12000I</b>	Indian country within the State of Alaska
<b>AKR12-000F</b>	Areas in the the Denali National Park and Preserve subject to construction by a Federal Operator
<b>IDR120000</b>	State of Idaho, except Indian country <b>[COVERAGE NOT YET AVAILABLE]</b>
<b>IDR12000I</b>	Indian country within the State of Idaho, except Duck Valley Reservation lands (see Region 9)
<b>ORR12000I</b>	Indian country within the State of Oregon, except Fort McDermitt Reservation lands (see Region 9)
<b>WAR12000F</b>	Areas in the State of Washington, except those located on Indian country, subject to construction activity by a Federal Operator <b>[COVERAGE NOT YET AVAILABLE]</b>
<b>WAR12000I</b>	Indian country within the State of Washington



## Appendix C - Small Construction Waivers and Instructions

These waivers are only available to stormwater discharges associated with small construction activities (i.e., 1-5 acres). As the operator of a small construction activity, you may be able to qualify for a waiver in lieu of needing to obtain coverage under this general permit based on: (A) a low rainfall erosivity factor, (B) a TMDL analysis, or (C) an equivalent analysis that determines allocations for small construction sites are not needed. Each operator, otherwise needing permit coverage, must notify EPA of its intention for a waiver. It is the responsibility of those individuals wishing to obtain a waiver from coverage under this general permit to submit a complete and accurate waiver certification as described below. Where the operator changes or another is added during the construction project, the new operator must also submit a waiver certification to be waived.

### C.1 Rainfall Erosivity Waiver

Under this scenario the small construction project's rainfall erosivity factor calculation ("R" in the Revised Universal Soil Loss Equation) is less than 5 during the period of construction activity. The operator must certify to EPA that construction activity will occur only when the rainfall erosivity factor is less than 5. The period of construction activity begins at initial earth disturbance and ends with final stabilization. Where vegetation will be used for final stabilization, the date of installation of a stabilization practice that will provide interim non-vegetative stabilization can be used for the end of the construction period, provided the operator commits (as a condition of waiver eligibility) to periodically inspect and properly maintain the area until the criteria for final stabilization as defined in the construction general permit have been met. If use of this interim stabilization eligibility condition was relied on to qualify for the waiver, signature on the waiver with its certification statement constitutes acceptance of and commitment to complete the final stabilization process. The operator must submit a waiver certification to EPA prior to commencing construction activities.

*Note: The rainfall erosivity factor "R" is determined in accordance with Chapter 2 of Agriculture Handbook Number 703, Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE), pages 21–64, dated January 1997; United States Department of Agriculture (USDA), Agricultural Research Service.*

EPA has developed an online rainfall erosivity calculator to help small construction sites determine potential eligibility for the rainfall erosivity waiver. You can access the calculator from EPA's website at: [www.epa.gov/npdes/stormwater/lew](http://www.epa.gov/npdes/stormwater/lew). The R factor can easily be calculated by using the construction site latitude/longitude or address and estimated start and end dates of construction. This calculator may also be useful in determining the time periods during which construction activity could be waived from permit coverage. You may find that moving your construction activity by a few weeks or expediting site stabilization will allow you to qualify for the waiver. Use this online calculator or the Construction Rainfall Erosivity Waiver Fact Sheet ([www.epa.gov/npdes/pubs/fact3-1.pdf](http://www.epa.gov/npdes/pubs/fact3-1.pdf)) to assist in determining the R Factor for your small construction site.

If you are the operator of the construction activity and eligible for a waiver based on low erosivity potential, you can submit a rainfall erosivity waiver electronically via EPA's eNOI system ([www.epa.gov/npdes/cgpenoi](http://www.epa.gov/npdes/cgpenoi)) or provide the following information on the waiver certification form in order to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operator(s);
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The rainfall erosivity factor calculation that applies to the active construction phase at your project site; and
5. A statement, signed and dated by an authorized representative as provided in Appendix I, Subsection I.11, which certifies that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five.

You can access the waiver certification form from EPA's website at: ([http://www.epa.gov/npdes/pubs/construction\\_waiver\\_form.pdf](http://www.epa.gov/npdes/pubs/construction_waiver_form.pdf)). Paper copies of the form must be sent to one of the addresses listed in Part C.4 of this section.

*Note: If the R factor is 5 or greater, you cannot apply for the rainfall erosivity waiver, and must apply for NPDES permit coverage, unless you qualify for the Water Quality Waiver as described in section B below.*

If your small construction project continues beyond the projected completion date given on the waiver certification, you must recalculate the rainfall erosivity factor for the new project duration. If the R factor is below five (5), you must update all applicable information on the waiver certification and retain a copy of the revised waiver as part of your records. The new waiver certification must be submitted prior to the projected completion date listed on the original waiver form to assure your exemption from permitting requirements is uninterrupted. If the new R factor is 5 or above, you must obtain NPDES permit coverage.

## **C.2 TMDL Waiver**

This waiver is available if EPA has established or approved a TMDL that addresses the pollutant(s) of concern for the impaired water and has determined that controls on stormwater discharges from small construction activity are not needed to protect water quality. The pollutant(s) of concern include sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. Information on TMDLs that have been established or approved by EPA is available from EPA online at <http://www.epa.gov/owow/tmdl/> and from state and tribal water quality agencies.

If you are the operator of the construction activity and eligible for a waiver based on compliance with an EPA-established or approved TMDL, you must provide the following information on the Waiver Certification form in order to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operator(s);
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;

3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The name of the waterbody(s) that would be receiving stormwater discharges from your construction project;
5. The name and approval date of the TMDL;
6. A statement, signed and dated by an authorized representative as provided in Appendix I, Subsection I.11, that certifies that the construction activity will take place and that the stormwater discharges will occur, within the drainage area addressed by the TMDL.

### **C.3 Equivalent Analysis Waiver**

This waiver is available for non-impaired waters only. The operator can develop an equivalent analysis that determines allocations for his/her small construction site for the pollutant(s) of concern or determines that such allocations are not needed to protect water quality. This waiver requires a small construction operator to develop an equivalent analysis based on existing in-stream concentrations, expected growth in pollutant concentrations from all sources, and a margin of safety.

If you are a construction operator who wants to use this waiver, you must develop your equivalent analysis and provide the following information to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operator(s);
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The name of the waterbody(s) that would be receiving stormwater discharges from your construction project;
5. Your equivalent analysis;
6. A statement, signed and dated by an authorized representative as provided in Appendix I, Subsection I.11, that certifies that the construction activity will take place and that the stormwater discharges will occur, within the drainage area addressed by the equivalent analysis.

### **C.4 Waiver Deadlines and Submissions**

1. Waiver certifications must be submitted prior to commencement of construction activities.
2. If you submit a TMDL or equivalent analysis waiver request, you are not waived until EPA approves your request. As such, you may not commence construction activities until receipt of approval from EPA.
3. Late Notifications: Operators are not prohibited from submitting waiver certifications after initiating clearing, grading, excavation activities, or other construction activities. The Agency reserves the right to take enforcement for any unpermitted discharges that occur between the time construction commenced and waiver authorization is granted.

Submittal of a waiver certification is an optional alternative to obtaining permit coverage for discharges of stormwater associated with small construction activity, provided you qualify for the waiver. Any discharge of stormwater associated with small construction activity not covered by either a permit or a waiver may be considered an unpermitted discharge under the Clean Water Act. As mentioned above, EPA reserves the right to take enforcement for any unpermitted discharges that occur between the time construction commenced and either discharge authorization is granted or a complete and accurate waiver certification is submitted. EPA may notify any operator covered by a waiver that they must apply for a permit. EPA may notify any operator who has been in non-compliance with a waiver that they may no longer use the waiver for future projects. Any member of the public may petition EPA to take action under this provision by submitting written notice along with supporting justification.

Complete and accurate Rainfall Erosivity waiver certifications not otherwise submitted electronically via EPA's eNOI system ([www.epa.gov/npdes/cgpenoi](http://www.epa.gov/npdes/cgpenoi)) must be sent to one of the following addresses:

Regular U.S. Mail Delivery

EPA Stormwater Notice Processing Center  
Mail Code 4203M  
U.S. EPA  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Overnight/Express Mail Delivery

EPA Stormwater Notice Processing Center  
Room 7420  
U.S. EPA  
1201 Constitution Avenue, NW  
Washington, DC 20004

Complete and accurate TMDL or equivalent analysis waiver requests must be sent to the applicable EPA Region office specified in Appendix B.

## Appendix D - Endangered Species Act Requirements

The purpose of this guidance is to assist you in complying with the requirements in Part 1.1.e of the permit requiring you to demonstrate that you meet one of the criteria listed in this appendix with respect to the protection of any and all species that are federally-listed as endangered or threatened under the Endangered Species Act (ESA) or of habitat that is federally-designated as "critical habitat" under the ESA in order to be eligible for coverage under this permit.

This guidance provides you information on the following:

- **Section D.1:** ESA Eligibility Criteria
- **Section D.2:** Guidance for Determining Which ESA Criteria Applies

### D.1 ESA Eligibility Criteria

You must certify in your NOI that you meet one of the eligibility criteria listed below in order to be eligible for coverage under this permit. You must also specify in the NOI the basis for your selection of the applicable eligibility criterion.

Note: (1) Regardless of the criterion selected, you must provide documentation in your SWPPP that is sufficient to support your determination that you satisfy the requirements of the particular criterion. (2) While coordination between you and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service (together, the "Services") is not necessarily required in all cases, EPA encourages you to coordinate with the Services and to do so early in the planning process prior to submitting your NOI.

**Criterion A.** No federally-listed threatened or endangered species or their designated critical habitat(s) are likely to occur in your site's "action area" as defined in Appendix A of this permit.

**Criterion B.** The construction site's discharges and discharge-related activities were already addressed in another operator's valid certification of eligibility for your action area under eligibility Criterion A, C, D, E, or F and there is no reason to believe that federally-listed species or federally-designated critical habitat not considered in the prior certification may be present or located in the "action area". To certify your eligibility under this Criterion, there must be no lapse of NPDES permit coverage in the other operator's certification. By certifying eligibility under this Criterion, you agree to comply with any effluent limitations or conditions upon which the other operator's certification was based. You must include in your NOI the tracking number from the other operator's notification of authorization under this permit. If your certification is based on another operator's certification under Criterion C, you must provide EPA with the relevant supporting information required of existing dischargers in Criterion C in your NOI form.

**Criterion C.** Federally-listed threatened or endangered species or their designated critical habitat(s) are likely to occur in or near your site's "action area," and your site's discharges and discharge-related activities are not likely to adversely affect listed threatened or endangered species or critical habitat. This determination may include consideration of any stormwater controls and/or management practices you will adopt to ensure that your discharges and discharge-related activities are not likely to adversely affect listed species and critical habitat. To make this certification, you must include the following in your NOI: 1) any federally listed species and/or designated habitat located in your "action area"; and 2) the distance between your site and the listed species or designated critical habitat (in miles). You must also include a copy of your site map with your NOI.

**Criterion D.** Coordination between you and the Services has been concluded. The coordination must have addressed the effects of your site's discharges and discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat, and must have resulted in a written concurrence from the relevant Service(s) that your site's discharges and discharge-related activities are not likely to adversely affect listed species or critical habitat. You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.

**Criterion E.** Consultation between a Federal Agency and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the ESA has been concluded. The consultation must have addressed the effects of the construction site's discharges and discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat. The result of this consultation must be either:

- i. a biological opinion that concludes that the action in question (taking into account the effects of your site's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, nor the destruction or adverse modification of critical habitat; or
- ii. written concurrence from the applicable Service(s) with a finding that the site's discharges and discharge-related activities are not likely to adversely affect federally-listed species or federally-designated habitat.

You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.

**Criterion F.** Your construction activities are authorized through the issuance of a permit under section 10 of the ESA, and this authorization addresses the effects of the site's discharges and discharge-related activities on federally-listed species and federally-designated critical habitat. You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.

You must comply with any applicable terms, conditions, or other requirements developed in the process of meeting the eligibility criteria in this section to remain eligible for coverage under this permit. Documentation of these requirements must be kept as part of your SWPPP (see Part 7.2.14.1).

## D.2 Guidance for Determining Which Criterion Applies

Part 1.1.5 of the permit requires that you meet one of the six criteria listed above in order to be eligible for coverage under the permit.

You must follow the procedures in Steps 1 through 6 to determine the ESA criterion under which your site is eligible for permit coverage.

### D.2.1 Step 1 - Determine if Your Discharges and Discharge-Related Activities Were Already Addressed in Another Operator's Valid Certification that Included Your Action Area.

- **If your discharges and discharge-related activities were already addressed in another operator's valid certification that included your action area** (e.g., a general contractor or developer may have completed and filed an NOI for the entire action area with the necessary ESA certifications (Criterion A, C, D, E, or F)), *you may select eligibility Criterion B on your Notice of Intent form.*

By certifying eligibility under Criterion B, you must comply with any terms and conditions imposed under the eligibility requirements of Criterion A, C, D, E, or F to ensure that your discharges and discharge-related activities are protective of listed species and/or critical habitat.

Note: If you are unable to meet these eligibility requirements, then you may either establish eligibility under one of the other criterion, or you may consider applying to EPA for an individual permit.

Under Criterion B, you must provide documentation in your SWPPP of any of these terms and conditions, as well as the other operator's basis for establishing eligibility. You must also provide a description of the basis for your selection of Criterion B on your NOI form, including the eligibility criterion (A, C, D, E, or F) that was certified to by the previous operator, and must provide the Tracking Number from the other operator's notification of authorization under this permit.

If your certification is based on another operator's certification under criterion C, you must provide the documentation required in the NOI for criterion C, namely: 1) what federally listed species and/or designated habitat are located in your "action area"; and 2) what is the distance between your site and the listed species or designated critical habitat (in miles).

- **If discharges and discharge-related activities from your site were not addressed in another operator's valid certification that included your action area**, you must follow the applicable procedures in Steps 2 through 5 below.

### D.2.2 Step 2 - Determine if Listed Threatened or Endangered Species or their Designated Critical Habitat(s) are Likely to Occur in your Site's Action Area

You must determine, to the best of your knowledge, whether species listed as either threatened or endangered, or their critical habitat(s) (see definitions of these terms in Appendix A), are located in your site's action area. To make this determination, you should first determine if listed species and/or critical habitat are expected to exist in your county or township. The local offices of the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), and State or Tribal Heritage Centers often maintain lists of federally listed endangered or threatened species on their internet sites. For FWS

terrestrial and aquatic species information, you can use FWS' on-line mapping tool, the Information, Planning, and Consultation (IPAC) System, located at <http://www.fws.gov/ipac/>.

Note: To determine the field office that corresponds to your project site, visit <http://www.fws.gov/angered/regions/index.html> and <http://www.nmfs.noaa.gov/> (under the left tab for "Regions").

In most cases, species and/or critical habitat lists allow you to determine if any such species or habitat exists in your county or township. You can also find critical habitat designations and associated requirements at 50 CFR Parts 17 and 226. <http://www.access.gpo.gov>.

- ***If there are listed species and/or critical habitat in your county or township***, you should contact your local FWS, NMFS, or State or Tribal Heritage Center to determine if the listed species are known to exist in your action area and if any critical habitat areas have been designated that overlap your action area.
  - If your local FWS, NMFS, or State or Tribal Heritage Center indicates that these species and/or critical habitat could exist in your action area, you must:
    - Do **one or more** of the following:
      - Conduct visual inspections. This method may be particularly suitable for construction sites that are smaller in size or located in non-natural settings such as highly urbanized areas or industrial parks where there is little or no natural habitat, or for construction activities that discharge directly into municipal stormwater collection systems.
      - Conduct a formal biological survey. In some cases, particularly for larger construction sites with extensive stormwater discharges, biological surveys may be an appropriate way to assess whether species are located in the action area and whether there are likely to be adverse effects to such species. Biological surveys are frequently performed by environmental consulting firms. A biological survey may in some cases be useful to conduct in conjunction with Steps Two, Three, or Four of these instructions.
      - If required, conduct an environmental assessment under the National Environmental Policy Act (NEPA). Some construction activities might require review under NEPA for specific reasons, such as federal funding or other federal involvement in the project. Note: Coverage under the CGP does not trigger such a review for individual projects/sites. EPA has complied with NEPA in the issuance of the CGP.

**and**



- Follow the instructions in Steps 3 – 5 below, as applicable. Note that many but not all measures imposed to protect listed species under these steps will also protect critical habitat. Thus, meeting the eligibility requirements of this CGP may require measures to protect critical habitat that are separate from those to protect listed species.
- **If there are no listed species in your county or township and no critical habitat areas in your action area, you may check eligibility criterion A on your NOI form.** You must also provide a description of the basis for the criterion selected on your NOI form and provide documentation supporting the criterion selected in your SWPPP.

**D.2.3 Step 3 - Determine if the Construction Activity's Discharges or Discharge-Related Activities Are Likely to Adversely Affect Listed Threatened or Endangered Species or Designated Critical Habitat**

If in Step 2 you determine based on communication with your local FWS, NMFS, or State or Tribal Heritage Center, or other determination, that listed species and/or critical habitat could exist in your action area, you must next assess whether your discharges or discharge-related activities are likely to adversely affect listed threatened or endangered species or designated critical habitat.

Potential adverse effects from discharges and discharge-related activities include:

- *Hydrological.* Stormwater discharges may cause siltation, sedimentation or induce other changes in receiving waters such as temperature, salinity or pH. These effects will vary with the amount of stormwater discharged and the volume and condition of the receiving water. Where a stormwater discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely. Construction activity itself may also alter drainage patterns on a site where construction occurs that can impact listed species or critical habitat.
- *Habitat.* Excavation, site development, grading, and other surface disturbance activities from construction activities, including the installation or placement of stormwater controls, may adversely affect listed species or their habitat. Stormwater may drain or inundate listed species habitat.
- *Toxicity.* In some cases, pollutants in stormwater may have toxic effects on listed species.

The scope of effects to consider will vary with each site. If you are having difficulty determining whether your project is likely to adversely affect listed species or critical habitat, or one of the Services has already raised concerns to you, you should contact the appropriate office of the FWS, NMFS or Natural Heritage Center for assistance.

- **If adverse effects to listed threatened or endangered species or their critical habitat are not likely, then you may select eligibility criterion C on the NOI form.** You must provide the following specific information on your NOI form: 1) what federally listed species and/or designated habitat are located in your "action area"; and 2) what is the distance between your site and the listed species or

designated critical habitat (in miles). You must also provide a copy of your site map with your NOI.

- ***If adverse effects to listed threatened or endangered species or their critical habitat are likely***, you must follow Step 4 below.

#### **D.2.4 Step 4 - Determine if Measures Can Be Implemented to Avoid Adverse Effects**

If you make a preliminary determination in Step 3 that adverse effects from your construction activity's discharges or discharge-related activities are likely to occur, you can still receive coverage under eligibility criterion C of the CGP if appropriate measures are undertaken to avoid or eliminate the likelihood of adverse effects prior to applying for CGP coverage.

These measures may involve relatively simple changes to construction activities such as re-routing a stormwater discharge to bypass an area where species are located, relocating stormwater controls, or by modifying the "footprint" of the construction activity. If you are unable to ascertain which measures to implement to avoid the likelihood of adverse effects, you must coordinate or enter into consultation with the FWS and/or NMFS, in which case you would not be eligible for coverage under eligibility criterion C, but may instead be eligible for coverage under eligibility criterion D, E, or F (described in more detail in Step 5).

- ***If you are able to install and implement appropriate measures to avoid the likelihood of adverse effects***, then you may check eligibility criterion C on the NOI form. The measures you adopt to avoid or eliminate adverse affects must be implemented for the duration of the construction project and your coverage under the CGP. You must also provide a description of the basis for the criterion selected, and the following specific information on your NOI form: 1) what federally listed species and/or designated habitat are located in your "action area"; and 2) what is the distance between your site and the listed species or designated critical habitat (in miles).
- ***If you cannot ascertain which measures to implement to avoid the likelihood of adverse effects***, you must follow the procedures in Step 5.

#### **D.2.5 Step 5 - Determine if the Eligibility Requirements of Criterion D, E, or F Can Be Met**

If in Step 4 you cannot ascertain which measures to implement to avoid the likelihood of adverse effects, you must contact the FWS and/or NMFS. You may still be eligible for CGP coverage if any likely adverse effects can be addressed through meeting criterion D, E, or F.

- ***Criterion D:*** You have coordinated with the Services and have addressed the effects of your site's discharges on federally-listed threatened or endangered species and federally-designated critical habitat, which resulted in a written concurrence from the relevant Service(s) that your site's discharges are not likely to adversely affect listed species or critical habitat.

If you have met the requirements of criterion D, *you may select eligibility criterion D on the NOI form*. You must provide a description of the basis for the criterion selected on your NOI form and must include copies of the correspondence between you and the applicable Service in your SWPPP.

- **Criterion E:** Formal or informal ESA section 7 consultation is performed with the FWS and/or NMFS and that consultation addresses the effects of your discharges and discharge-related activities on federally-listed and threatened species and designated critical habitat. In order to be eligible for coverage under this permit, consultation must result in a “no jeopardy opinion” or a written concurrence by the Service(s) on a finding that your stormwater discharge(s) and stormwater discharge-related activities are not likely to adversely affect listed species or critical habitat (For more information on consultation, see 50 CFR §402). If you receive a “jeopardy opinion,” you may continue to work with the FWS and/or NMFS and your permitting authority to modify your project so that it will not jeopardize listed species or designated critical habitat.

Note that most consultations are accomplished through informal consultation. When conducting informal ESA section 7 consultation as a non-federal representative, you must follow the procedures found in 50 CFR Part 402 of the ESA regulations. You must notify FWS and/or NMFS of your intention and agreement to conduct consultation as a non-federal representative.

Consultation may occur in the context of another federal action at the construction site (e.g., where ESA section 7 consultation was performed for issuance of a wetlands dredge and fill permit for the project or where a NEPA review is performed for the project that incorporates a section 7 consultation). Any terms and conditions developed through consultations to protect listed species and critical habitat must be incorporated into the SWPPP. As noted above, operators may, if they wish, initiate consultation with the Services at Step Four.

Whether ESA section 7 consultation must be performed with either the FWS, NMFS or both Services depends on the listed species that may be affected by the operator’s activity. In general, NMFS has jurisdiction over marine, estuarine, and anadromous species. Operators should also be aware that while formal section 7 consultation provides protection from incidental takings liability, informal consultation does not.

If you have met the requirements of criterion E, *you may select eligibility criterion E on the NOI form.* You must provide a description of the basis for the criterion selected on your NOI form and must include copies of the correspondence between yourself and the Services in your SWPPP.

- **Criterion F:** Your construction activities are authorized through the issuance of a permit under section 10 of the ESA, and that authorization addresses the effects of your discharge(s) and discharge-related activities on federally-listed species and designated critical habitat. You must follow FWS and/or NMFS procedures when applying for an ESA Section 10 permit (see 50 CFR §17.22(b)(1) for FWS and §222.22 for NMFS). Application instructions for section 10 permits for FWS and NMFS can be obtained by accessing the FWS and NMFS websites (<http://www.fws.gov> and <http://www.nmfs.noaa.gov>) or by contacting the appropriate FWS and NMFS regional office.

If you have met the requirements of criterion F, *you may select eligibility criterion F on the NOI form.* You must provide a description of the basis for the criterion selected on your NOI form and must include copies of the correspondence between yourself and the Services in your SWPPP.

## Appendix E – Historic Property Screening Process

### Background

Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to take into account the effects of Federal “undertakings”, such as the issuance of this permit, on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. To address any issues relating to historic properties in connection with the issuance of this permit, EPA has developed the screening process in this appendix that enables construction operators to appropriately consider the potential impacts, if any, of their installation of stormwater controls on historic properties and to determine whether actions can be taken, if applicable, to mitigate any such impacts. Although the coverages of individual construction sites under this permit do not constitute separate Federal undertakings, the screening process in this appendix provides an appropriate site-specific means of addressing historic property issues in connection with EPA’s issuance of the permit.

**Key Terms**

**Historic property**- prehistoric or historic districts, sites, buildings, structures, or objects that are included in or eligible for inclusion in the National Register of Historic Places, including artifacts, records, and remains that are related to and located within such properties

**SHPO** – The State Historic Preservation Officer for a particular state

**THPO or Tribal representative** – The Tribal Historic Preservation Officer for a particular Tribe or, if there is no THPO, the representative designated by such Tribe for NHPA purposes

### Instructions for All Construction Operators

You are required to follow the screening process in this appendix to determine if your installation of stormwater controls on your site has the potential to cause effects to historic properties, and whether or not you need to contact your SHPO, THPO, or other tribal representative for further information. You may not submit your NOI until you have completed this screening process. The following four steps describe how applicants can meet the historic property requirements under this permit:

Step 1            *Are you installing any stormwater controls that require subsurface earth disturbance?*

The first step of the screening process is to determine if you will install stormwater controls that cause subsurface earth disturbance. The installation of the following types of stormwater controls require subsurface earth disturbance:

- Dikes
- Berms
- Catch Basins
- Ponds
- Ditches
- Trenches
- Culverts
- Channels
- Perimeter Drains

- Swales

*Note: This list is not intended to be exhaustive. Other stormwater controls that are not on this list may involve earth-disturbing activities and must also be examined for the potential to affect historic properties.*

*Note: You are only required to consider earth-disturbing activities related to the installation of stormwater controls in the NHPA screening process. You are not required to consider other earth-disturbing activities at the site. If you are installing one of the above stormwater controls or another type of control that requires subsurface earth disturbance, your project has the potential to have an effect on historic properties. If this is the case, then you must proceed to Step 2.*

If you are not installing one of the above stormwater controls or another type of control that requires subsurface earth disturbance, then you may indicate this on your NOI, and no further screening is necessary. During the 14-day waiting period after submitting your NOI, the SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

Step 2      *Have prior professional cultural resource surveys or other evaluations determined that historic properties do not exist, or have prior disturbances precluded the existence of historic properties?*

If you are installing a stormwater control that requires subsurface earth disturbance, you must next determine if it has already been determined that no historic properties exist on your site based on prior professional cultural resource surveys or other evaluations, or that the existence of historic properties has been precluded because of prior earth disturbances.

If prior to your project it has already been determined that no historic properties exist at your site based on available information, including information that may be provided by your applicable SHPO, THPO, or other tribal representative, then you may indicate this on your NOI, and no further screening steps are necessary. Similarly, if earth disturbances that have occurred prior to your project have eliminated the possibility that historic properties exist on your site, you may indicate this on your NOI, and no further screening steps are necessary. After submitting your NOI, and during the 14-day waiting period, the SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

If neither of these circumstances exists for your project, you must proceed to Step 3.

Step 3      *If you are installing any stormwater controls that require subsurface earth disturbance, you must determine if these activities will have an effect on historic properties.*

If your answer to the questions in Steps 1 and 2 is "no", then you must assess whether your earth-disturbing activities related to the installation of stormwater controls will have an effect on historic properties. This assessment may be based on historical sources, knowledge of the area, an assessment of the types of earth-disturbing activities you are engaging in, considerations of

*any controls and/or management practices you will adopt to ensure that your stormwater control-related earth-disturbing activities will not have an effect on historic properties, and any other relevant factors. If you determine based on this assessment that earth disturbances related to the installation of your stormwater controls will not cause effects to historic properties, you may indicate this on your NOI, and document the basis for your determination in your SWPPP and no further screening steps are necessary. In this case you must also attach a copy of your site map to your NOI. After submitting your NOI, and during the 14-day waiting period, the SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.*

If none of the circumstances in Steps 1-3 exist for your project, you must proceed to Step 4.

Step 4: *If you are installing any stormwater controls that require subsurface earth disturbance and you have not satisfied the conditions in Steps 1-3, you must contact and consult with the appropriate historic preservation authorities.*

Where you are installing stormwater controls that require subsurface earth disturbance, and you cannot determine in Step 3 that these activities will not have effects on historic properties, then you must contact the relevant SHPO, THPO, or other tribal representative to request their views as to the likelihood that historic properties are potentially present on your site and may be impacted by the installation of these controls.

*Note: Addresses for SHPOs and THPOs may be found on the Advisory Council on Historic Preservation's website ([www.achp.gov/programs.html](http://www.achp.gov/programs.html)). In instances where a Tribe does not have a THPO you should contact the appropriate Tribal government office designated by the Tribe for this purpose when responding to this permit eligibility condition.*

You must submit the following minimum information in order to properly initiate your request for information:

1. Project name (*i.e.*, the name or title most commonly associated with your project);
2. A narrative description of the project;
3. Name, address, phone and fax number, and email address (if available) of the operator;
4. Most recent U.S. Geological Survey (USGS) map section (7.5 minute quadrangle) showing actual project location and boundaries clearly indicated; and
5. Sections of SWPPP site map (see Part 7.2.6) that show locations where stormwater controls that will cause subsurface earth disturbance will be installed (see Step 1).

Without submitting this minimum information, you will not have been considered to have properly initiated your request. You will need to provide the SHPO, THPO, or other tribal representative a minimum of 15 calendar days after they receive these materials to respond to your request for information about your project. You are advised to get a receipt from the post office or other carrier confirming the date on which your letter was received.

If you do not receive a response within 15 calendar days after receipt by the SHPO, THPO, or other tribal representative of your request, then you may indicate this on your NOI, and no further screening steps are necessary. Or, if the applicable SHPO, THPO, or other tribal representative responds to your request with an indication that no historic properties will be affected by the installation of stormwater controls at your site, then you may indicate this on your NOI, and no further screening steps are necessary. After submitting your NOI, and during the 14-day waiting period, the SHPO, THPO, or other tribal representative may request that EPA hold up authorization based on concerns about potential adverse impacts to historic properties. EPA will evaluate any such request and notify you if any additional measures to address adverse impacts to historic properties are necessary.

If within 15 calendar days of receipt of your request the applicable SHPO, THPO, or other tribal representative responds with a request for additional information or for further consultation regarding appropriate measures for treatment or mitigation of effects on historic properties caused by the installation of stormwater controls on your site, you must comply with this request and proceed to Step 5.

Step 5: Consultation with your applicable SHPO, THPO, or other tribal representative.

If, following your discussions with the appropriate historic preservation authorities in Step 4, the applicable SHPO, THPO, or other tribal representative requests additional information or further consultation, you must respond with such information or to consult to determine impacts to historic properties that may be caused by the installation of stormwater controls on your site and appropriate measures for treatment or mitigation of such impacts. If as a result of your discussions with the applicable SHPO, THPO, or tribal representative, you enter into, and comply with, a written agreement regarding treatment and/or mitigation of impacts on your site, then you may indicate this on your NOI, and no further screening steps are necessary.

If, however, agreement on an appropriate treatment or mitigation plan cannot be reached between you and the SHPO, THPO, or other tribal representative within 30 days of your response to the SHPO, THPO, or other tribal representative's request for additional information or further consultation, you may submit your NOI, but you must indicate that you have not negotiated measures to avoid or mitigate such effects. You must also include in your SWPPP the following documentation:

1. Copies of any written correspondence between you and the SHPO, THPO, or other tribal representative; and
2. A description of any significant remaining disagreements as to mitigation measures between you and the SHPO, THPO, or other tribal representative.

After submitting your NOI, and during the 14-day waiting period, the SHPO, THPO, ACHP or other tribal representative may request that EPA place a hold on authorization based upon concerns regarding potential adverse effects to historic properties. EPA, in coordination with the ACHP, will evaluate any such request and notify you if any additional measures to address adverse effects to historic properties are necessary.

**Appendix F - List of Tier 3, Tier 2, and Tier 2.5 Waters**

EPA's CGP has special requirements for discharges to waters designated by a state or tribe as Tier 2/2.5 or Tier 3 for antidegradation purposes under 40 CFR 131.12(a). See Parts 1.2.3 and 3.3.

The list below is provided as a resource for operators who must determine whether they discharge to a Tier 2/2.5 or Tier 3 water. Only Tier 2/2.5 or Tier 3 waters specifically identified by a water quality standard authority (e.g., a state, territory, or tribe) are identified in the table below. Many authorities evaluate the existing and protected quality of the receiving water on a pollutant-by-pollutant basis and determine whether water quality is better than the applicable criteria that would be affected by a new discharge or an increase in an existing discharge of the pollutant. In instances where water quality is better, the authority may choose to allow lower water quality, where lower water quality is determined to be necessary to support important social and economic development. Permittees are not required to identify those waters which are evaluated on an individual basis.

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
MAR100000	<b>Commonwealth of Massachusetts, except Indian Country lands</b>	
	Tier 2 and Tier 2.5 waters are identified and listed in 314 CMR 4.06 Basin Classification. (314 CMR 4 can be found at DEP's web page at <a href="http://www.mass.gov/dep/service/regulations/314cmr04.pdf">http://www.mass.gov/dep/service/regulations/314cmr04.pdf</a> )	
	Tier 2	Tier 2 waters are listed on a parameter-by-parameter basis.
	Tier 2.5	Tier 2.5 waters are listed as "outstanding resource waters" on the website: <a href="http://www.mass.gov/dep/water/laws/tblfig.pdf">http://www.mass.gov/dep/water/laws/tblfig.pdf</a>
NHR100000	<b>State of New Hampshire</b>	
	Tier 2/2.5	There is no list of Tier 2/Tier 2.5 waters. New dischargers should contact Ken Edwardson at <a href="mailto:Kenneth.Edwardson@des.nh.gov">Kenneth.Edwardson@des.nh.gov</a> .
	Tier 3	Env-Ws 1708.05(a) Surface waters of national forests and surface waters designated as "natural" under RSA 483:7-a, I shall be considered outstanding resource waters (ORW). "Natural waters" are listed at <a href="http://www.gencourt.state.nh.us/rsa/html/L/483/483-15.htm">http://www.gencourt.state.nh.us/rsa/html/L/483/483-15.htm</a> . Surface waters of national forests are not included in an official list. For further questions, new dischargers should contact Thelma Murphy (EPA Region 1's stormwater coordinator) at <a href="mailto:murphy.thelma@epa.gov">murphy.thelma@epa.gov</a> .
PRR100000	<b>Commonwealth of Puerto Rico</b>	
	Tier 3	Tier III waters are those which are classified as either Class SA or Class SE. Class SA waters are defined as "Coastal waters and estuarine waters of high quality and/or exceptional ecological or recreational value whose existing characteristics shall not be altered, except by natural causes, in order to preserve the existing natural phenomena." Class SA waters include bioluminescent lagoons and bays such as La Parguera and Monsio José on the Southern Coast, Bahía de Mosquito in Vieques, and any other coastal or estuarine waters of exceptional quality of high ecological value or recreational which may be designated by Puerto Rico, through Resolution, as requiring this classification for protection of the waters. Class SE waters are defined



Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
		as "Surface waters and wetlands of exceptional ecological value, whose existing characteristics should not be altered in order to preserve the existing natural phenomena." Class SE waters include Laguna Tortuguero, Laguna Cartagena and any other surface water bodies of exceptional ecological value as may be designated by Puerto Rico through Resolution.
DCR100000	<b>District of Columbia</b>	
	Tier 2/2.5	Rock Creek and its tributaries and Battery Kemble Creek and its tributaries are considered Special Waters of the District of Columbia (SWDC) under its antidegradation program.
MNR100001	<b>Fond du Lac Band of MN Chippewa</b>	
	Tier 3	Six lakes are presently identified as Tier 3: (1) Dead Fish, (2) Jaskari, (3) Miller (Mud), (4) Perch, (5) Rice Portage, (6) Wild Rice.
	<b>Grand Portage Band of MN Chippewa</b>	
	Tier 2/2.5	All waters, not already classified as Tier 3, are high quality Tier 2 waters. (see Grand Portage Reservation Water Quality Standards, Section VI & VII, Pages 14-16).
	Tier 3	"The portion of Lake Superior north of latitude 47 degrees, 57 minutes, 13 seconds, east of Hat Point, south of the Minnesota-Ontario boundary, and west of the Minnesota-Michigan boundary." (see Section VII, Page 16).
WIR100001	<b>Lac du Flambeau Band of the Lake Superior Chippewa</b>	
	Tier 2	All named waters, including wetlands, not specified under an antidegradation classification.
	Tier 2.5	Bills Lake, Birch Lake, Bobidosh Lake, Bog Lake (SE SE Sec. 31, T40NR6E), Bolton Lake, Broken Bow Lake, Chewalah Lake, Clear Lake (Sec. 2, T39NR4E), Corn Great, Great, Corn Lake, Little "Least/Lesser", Crawling Stone Lake, Big, Crawling Stone Lake, Little, Crescent Lake, Crooked Lake, Big, David Lake, Ellerson Lake, Middle, Ellerson Lake, West, Elsie Lake "Boundary Lake", Fat Lake, Fence Lake, Gresham Creek, Green Lake (NW NW Sec. 19, T41R6E), Grey Lake, Gunlock Lake, Haskell Lake, Headflyer Lake (Sec. 19, T41NR5E), Highway Lake (NW NW Sec. 19, T41NR5E), Horsehead Lake (SE SW Sec. 9, T40NR5E), Hutton's Creek, Ike Walton Lake, Lily Lake (SE SW Sec. 35, T40NR5E), Little Ten Lake, Lodge Lake "L. Rice" (NW NW Sec. 8, T41NR6E), Lucy Lake, Mindys Lake (Sec. 8, T40NR5E), Minette Lake, Mitten Lake, Monk's Lake (Sec. 13, T40NR5E), Moving Cloud Lake, Mud Creek, Muskesin Lake, Patterson Lake, Placid Twin Lake (North), Placid Twin Lake (South), Plummer Lake, Poupart Lake, Prairie Lake (NE SW Sec. 13, T40NR4E), Raven Lake, Ross Allen Lake, Sand Lake, Little, Scott Lake (Sec. 22, T40N, R4E), Shishebogama Lake, Signal Lake, Snort Lake (Sec. 5, T41N, R6E), Spring Lake "Jerms", Squirrel Lake, Statenaker Lake "Hollow", Stearns Lake "Hourglass", Sugarbush "Hidden Lake" (NW NW Sec. 17, T41NR5E), Sugarbush Creek, Sugarbush Lake, Little, Sugarbush Lake, Lower, Sugarbush Lake, Middle, Sugarbush Lake, Upper, Sunfish Lake, Tippecanoe Lake, Tomahawk River, To-To Tom Lake, Toulish Lake, Trout River, Warrior Lake, White Sand Lake, Whitefish Lake

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority	
		"Cattail Lake" (Sec. 34, T40N5R), Wishow Lake, Wyandock Lake
	Tier 3	Bear River (1st bridge to Reservation boundary), Big Springs (Sec. 25, T40NR4E), Black Lake, Cranberry Lake, Doud Lake, Eagle Lake, Gene Lake, Johnson Springs, Little Trout Lake, Lost Lake (Sect. 1, T41NR4E), Mishonagon Creek, Munnomin (Jesse, Duck) Lake, Negani (Hegani) Lake, Reservation Line Lake, Spring Creek, Tank Lake, Thomas Lake, Wild Rice Lake, Zee Lake
NMR100000	<b>State of New Mexico</b>	
	Tier 3	<p>(1) Rio Santa Barbara, including the west, middle and east forks from their headwaters downstream to the boundary of the Pecos Wilderness; and</p> <p>(2) the waters within the United States forest service Valle Vidal special management unit including:</p> <p>(a) Rio Costilla, including Comanche, La Cueva, Fernandez, Chuckwagon, Little Costilla, Holman, Gold, Grassy, LaBelle and Vidal creeks, from their headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit;</p> <p>(b) Middle Ponil creek, including the waters of Greenwood Canyon, from their headwaters downstream to the boundary of the Elliott S. Barker wildlife management area;</p> <p>(c) Shuree lakes;</p> <p>(d) North Ponil creek, including McCrystal and Seally Canyon creeks, from their headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit; and</p> <p>(e) Leandro creek from its headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit.</p> <p>(3) the named perennial surface waters of the state, identified in Subparagraph (a) below, located within United States department of agriculture forest service wilderness. Wilderness are those lands designated by the United States congress as wilderness pursuant to the Wilderness Act. Wilderness areas included in this designation are the Aldo Leopold wilderness, Apache Kid wilderness, Blue Range wilderness, Chama River Canyon wilderness, Cruces Basin wilderness, Dome wilderness, Gila wilderness, Latir Peak wilderness, Pecos wilderness, San Pedro Parks wilderness, Wheeler Peak wilderness, and White Mountain wilderness.</p> <p>(a) The following waters are designated in the Rio Grande basin:</p> <p>(i) in the Aldo Leopold wilderness: Byers Run, Circle Seven creek, Flower canyon, Holden Prong, Indian canyon, Las Animas creek, Mud Spring canyon, North Fork Palomas creek, North Seco creek, Pretty canyon, Sids Prong, South Animas canyon, Victorio Park canyon, Water canyon;</p> <p>(ii) in the Apache Kid wilderness Indian creek and Smith canyon;</p> <p>(iii) in the Chama River Canyon wilderness: Chavez canyon, Ojitos canyon, Rio Chama;</p> <p>(iv) in the Cruces Basin wilderness: Beaver creek, Cruces creek, Diablo creek, Escondido creek, Lobo creek, Osha creek;</p> <p>(v) in the Dome wilderness: Capulin creek, Medio creek, Sanchez</p>

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
	<p>canyon/creek;</p> <p>(vi) in the Latir Peak wilderness: Bull creek, Bull Creek lake, Heart lake, Lagunitas Fork, Lake Fork creek, Rito del Medio, Rito Primero, West Latir creek;</p> <p>(vii) in the Pecos wilderness: Agua Sarca, Hidden lake, Horseshoe lake (Alamitos), Jose Vigil lake, Nambe lake, Nat lake IV, No Fish lake, North Fork Rio Quemado, Rinconada, Rio Capulin, Rio de las Trampas (Trampas creek), Rio de Truchas, Rio Frijoles, Rio Medio, Rio Molino, Rio Nambe, Rio San Leonardo, Rito con Agua, Rito Gallina, Rito Jaroso, Rito Quemado, San Leonardo lake, Santa Fe lake, Santa Fe river, Serpent lake, South Fork Rio Quemado, Trampas lake (East), Trampas lake (West);</p> <p>(viii) in the San Pedro Parks wilderness: Agua Sarca, Cañon Madera, Cave creek, Cecilia Canyon creek, Clear creek (North SPP), Clear creek (South SPP), Corralitos creek, Dove creek, Jose Miguel creek, La Jara creek, Oso creek, Rio Capulin, Rio de las Vacas, Rio Gallina, Rio Puerco de Chama, Rito Anastacio East, Rito Anastacio West, Rito de las Palomas, Rito de las Perchas, Rito de los Pinos, Rito de los Utes, Rito Leche, Rito Redondo, Rito Resumidero, San Gregorio lake;</p> <p>(ix) in the Wheeler Peak wilderness: Black Copper canyon, East Fork Red river, Elk lake, Horseshoe lake, Lost lake, Sawmill creek, South Fork lake, South Fork Rio Hondo, Williams lake.</p> <p>(b) The following waters are designated in the Pecos River basin:</p> <p>(i) in the Pecos wilderness: Albright creek, Bear creek, Beatty creek, Beaver creek, Carpenter creek, Cascade canyon, Cave creek, El Porvenir creek, Hollinger creek, Holy Ghost creek, Horsethief creek, Jack's creek, Jarosa canyon/creek, Johnson lake, Lake Katherine, Lost Bear lake, Noisy brook, Panchuela creek, Pecos Baldy lake, Pecos river, Rio Mora, Rio Valdez, Rito Azul, Rito de los Chimayosos, Rito de los Esteros, Rito del Oso, Rito del Padre, Rito las Trampas, Rito Maestas, Rito Oscuro, Rito Perro, Rito Sebadilloses, South Fork Bear creek, South Fork Rito Azul, Spirit lake, Stewart lake, Truchas lake (North), Truchas lake (South), Winsor creek;</p> <p>(ii) in the White Mountain wilderness: Argentina creek, Aspen creek, Bonito creek, Little Bonito creek, Mills canyon/creek, Rodamaker creek, South Fork Rio Bonito, Turkey canyon/creek.</p> <p>(c) The following waters are designated in the Gila River basin:</p> <p>(i) in the Aldo Leopold wilderness: Aspen canyon, Black Canyon creek, Bonner canyon, Burnt canyon, Diamond creek, Falls canyon, Fisherman canyon, Running Water canyon, South Diamond creek;</p> <p>(ii) in the Gila wilderness: Apache creek, Black Canyon creek, Brush canyon, Canyon creek, Chicken Coop canyon, Clear creek, Cooper canyon, Cow creek, Cub creek, Diamond creek, East Fork Gila river, Gila river, Gilita creek, Indian creek, Iron creek, Langstroth canyon, Lillie canyon, Little creek, Little Turkey creek, Lookout canyon, McKenna creek, Middle Fork Gila river, Miller Spring canyon, Mogollon creek, Panther canyon, Prior creek, Rain creek, Raw Meat creek, Rocky canyon, Sacaton creek, Sapillo creek, Sheep Corral canyon, Skeleton canyon, Squaw creek, Sycamore canyon, Trail canyon, Trail creek, Trout creek, Turkey creek, Turkey Feather creek, Turnbo canyon,</p>

Permit Number	Areas of Coverage/Where EPA Is Permitting Authority
	<p>West Fork Gila river, West Fork Mogollon creek, White creek, Willow creek, Woodrow canyon.</p> <p>(d) The following waters are designated in the Canadian River basin: in the Pecos wilderness Daily creek, Johns canyon, Middle Fork Lake of Rio de la Casa, Middle Fork Rio de la Casa, North Fork Lake of Rio de la Casa, Rito de Gascon, Rito San Jose, Sapello river, South Fork Rio de la Casa, Sparks creek (Manuelitas creek).</p> <p>(e) The following waters are designated in the San Francisco River basin:</p> <p>(i) in the Blue Range wilderness: Pueblo creek;</p> <p>(ii) in the Gila wilderness: Big Dry creek, Lipsey canyon, Little Dry creek, Little Whitewater creek, South Fork Whitewater creek, Spider creek, Spruce creek, Whitewater creek.</p> <p>(f) The following waters are designated in the Mimbres Closed basin: in the Aldo Leopold wilderness Corral canyon, Mimbres river, North Fork Mimbres river, South Fork Mimbres river.</p> <p>(g) The following waters are designated in the Tularosa Closed basin: in the White Mountain wilderness Indian creek, Nogal Arroyo, Three Rivers.</p> <p>(h) The wetlands designated are identified on the maps and list of wetlands within United States forest service wilderness areas designated as outstanding national resource waters published at the New Mexico state library and available on the department's website.</p>

**Appendix G – Buffer Guidance.**

The purpose of this guidance is to assist you in complying with the requirements in Part 2.1.2.1 of the permit regarding the establishment of natural buffers or equivalent sediment controls. This guidance is organized as follows:

- G.1 Sites That Are Required to Comply with Part 2.1.2.1 .....2
  - G.1.1 Step 1 - Determine if Your Site is Within 50 Feet of a Surface Water.....2
  - G.1.2 Step 2 - Determine if Any Exceptions to the Requirements in Part 2.1.2.1 Apply.....3
- G.2 COMPLIANCE ALTERNATIVES GUIDANCE.....4
  - G.2.1 Guidance for Providing and Maintaining Natural Buffers .....4
    - G.2.1.1 Buffer Width Measurement .....5
    - G.2.1.2 Limits to Disturbance Within the Buffer .....7
    - G.2.1.3 Discharges to the Buffer .....7
    - G.2.1.4 SWPPP Documentation .....8
  - G.2.2 Guidance for Providing the Equivalent Sediment Reduction as the 50-foot Buffer.....8
    - G.2.2.1 Determine Whether it is Feasible to Provide a Reduced Buffer .....8
    - G.2.2.2 Design Controls That Provide Equivalent Sediment Reduction as 50-foot Buffer .....9
      - a. Step 1 - Estimate the Sediment Reduction from the 50-foot Buffer ..... 10
      - b. Step 2 - Design Controls That Match the Sediment Removal Efficiency of the 50-foot Buffer..... 11
  - G.2.3 Small Residential Lot Compliance Alternatives .....13
    - G.2.3.1 Step 1 – Determine if You are Eligible for the Small Residential Lot Compliance Alternatives .....13
    - G.2.3.2 Step 2 – Implement the Requirements of the Small Residential Lot Compliance Alternative Selected .....13
      - a. Small Residential Lot Compliance Alternative 1 .....13
      - b. Small Residential Lot Compliance Alternative 2..... 14

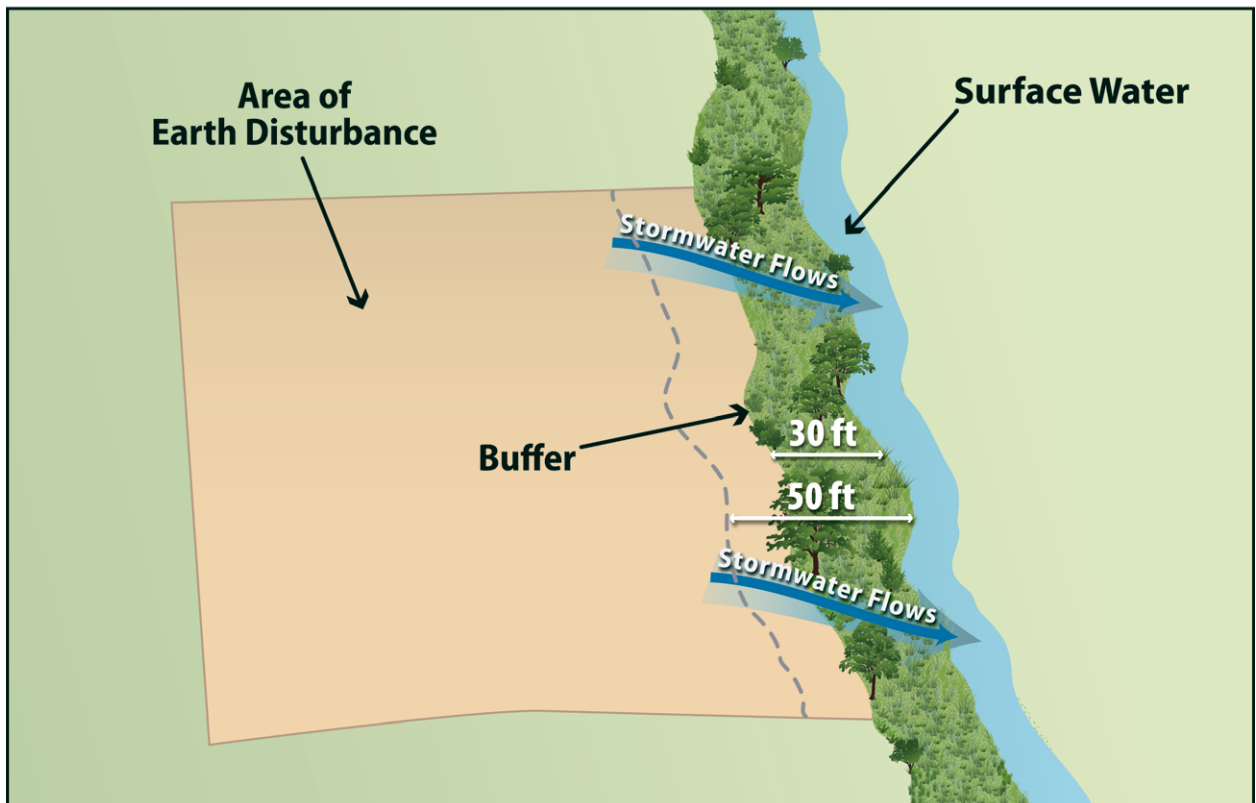
## G.1 Sites That Are Required to Comply with Part 2.1.2.1

The purpose of this part is to help you determine if the requirements in Part 2.1.2.1 apply to your site.

### G.1.1 Step 1 - Determine if Your Site is Within 50 Feet of a Surface Water

Part 2.1.2.1 applies to you only if your earth-disturbing activities will occur within 50 feet of a surface water that receives stormwater discharges from your site. Figure G – 1 illustrates when a site would be required to comply with the requirements in Part 2.1.2.1 due to their proximity to a surface water. If the surface water is not located within 50 feet of the earth-disturbing activities, Part 2.1.2.1 does not apply.

**Figure G - 1. Example of earth-disturbing activities within 50 feet of a surface water.**



If you determine that your earth-disturbing activities will occur within 50 feet of a surface water that receives stormwater discharges from your site, the requirements in Part 2.1.2.1 apply, except for certain circumstances that are described in Step 2.

Note that where some natural buffer exists but portions of the area within 50 feet of the surface water are occupied by preexisting development disturbances, or if a portion of area within 50 feet of the surface water is owned by another party and is not under your control, the buffer requirements in Part 2.1.2.1 still apply, but with some allowances.

Clarity about how to implement the compliance alternatives for these situations is provided in G.2.1.2 and G.2.2.2 below.

Note that EPA does not consider designed stormwater control features (e.g., *stormwater conveyance channels, storm drain inlets, stormwater basins*) that direct storm water to surface waters more than 50 feet from the disturbance to constitute surface waters for the purposes of determining if the buffer requirements apply.

### **G.1.2 Step 2 - Determine if Any Exceptions to the Requirements in Part 2.1.2.1 Apply**

The following exceptions apply to the requirements in Part 2.1.2.1:

- If there is no discharge of stormwater to surface waters through the area between the disturbed portions of the site and any surface waters located within 50 feet of your site, you are not required to comply with the requirements in this Part. This includes situations where you have implemented controls measures, such as a berm or other barrier, that will prevent such discharges.
- Where no natural buffer exists due to preexisting development disturbances (e.g., *structures, impervious surfaces*) that occurred prior to the initiation of planning for the current development of the site, you are not required to comply with the requirements in this Part.

Where some natural buffer exists but portions of the area within 50 feet of the surface water are occupied by preexisting development disturbances, you are required to comply with the requirements in this Part. For the purposes of calculating the sediment load reduction for either compliance alternative 2 or 3 below, you are not expected to compensate for the reduction in buffer function that would have resulted from the area covered by these preexisting disturbances. Clarity about how to implement the compliance alternatives for these situations is provided in G.2.1.2 and G.2.2.2 below.

If during your project, you will disturb any portion of these preexisting disturbances, the area removed will be deducted from the area treated as natural buffer.

- For "linear construction projects" (see Appendix A), you are not required to comply with this requirement if site constraints (e.g., *limited right-of-way*) prevent you from complying with the requirements of the alternatives in Part 2.1.2.1a, provided that, to the extent practicable, you limit disturbances within 50 feet of the surface water and/or you provide supplemental erosion and sediment controls to treat stormwater discharges from earth disturbances within 50 feet of the surface water. You must also document in your SWPPP your rationale for why it is infeasible for you to comply with the requirements in Part 2.1.2.1a, and describe any buffer width retained and/or supplemental erosion and sediment controls installed.
- For "small residential lot" construction (i.e., *a lot being developed for residential purposes that will disturb less than 1 acre of land, but is part of a larger residential project that will ultimately disturb greater than or equal to 1 acre*), you have the option of complying with the requirements in Part G.2.3 of this appendix.
- The following disturbances within 50 feet of a surface water are exempt from the requirements in this Part:
  - Construction approved under a CWA Section 404 permit; or

- Construction of a water-dependent structure or water access areas (e.g., pier, boat ramp, trail).

Note that you must document in your SWPPP if any disturbances related to any of the above exceptions occurs within the buffer area on your site.

## **G.2 COMPLIANCE ALTERNATIVES GUIDANCE**

If in Part G.1 of this guidance you determine that the buffer requirements apply to your site, you have three compliance alternatives from which you can choose:

1. Provide and maintain a 50-foot buffer undisturbed natural buffer (Part 2.1.2.1a.i);<sup>1</sup> or
2. Provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by additional erosion and sediment controls, which in combination achieves the sediment load reduction equivalent to a 50-foot undisturbed natural buffer (Part 2.1.2.1a.ii);<sup>1</sup> or
3. If it is infeasible to provide and maintain an undisturbed natural buffer of any size, you must implement erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer (Part 2.1.2.1a.iii).<sup>1</sup>

The compliance alternative selected above must be maintained throughout the duration of permit coverage.

The following provides detailed guidance for how you can comply with each of the compliance alternatives. Part G.2.1 below provides guidance on how to provide and maintain natural buffers consistent with the alternatives 1 and 2, above. Part G.2.2 below provides guidance on how to comply with the requirement to provide a 50-foot buffer equivalent through erosion and sediment controls consistent with alternatives 2 and 3, above.

### **G.2.1 Guidance for Providing and Maintaining Natural Buffers**

The following guidance is intended to assist you in complying with the requirements to provide and maintain a natural buffer during construction. This part of the guidance applies to you if you choose either alternative 1 (50-foot buffer) or alternative 2 (a buffer of < 50 feet supplemented by additional erosion and sediment controls that achieve the equivalent sediment load reduction as the 50-foot buffer), or if you are providing a buffer in compliance with one of the small residential lot compliance alternatives in Part G.2.3 below.

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<sup>1</sup> For the compliance alternatives in 1 and 2, you are not required to enhance the quality of the vegetation that already exists in the buffer, or provide vegetation if none exists (e.g., arid and semi-arid areas). You only need to retain and protect from disturbance the natural buffer that existed prior to the commencement of construction. Any preexisting structures or impervious surfaces are allowed in the natural buffer provided you retain and protect from disturbance the natural buffer area outside the preexisting disturbance. Similarly, for alternatives 2 and 3, you are required to implement and maintain sediment controls that achieve the sediment load reduction equivalent to the undisturbed natural buffer that existed on the site prior to the commencement of construction. In determining equivalent sediment load reductions, you may consider naturally non-vegetated areas and prior disturbances. See Part G.2.2 of this Appendix for a discussion of how to determine equivalent reductions.



### **G.2.1.1 Buffer Width Measurement**

Where you are retaining a buffer of any size, the buffer should be measured perpendicularly from any of the following points, whichever is further landward from the water:

1. The ordinary high water mark of the water body, defined as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and/or the presence of litter and debris; or
2. The edge of the stream or river bank, bluff, or cliff, whichever is applicable.

Refer to Figure G – 2 and Figure G - 3. You may find that specifically measuring these points is challenging if the flow path of the surface water changes frequently, thereby causing the measurement line for the buffer to fluctuate continuously along the path of the waterbody. Where this is the case, EPA suggests that rather than measuring each change or deviation along the water's edge, it may be easier to select regular intervals from which to conduct your measurement. For instance, you may elect to conduct your buffer measurement every 5 to 10 feet along the length of the water.

Additionally, note that if earth-disturbing activities will take place on both sides of a surface water that flows through your site, to the extent that you are establishing a buffer around this water, it must be established on both sides. For example, if you choose alternative 1 above, and your project calls for disturbances on both sides of a small stream, you would need to retain the full 50 feet of buffer on both sides of the water. However, if your construction activities will only occur on one side of the stream, you would only need to retain the 50-foot buffer on the side of the stream where the earth-disturbance will occur.

Figure G - 2. This image shows buffer measurement from the ordinary high water mark of the water body, as indicated by a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, and/or the presence of litter/debris.

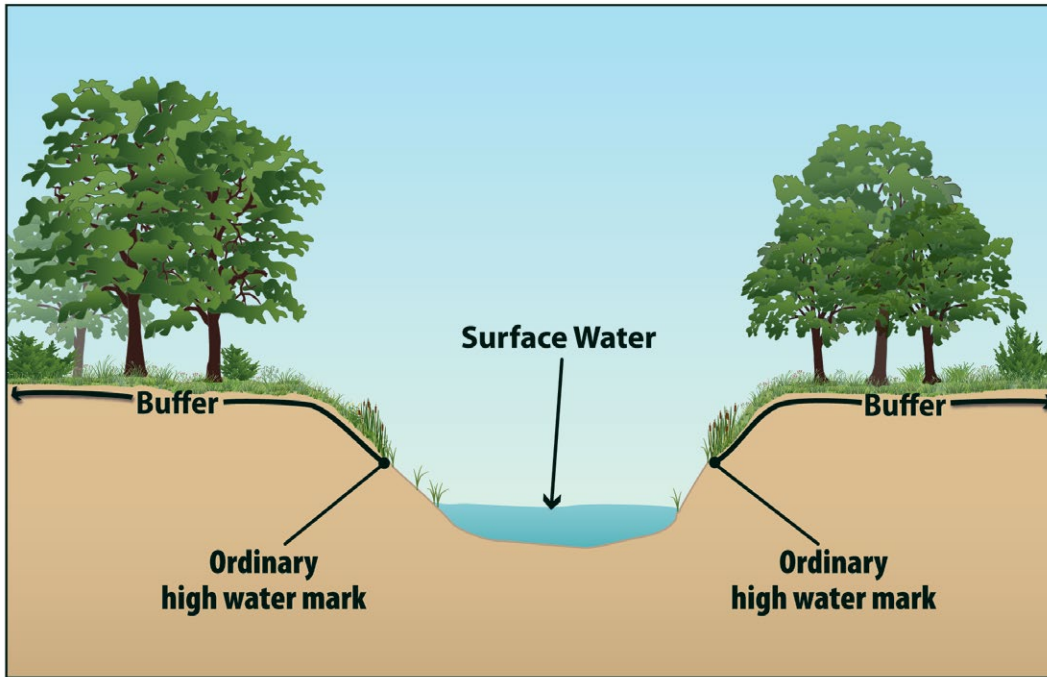
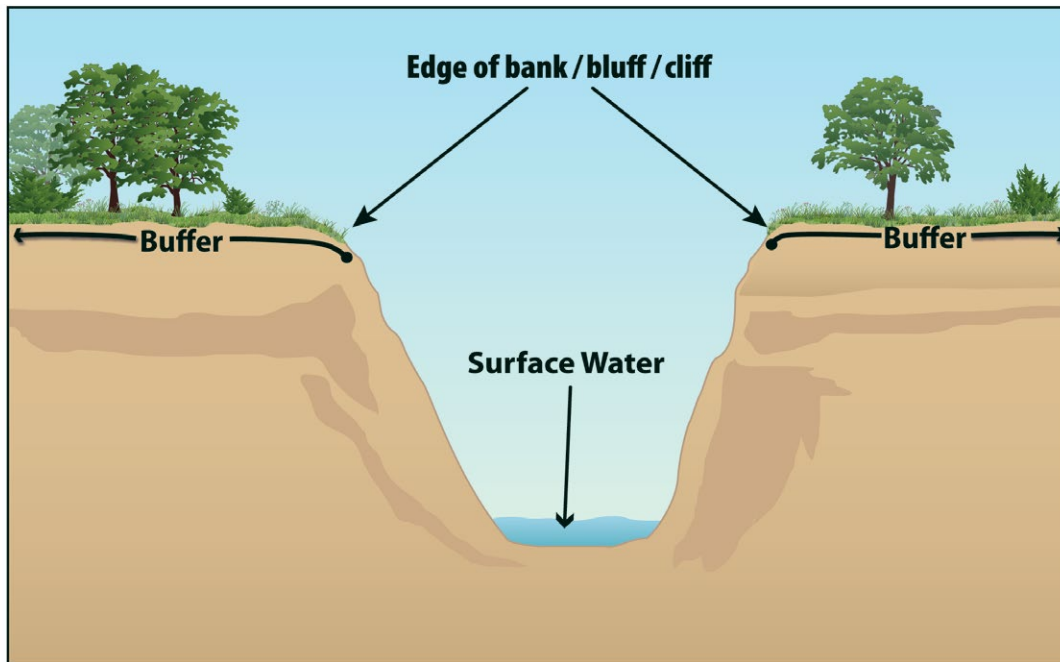


Figure G - 3. This image shows buffer measurement from the edge of the bank, bluff, or cliff, whichever is applicable.



### **G.2.1.2 Limits to Disturbance Within the Buffer**

You are considered to be in compliance with this requirement if you retain and protect from construction activities the natural buffer that existed prior to the commencement of construction. If the buffer area contains no vegetation prior to the commencement of construction (e.g., sand or rocky surface), you are not required to plant any additional vegetation. As noted above, any preexisting structures or impervious surfaces are allowed in the buffer provided you retain and protect from disturbance the vegetation in the buffer outside the preexisting disturbance.

To ensure that the water quality protection benefits of the buffer are retained during construction, you are prohibited from conducting any earth-disturbing activities within the buffer during permit coverage. In furtherance of this requirement, prior to commencing earth-disturbing activities on your site, you must delineate, and clearly mark off, with flags, tape, or a similar marking device, the buffer area on your site. The purpose of this requirement is to make the buffer area clearly visible to the people working on your site so that unintended disturbances are avoided.

While you are not required to enhance the quality of the vegetation that already exists within the buffer, you are encouraged to do so where such improvements will enhance the water quality protection benefits of the buffer. (Note that any disturbances within the buffer related to buffer enhancement are permitted and do not constitute construction disturbances.) For instance, you may want to consider targeted plantings where limited vegetation exists, or replacement of existing vegetation where invasive or noxious plant species (see <http://plants.usda.gov/java/noxiousDriver>) have taken over. In the case of invasive or noxious species, you may want to remove and replace them with a diversity of native trees, shrubs, and herbaceous plants that are well-adapted to the climatic, soil, and hydrologic conditions on the site. You are also encouraged to limit the removal of naturally deposited leaf litter, woody debris, and other biomass, as this material contributes to the ability of the buffer to retain water and filter pollutants.

If a portion of the buffer area adjacent to the surface water is owned by another party and is not under your control, you are only required to retain and protect from construction activities the portion of the buffer area that is under your control. For example, if you elect alternative 1 above (provide and maintain a 50-foot buffer), but 10 feet of land immediately adjacent to the surface water is owned by a different party than the land on which your construction activities are taking place and you do not have control over that land, you must only retain and protect from construction activities the 40-foot buffer area that occurs on the property on which your construction activities are taking place. EPA would consider you to be in compliance with this requirement regardless of the activities that are taking place in the 10-foot area that is owned by a different party than the land on which your construction activities are taking place that you have no control over.

### **G.2.1.3 Discharges to the Buffer**

You must ensure that all discharges from the area of earth disturbance to the natural buffer are first treated by the site's erosion and sediment controls (*for example, you must comply with the Part 2.1.2.2 requirement to establish sediment controls around the downslope perimeter of your site disturbances*), and if necessary to prevent erosion caused by stormwater flows within the buffer, you must use velocity dissipation devices. The purpose of this requirement is to decrease the rate of stormwater flow and

encourage infiltration so that the pollutant filtering functions of the buffer will be achieved. To comply with this requirement, construction operators typically will use devices that physically dissipate stormwater flows so that the discharge entering the buffer is spread out and slowed down.

#### **G.2.1.4 SWPPP Documentation**

You are required to document in your SWPPP the natural buffer width that is retained. For example, if you are complying with alternative 1, you must specify in your SWPPP that you are providing a 50-foot buffer. Or, if you will be complying with alternative 2, you must document the reduced width of the buffer you will be retaining (and you must also comply with the requirements in Part 2.1.2.1c to describe the erosion and sediment controls you will use to achieve an equivalent sediment reduction, as described in Part G.2.2 below). Note that you must also show any buffers on your site plan in your SWPPP consistent with Part 7.2.6.3. Additionally, if any disturbances related to the exceptions in Part 2.1.2.1e occur within the buffer area, you must document this in the SWPPP.

#### **G.2.2 Guidance for Providing the Equivalent Sediment Reduction as the 50-foot Buffer**

If you are selecting Alternative 2 (provide and maintain a buffer that is less than 50 feet that is supplemented by additional erosion and sediment controls that, together, achieve the equivalent sediment load reduction as the 50-foot buffer) or Alternative 3 (implement erosion and sediment controls that achieve the equivalent sediment load reduction as the 50-foot buffer), the following guidance is intended to assist you in demonstrating that you will achieve the equivalent sediment reduction as the 50-foot buffer.

##### **G.2.2.1 Determine Whether it is Feasible to Provide a Reduced Buffer**

EPA recognizes that there will be a number of situations in which it will be infeasible to provide and maintain a buffer of any width. While some of these situations may exempt you from the buffer requirement entirely (see G.1.2), if you do not qualify for one of these exemptions, there still may be conditions or circumstances at your site that make it infeasible to provide a natural buffer. For example, there may be sites where a significant portion of the property on which the earth-disturbing activities will occur is located within the buffer area, thereby precluding the retention of natural buffer areas. EPA believes there are likely to be other examples of situations that make it infeasible to provide any buffer area.

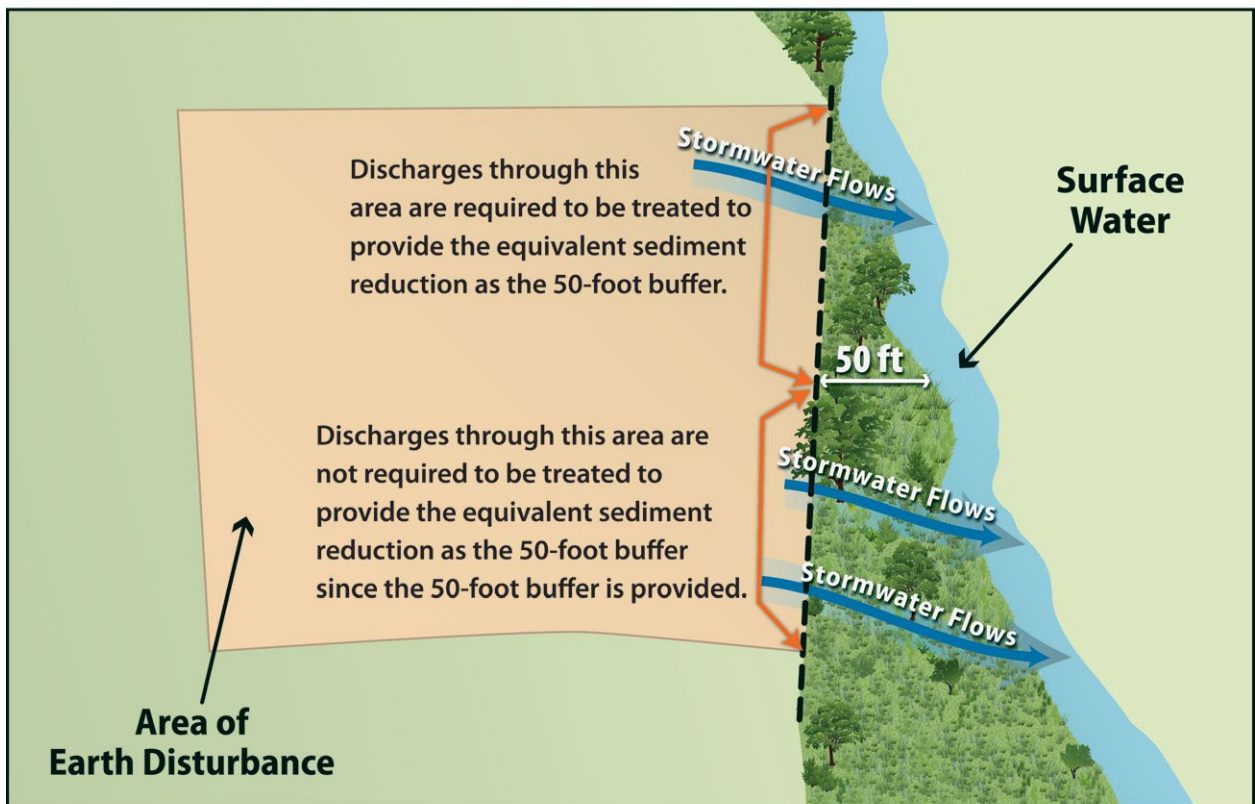
Therefore, in choosing between the 2 different compliance alternatives (Alternative 2 or 3), you should only elect to comply with Alternative 2 if it is feasible for you to retain any natural buffer on your site. (Note: For any buffer width retained, you are required to comply with the requirements in Part G.2.1, above, concerning the retention of vegetation and restricting earth disturbances.) Similarly, if you determine that it is infeasible to provide a natural buffer of any size during construction, you should elect to comply with Alternative 3. After making this determination, you should proceed to Part G.2.2.2 to determine how to provide controls that, together with any buffer areas that is being retained, if applicable, will achieve an equivalent sediment load reduction as the 50-foot buffer.

### G.2.2.2 Design Controls That Provide Equivalent Sediment Reduction as 50-foot Buffer

You must next determine what additional controls must be implemented on your site that, alone or in combination with any retained natural buffer, achieve a reduction in sediment equivalent to that achieved by a 50-foot buffer.

Note that if only a portion of the natural buffer is less than 50 feet, you are only required to implement erosion and sediment controls that achieve the sediment load reduction equivalent to the 50-foot buffer for discharges through that area. You would not be required to provide treatment of stormwater discharges that flow through 50 feet or more of natural buffer. See Figure G - 4.

**Figure G - 4 Example of how to comply with the requirement to provide the equivalent sediment reduction when only a portion of your earth-disturbances discharge to a buffer of less than 50-feet.**



To comply with this requirement, you are required to do the following:

**Step 1** - Estimate the sediment reduction expected from your site if you had retained a 50-foot natural buffer;

**Step 2** - Design controls that alone or in combination with any width of buffer retained achieve the equivalent sediment removal efficiency as that expected from the 50-foot buffer; and

**Step 3** - Document in your SWPPP how your controls will achieve the equivalent sediment removal efficiency of the 50-foot buffer.

Guidelines to help you work through these requirements are provided below.

**a. Step 1 - Estimate the Sediment Reduction from the 50-foot Buffer**

In order to design controls that match the sediment removal efficiency of a 50-foot buffer, you first need to know what this efficiency is for your site. The sediment removal efficiencies of natural buffers vary according to a number of site-specific factors, including precipitation, soil type, land cover, slope length, width, steepness, and the types of sediment controls used to reduce the discharge of sediment prior to the buffer. EPA has simplified this calculation by developing buffer performance tables covering a range of vegetation and soil types for the areas covered by the CGP. See Attachment 1, Tables G - 8 through G - 15. Note: buffer performance values in Tables G - 8 through G - 15 represent the percent of sediment captured through the use of perimeter controls (e.g., silt fences) and 50-foot buffers at disturbed sites of fixed proportions and slopes.<sup>2</sup>

Using Tables G - 8 through G - 15 (see Attachment 1), you can determine the sediment removal efficiency of a 50-foot buffer for your geographic area by matching the vegetative cover type that best describes your buffer area and the type of soils that predominate at your site. For example, if your site is located in Massachusetts (Table G - 9), and your buffer vegetation corresponds most closely with that of tall fescue grass, and the soil type at your site is best typified as sand, your site's sediment removal efficiency would be 81 percent.

In this step, you should choose the vegetation type in the tables that most closely matches the vegetation that would exist naturally in the buffer area on your site regardless of the condition of the buffer. However, because you are not required to plant any additional vegetation in the buffer area, in determining what controls are necessary to meet this sediment removal equivalency in Step 2 below, you will be able to take credit for this area as a fully vegetated "natural buffer."

Similarly, if a portion of the buffer area adjacent to the surface water is owned by another party and is not under your control, you can treat the area of land not

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<sup>2</sup> EPA used the following when developing the buffer performance tables:

- The sediment removal efficiencies are based on the U.S. Department of Agriculture's RUSLE2 ("Revised Universal Soil Loss Equation 2") model for slope profiles using a 100-foot long denuded slopes.
- Sediment removal was defined as the annual sediment delivered at the downstream end of the 50-foot natural buffer (tons/yr/acre) divided by the annual yield from denuded area (tons/yr/acre).
- As perimeter controls are also required by the CGP, sediment removal is in part a function of the reduction due to a perimeter control (i.e., silt fence) located between the disturbed portion of the site and the upstream edge of the natural buffer and flow traveling through a 50-foot buffer of undisturbed natural vegetation.
- It was assumed that construction sites have a relatively uniform slope without topographic features that accelerate the concentration for erosive flows.
- It was assumed that vegetation has been removed from the disturbed portion of the site and a combination of cuts and fills have resulted in a smooth soil surface with limited retention of near-surface root mass

To represent the influence of soil, EPA analyzed 11 general soil texture classifications in its evaluation of buffer performance. To represent different types of buffer vegetation, EPA evaluated 4 or more common vegetative types for each state/territory covered under the permit. For each vegetation type evaluated, EPA considered only permanent, non-grazed and non-harvested vegetation, on the assumption that a natural buffer adjacent to the surface water will typically be undisturbed. EPA also evaluated slope steepness and found that sediment removal efficiencies present in Tables G -8 through G - 15 are achievable for slopes that are less than nine percent.

under control as having the equivalent vegetative cover and soil type that predominates on the portion of the property on which your construction activities are occurring.

*For example, if your earth-disturbances occur within 50 feet of a surface water, but the 10 feet of land immediately adjacent to the surface water is owned by a different party than the land on which your construction activities are taking place and you do not have control over that land, you can treat the 10 foot area adjacent to the stream as having the equivalent soil and vegetation type as predominates in the 40 foot area under your control. You would then make the same assumption in Step 2 for purposes of determining the equivalent sediment removal.*

Alternatively, you may do your own calculation of the effectiveness of the 50-foot buffer based upon your site-specific conditions, and may use this number as your sediment removal equivalency standard to meet instead of using Tables G - 8 through G - 15. This calculation must be documented in your SWPPP.

**b. Step 2 - Design Controls That Match the Sediment Removal Efficiency of the 50-foot Buffer**

Once you have determined the estimated sediment removal efficiency of a 50-foot buffer for your site in Step 1, you will be required to select stormwater controls that will provide an equivalent sediment load reductions. These controls can include the installation of a single designed control, such as a sediment pond, additional perimeter controls, or other type of device. Alternatively, you may elect to install a combination of stormwater controls and to retain some amount of a buffer. Whichever control(s) you select, you must demonstrate in your SWPPP that the controls will provide at a minimum the same sediment removal capabilities as the 50-foot buffer (Step 1). You are allowed to take credit for the removal efficiencies of your required perimeter controls in your calculation of equivalency, because these were included in calculating the buffer removal efficiencies in tables G - 8 through G - 15. (Note: You are reminded that the controls must be kept in effective operating condition until you have completed final stabilization on the disturbed portions of the site discharging to the surface water.)

To make the determination that your controls and/or buffer area achieve an equivalent sediment load reduction as the 50-foot buffer, you will need to use a model or other type of calculator. As mentioned above, there are a variety of models available that can be used to support your calculation, including USDA's RUSLE-series programs and the WEPP erosion model, SEDCAD, SEDIMOT, or other models. A couple of examples are provided in Attachment 3 to help illustrate how this determination could be made.

If you are retaining a buffer of less than 50 feet, you may take credit for the removal that will occur from the reduced buffer and only need to provide additional controls to make up the difference between the removal efficiency of a 50 foot buffer and the removal efficiency of the narrower buffer. For example, if you are retaining a 30 foot buffer, you can account for the sediment removal provided by the 30-foot buffer retained, and you will only need to design controls to make up for the additional removal provided by the 20-foot of buffer that is not being provided. To do this, you would plug the width of the buffer that is

retained into RUSLE or another model, along with other stormwater controls that will together achieve a sediment reduction equivalent to a natural 50-foot buffer.

As described in Step 1 above, you can take credit for the area you have retained as a "natural buffer" as being fully vegetated, regardless of the condition of the buffer area.

*For example, if your earth-disturbances occur 30 feet from a surface water, but the 10 feet of land immediately adjacent to the surface water is owned by a different party than the land on which your construction activities are taking place and you do not have control over that land, you can treat the 10-foot area as a natural buffer, regardless of the activities that are taking place in the area. Therefore, you can assume (for purposes of your equivalency calculation) that your site is providing the sediment removal equivalent of a 30-foot buffer, and you will only need to design controls to make up for the additional removal provided by the 20-foot of buffer that is not being provided.*

**c. Step 3 - Document How Site-Specific Controls Will Achieve the Sediment Removal Efficiency of the 50-foot Buffer**

In Steps 1 and 2, you determined both the expected sediment removal efficiency of a 50-foot buffer at your site, and you used this number as a performance standard to design controls to be installed at your site, which alone or in combination with any retained natural buffer, achieves the expected sediment removal efficiency of a 50-foot buffer at your site. The final step is to document in your SWPPP the information you relied on to calculate the equivalent sediment reduction as an undisturbed natural buffer.

EPA will consider your documentation to be sufficient if it generally meets the following:

- For Step 1, refer to the table in Attachment 1 that you used to derive your estimated 50-foot buffer sediment removal efficiency performance. Include information about the buffer vegetation and soil type that predominate at your site, which you used to select the sediment load reduction value in Tables G - 8 through G - 15. Or, if you conducted a site-specific calculation for sediment removal efficiency, provide the specific removal efficiency, and the information you relied on to make your site-specific calculation.
- For Step 2: (1) Specify the model you used to estimate sediment load reductions from your site; and (2) the results of calculations showing how your controls will meet or exceed the sediment removal efficiency from Step 1.

If you choose Alternative 3, you must also include in your SWPPP a description of why it is infeasible for you to provide and maintain an undisturbed natural buffer of any size.



### G.2.3 Small Residential Lot Compliance Alternatives

In this part of Appendix G, EPA provides additional compliance alternatives for operators of small residential lots. In accordance with Part 2.1.2.1e.iv, operators of small residential lots who do not provide a 50-foot buffer are not required to make the demonstration outlined in Part G.2.2.2. Instead, qualifying operators can comply with the buffer requirement by choosing to implement a set of traditional sediment and erosion controls from the menu of practices provided in Part G.2.3.2.

A **small residential lot** is a lot or grouping of lots being developed for residential purposes that will disturb less than 1 acre of land, but that is part of a larger residential project that will ultimately disturb greater than or equal to 1 acre.

EPA has developed two different alternatives for compliance. The following steps describe how a small residential lot operator would achieve compliance with these 2 alternatives.

#### G.2.3.1 Step 1 – Determine if You are Eligible for the Small Residential Lot Compliance Alternatives

In order to be eligible for the small residential lot compliance alternatives, the following conditions must be met:

- a. The lot or grouping of lots meets the definition of "small residential lot"; and
- b. The operator must comply with all other requirements in Part 2.1.2.1, including:
  - i. Ensure that all discharges from the area of earth disturbance to the natural buffer are first treated by the site's erosion and sediment controls, and use velocity dissipation devices if necessary to prevent erosion caused by stormwater within the buffer;
  - ii. Document in the SWPPP the natural buffer width retained on the property, and show the buffer boundary on your site plan; and
  - iii. Delineate, and clearly mark off, with flags, tape, or other similar marking device, all natural buffer areas.

#### G.2.3.2 Step 2 – Implement the Requirements of the Small Residential Lot Compliance Alternative Selected

You must next choose from one of two small residential lot compliance alternatives and implement the stormwater control practices associated with that alternative.

Note: The compliance alternatives provided below are not mandatory. Operators of small residential lots can alternatively choose to comply with any of the options that are available to other sites in Part 2.1.2.1a, described in Parts G.2.1 and G.2.2 in this appendix.

##### a. Small Residential Lot Compliance Alternative 1

Alternative 1 is a straightforward tiered- technology approach that specifies the controls that a small residential lot must implement based on the buffer width retained. To achieve compliance with Alternative 1, you must implement the

controls specified in Table G – 1 based on the buffer width to be retained. See footnote 3, below, for a description of the controls you must implement.

*For example, if you are an operator of a small residential lot that will be retaining a 35-foot buffer and you choose Small Residential Lot Compliance Alternative 1, you must implement double perimeter controls between earth disturbances and the surface water.*

In addition to implementing the applicable control, you must also document in your SWPPP how you will comply with Alternative 1.

**Table G - 1. Alternative 1 Requirements<sup>3</sup>**

Retain 50-foot Buffer	Retain <50 and >30 foot Buffer	Retain ≤ 30 foot Buffer
No Additional Requirements	Double Perimeter Controls	Double Perimeter Controls and 7-Day Site Stabilization

**b. Small Residential Lot Compliance Alternative 2**

Alternative 2 specifies the controls that a builder of a small lot must implement based on both the buffer width retained and their risk of sediment discharge. By incorporating the sediment risk, this approach may result in the implementation of controls that are more appropriate for the site’s specific conditions.

*Step 1 – Determine Your Site’s Sediment Risk Level*

To meet the requirements of Alternative 2, you must first determine your site’s sediment discharge “risk level” based on the site’s slope, location, and soil type. To help you to determine your site’s sediment risk level, EPA has developed five different tables for different slope conditions. You must select the table that most closely corresponds to your site’s average slope.

*For example, if your site’s average slope is 7 percent, you would use Table G – 4 to determine your site’s sediment risk.*

After you determine which table applies to your site, you must then use the table to determine the “risk level” (e.g., “low”, “moderate”, or “high”) that corresponds to your site’s location and predominant soil type.<sup>4</sup>

*For example, based on Table G - 3, a site located in New Hampshire with a 4 percent average slope and with predominately sandy clay loam soils would fall into the “moderate” risk level.*

**<sup>3</sup> Description of Additional Controls Applicable to Small Residential Lot Compliance Alternatives 1 and 2:**

- **No Additional Requirements:** If you implement a buffer of 50 feet or greater, then you are not subject to any additional requirements. Note that you are required to install perimeter controls between the disturbed portions of your site and the buffer in accordance with Part 2.1.2.2.
- **Double Perimeter Control:** In addition to the reduced buffer width retained on your site, you must provide a double row of perimeter controls between the disturbed portion of your site and the surface water spaced a minimum of 5 feet apart.
- **Double Perimeter Control and 7-Day Site Stabilization:** In addition to the reduced buffer width retained on your site and the perimeter control implemented in accordance with Part 2.1.2.2, you must provide a double row of perimeter controls between the disturbed portion of your site and the surface water spaced a minimum of 5 feet apart, and you are required to complete the stabilization activities specified in Parts 2.2.1.2a and/or 2.2.1.2b within 7 calendar days of the temporary or permanent cessation of earth-disturbing activities.

<sup>4</sup> One source for determining your site’s predominant soil type is the USDA’s Web Soil Survey located at <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.

**Table G - 2. Risk Levels for Sites with Average Slopes of ≤ 3 Percent**

Soil Type \ Location	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Guam	Moderate	Moderate	Moderate	Moderate	High
Puerto Rico	Moderate	Moderate	Moderate	Moderate	High
Virgin Islands	Low	Moderate	Low	Moderate	Moderate
American Samoa	Moderate	Moderate	Moderate	Moderate	High
Massachusetts and New Hampshire	Low	Moderate	Low	Low	Moderate
Idaho	Low	Low	Low	Low	Low
New Mexico	Low	Low	Low	Low	Low
Washington D.C.	Low	Moderate	Low	Low	Moderate

**Table G - 3. Risk Levels for Sites with Average Slopes of > 3 Percent and ≤ 6 Percent**

Soil Type \ Location	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Guam	Moderate	Moderate	Moderate	Moderate	High
Puerto Rico	Moderate	Moderate	Moderate	Moderate	High
Virgin Islands	Moderate	Moderate	Moderate	Moderate	High
American Samoa	High	High	Moderate	High	High
Massachusetts and New Hampshire	Moderate	Moderate	Low	Moderate	High
Idaho	Low	Low	Low	Low	Low
New Mexico	Low	Low	Low	Low	Moderate
Washington D.C.	Moderate	Moderate	Moderate	Moderate	High

**Table G - 4. Risk Levels for Sites with Average Slopes of > 6 Percent and ≤ 9 Percent**

Soil Type \ Location	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Guam	Moderate	High	Moderate	High	High
Puerto Rico	Moderate	High	Moderate	Moderate	High
Virgin Islands	Moderate	Moderate	Moderate	Moderate	High
American Samoa	High	High	High	High	High
Massachusetts and New Hampshire	Moderate	Moderate	Moderate	Moderate	High
Idaho	Low	Low	Low	Low	Low
New Mexico	Low	Low	Low	Low	Moderate
Washington D.C.	Moderate	Moderate	Moderate	Moderate	High

**Table G - 5. Risk Levels for Sites with Average Slopes of > 9 Percent and ≤ 15 Percent**

Soil Type \ Location	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Guam	High	High	High	High	High
Puerto Rico	High	High	High	High	High
Virgin Islands	Moderate	High	Moderate	High	High
American Samoa	High	High	High	High	High
Massachusetts and New Hampshire	Moderate	Moderate	Moderate	Moderate	High
Idaho	Low	Low	Low	Low	Low
New Mexico	Low	Moderate	Low	Moderate	Moderate
Washington D.C.	Moderate	High	Moderate	Moderate	High

**Table G - 6. Risk Levels for Sites with Average Slopes of > 15 Percent**

Soil Type \ Location	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Guam	High	High	High	High	High
Puerto Rico	High	High	High	High	High
Virgin Islands	High	High	High	High	High
American Samoa	High	High	High	High	High
Massachusetts and New Hampshire	High	High	Moderate	High	High
Idaho	Low	Low	Low	Low	Moderate
New Mexico	Moderate	Moderate	Moderate	Moderate	High
Washington D.C.	High	High	Moderate	High	High

*Step 2 – Determine Which Additional Controls Apply*

Once you determine your site's "risk level", you must next determine the additional controls you need to implement on your site, based on the width of buffer you plan to retain. Table G - 7 specifies the requirements that apply based on the "risk level" and buffer width retained. See footnote 3, above, for a description of the additional controls that are required.

*For example, if you are the operator of a small residential lot that falls into the "moderate" risk level, and you decide to retain a 20-foot buffer, using Table G-7 you would determine that you need to implement double perimeter controls to achieve compliance with Part 2.1.2.1.*

You must also document in your SWPPP your compliance with Alternative 2.

**Table G - 7. Alternative 2 Requirements<sup>2</sup>**

Risk Level Based on Estimated Soil Erosion	Retain ≥ 50' Buffer	Retain <50' and >30' Buffer	Retain ≤30' and >10' Buffer	Retain ≤ 10' Buffer
Low Risk	No Additional Requirements	No Additional Requirements	Double Perimeter Control	Double Perimeter Control
Moderate Risk	No Additional Requirements	Double Perimeter Control	Double Perimeter Control	Double Perimeter Control and 7-Day Site Stabilization
High Risk	No Additional Requirements	Double Perimeter Control	Double Perimeter Control and 7-Day Site Stabilization	Double Perimeter Control and 7-Day Site Stabilization

**ATTACHMENT 1**

Sediment Removal Efficiency Tables<sup>5</sup>

EPA recognizes that very high removal efficiencies, even where theoretically achievable by a 50-foot buffer, may be very difficult to achieve in practice using alternative controls. Therefore in the tables below, EPA has limited the removal efficiencies to a maximum of 90%. Efficiencies that were calculated at greater than 90% are shown as 90%, and this is the minimum percent removal that must be achieved by alternative controls.

**Table G - 8. Estimated 50-foot Buffer Performance in Idaho\***

Type of Buffer Vegetation**	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Tall Fescue Grass	42	52	44	48	85
Medium-density Weeds	28	30	28	26	60
Low-density Warm-season Native Bunchgrass (i.e., Grama Grass)	25	26	24	24	55
Northern Mixed Prairie Grass	28	30	28	26	50
Northern Range Cold Desert Shrubs	28	28	24	26	50

\* Applicable for sites with less than nine percent slope  
 \*\* Characterization focuses on the under-story vegetation

**Table G - 9. Estimated 50-foot Buffer Performance in Massachusetts and New Hampshire\***

Type of Buffer Vegetation**	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Warm-season Grass (i.e., Switchgrass, Lemongrass)	79	90	90	90	90
Cool-season Dense Grass (Kentucky Bluegrass, Smooth Bromegrass, Timothy)	78	90	90	90	90
Tall Fescue Grass	76	90	81	89	90
Medium-density Weeds	66	76	60	72	66

\* Applicable for sites with less than nine percent slope  
 \*\* Characterization focuses on the under-story vegetation

<sup>5</sup> The buffer performances were calculated based on a denuded slope upgradient of a 50-foot buffer and a perimeter controls, as perimeter controls are a standard requirement (see Part 2.1.2.2).

**Table G - 10. Estimated 50-foot Buffer Performance in New Mexico\***

Type of Buffer Vegetation **	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Tall Fescue grass	71	85	80	86	90
Medium-density Weeds	56	73	55	66	78
Low-density Warm-season Native Bunchgrass (i.e., Grama Grass)	53	70	51	62	67
Southern Mixed Prairie Grass	53	71	52	63	50
Southern Range Cold Desert Shrubs	56	73	55	65	53

\* Applicable for sites with less than nine percent slope

\*\* Characterization focuses on the under-story vegetation

**Table G - 11. Estimated 50-foot Buffer Performance in Washington, DC\***

Type of Buffer Vegetation **	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Warm-season Grass (i.e., Switchgrass, Lemongrass)	82	90	90	90	90
Cool-season Dense Grass (Kentucky Bluegrass, Smooth Bromegrass, Timothy)	81	90	90	90	90
Tall Fescue Grass	79	90	83	89	90
Medium-density Weeds	71	79	66	75	74

\* Applicable for sites with less than nine percent slope

\*\* Characterization focuses on the under-story vegetation

**Table G - 12. Estimated 50-foot Buffer Performance in American Samoa\***

Type of Buffer Vegetation **	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Bahiagrass (Permanent cover)	82	90	90	90	83
Warm-season Grass (i.e., Switchgrass, Lemongrass)	82	90	90	90	85
Dense Grass	82	90	90	90	83
Tall Fescue Grass	82	89	82	89	79
Medium-density Weeds	70	73	62	75	59

\* Applicable for sites with less than nine percent slope

\*\* Characterization focuses on the under-story vegetation

**Table G - 13. Estimated 50-foot Buffer Performance in Guam\***

Type of Buffer Vegetation **	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Bahiagrass (Permanent cover)	80	90	90	90	89
Warm-season Grass (i.e., Switchgrass, Lemongrass)	80	90	90	90	90
Dense Grass	79	90	90	90	89
Tall Fescue Grass	76	90	80	88	87
Medium-density Weeds	63	73	53	68	61

\* Applicable for sites with less than nine percent slope

\*\* Characterization focuses on the under-story vegetation

**Table G - 14. Estimated 50-foot Buffer Performance in Puerto Rico\***

Type of Buffer Vegetation**	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Bahiagrass (Permanent cover)	83	90	90	90	90
Warm-season Grass (i.e., Switchgrass, Lemongrass)	83	90	90	90	90
Dense Grass	83	90	90	90	90
Tall Fescue Grass	82	90	84	90	89
Medium-density Weeds	72	78	65	76	64

\* Applicable for sites with less than nine percent slope

\*\* Characterization focuses on the under-story vegetation

**Table G - 15. Estimated 50-foot Buffer Performance in Virgin Islands\***

Type of Buffer Vegetation**	Estimated % Sediment Removal				
	Clay	Silty Clay Loam or Clay-Loam	Sand	Sandy Clay Loam, Loamy Sand or Silty Clay	Loam, Silt, Sandy Loam or Silt Loam
Bahiagrass (Permanent cover)	85	90	90	90	90
Warm-season Grass (i.e., Switchgrass, Lemongrass)	86	90	90	90	90
Dense Grass	85	90	90	90	90
Tall Fescue Grass	85	90	88	90	89
Medium-density Weeds	75	77	71	78	63

\* Applicable for sites with less than nine percent slope

\*\* Characterization focuses on the under-story vegetation



**ATTACHMENT 2**Using the Sediment Removal Efficiency Tables – Questions and Answers

- *What if my specific buffer vegetation is not represented in Tables G - 8 through G - 15?* Tables G - 8 through G - 15 provide a wide range of factors affecting buffer performance; however, there may be instances where the specific buffer vegetation type on your site is not listed. If you do not see a description of the type of vegetation present at your site, you should choose the vegetation type that most closely matches the vegetation type on your site. You can contact your local Cooperative Extension Service Office ([www.csrees.usda.gov/Extension](http://www.csrees.usda.gov/Extension)) for assistance in determining the vegetation type in Tables G - 8 through G - 15 that most closely matches your site-specific vegetation.
- *What if there is high variability in local soils?* EPA recognizes that there may be a number of different soil type(s) on any given construction site. General soil information can be obtained from USDA soil survey reports (<http://websoilsurvey.nrcs.usda.gov>) or from individual site assessments performed by a certified soil expert. Tables G - 8 through G - 15 present eleven generic soil texture classes, grouping individual textures where EPA has determined that performance is similar. If your site contains different soil texture classes, you should use the soil type that best approximates the predominant soil type at your site.
- *What if my site slope is greater than 9 percent after final grade is reached?* As indicated in the buffer performance tables, the estimated sediment removal efficiencies are associated with disturbed slopes of up to 9 percent grade. Where your graded site has an average slope of greater than 9 percent, you should calculate a site-specific buffer performance.
- *How do I calculate my own estimates for sediment reduction at my specific site?* If you determine that it is necessary to calculate your own sediment removal efficiency using site-specific conditions (e.g., slopes at your site are greater than 9 percent), you can do so by choosing from a range of available mathematical models that are available to facilitate this calculation, including USDA's RUSLE-series programs and the WEPP erosion model, SEDCAD, SEDIMOT, or other equivalent models.
- *What is my estimated buffer performance if my site location is not represented by Tables G - 8 through G - 15?* If your site is located in an area not represented by Tables G - 8 through G - 15, you should use the table that most closely approximates conditions at your site. You may also choose to conduct a site-specific calculation of the buffer performance.
- *What if only a portion of my site drains to the buffer area?* If only a portion of your site drains to a surface water, where that water is within 50 feet of your construction activities, you are only required to meet the equivalency requirement for the stormwater flows corresponding to those portions of the site. See Example 2 below for an example of how this is expected to work.

### ATTACHMENT 3

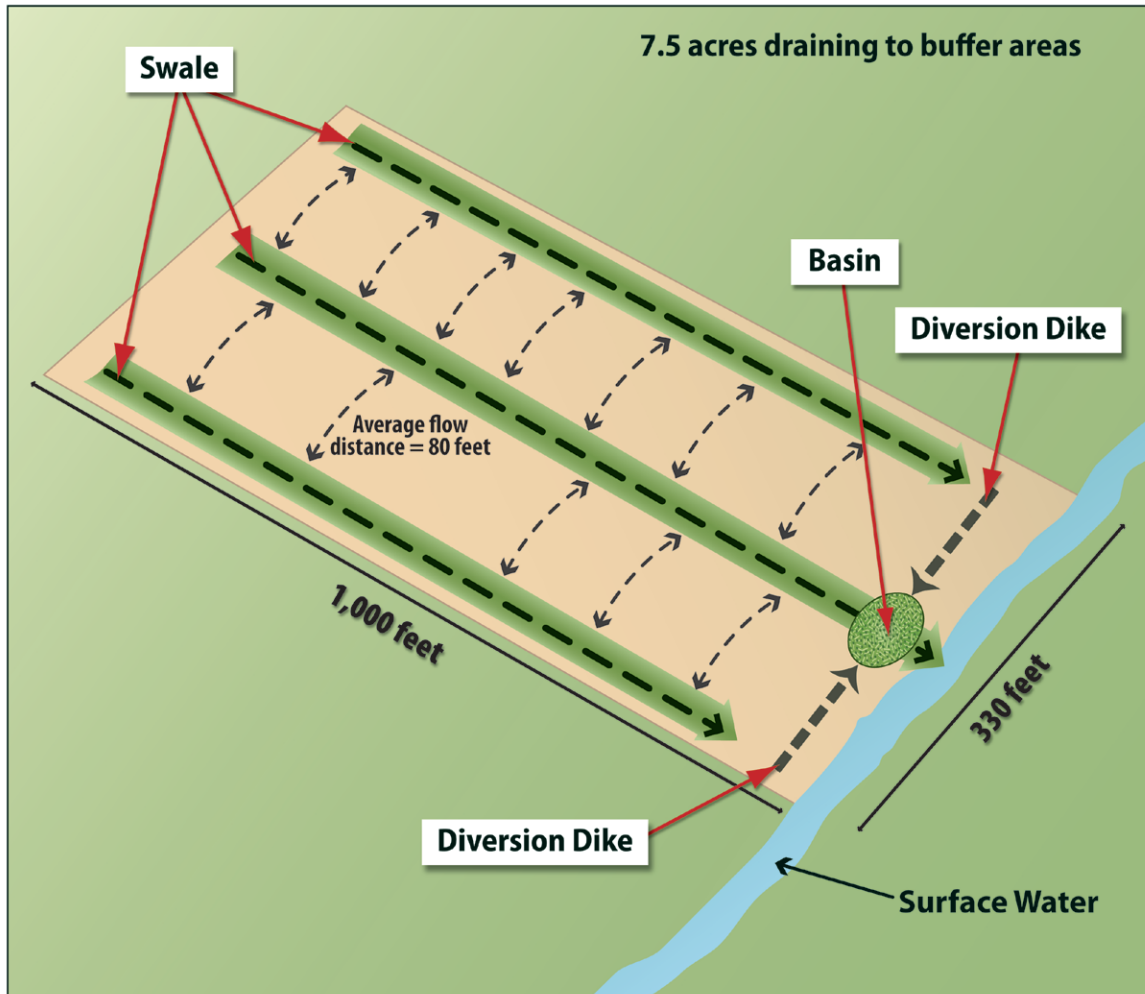
#### Examples of How to Use the Sediment Removal Efficiency Tables

##### *Example 1. Comparatively Wet Location (7.5 acre site located in Massachusetts)*

The operator of a 7.5-acre construction site in Massachusetts has determined that it is infeasible to establish a buffer of any size on their site, and is now required to select and install controls that will achieve an equivalent sediment load reduction as that estimated in G - 9 for their site conditions. The first step is to identify what percentage of eroded sediment is estimated to be retained from a 50-foot buffer. For this example, it is assumed that the site has a relatively uniform gentle slope (3 percent), so Table G - 9 can be used to estimate the 50-foot buffer sediment load reduction. If the site's buffer vegetation is best typified by cool-season dense grass and the underlying soil is of a type best described as loamy sand, the 50-foot buffer is projected to capture 90 percent of eroded sediment from the construction site.

The second step is to determine what sediment controls can be selected and installed in combination with the perimeter controls already required to be implemented at the site (see Part 2.1.2.2), which will achieve the 90 percent sediment removal efficiency from Table G - 9. For this example, using the RUSLE2 profile model, it was determined that installing a pair of shallow-sloped diversion ditches to convey runoff to a well-designed and maintained sediment basin provides 99 percent sediment removal. Because the estimated sediment reduction is greater than the required 90 percent that a 50-foot buffer provides, the operator will have met the buffer requirements. See Figure G - 5. The operator could also choose a different set of controls, as long as they achieve at least a 90 percent sediment removal efficiency.

**Figure G - 5. Example 1 – Equivalent Sediment Load Reductions at a 7.5 ac Site in MA.**



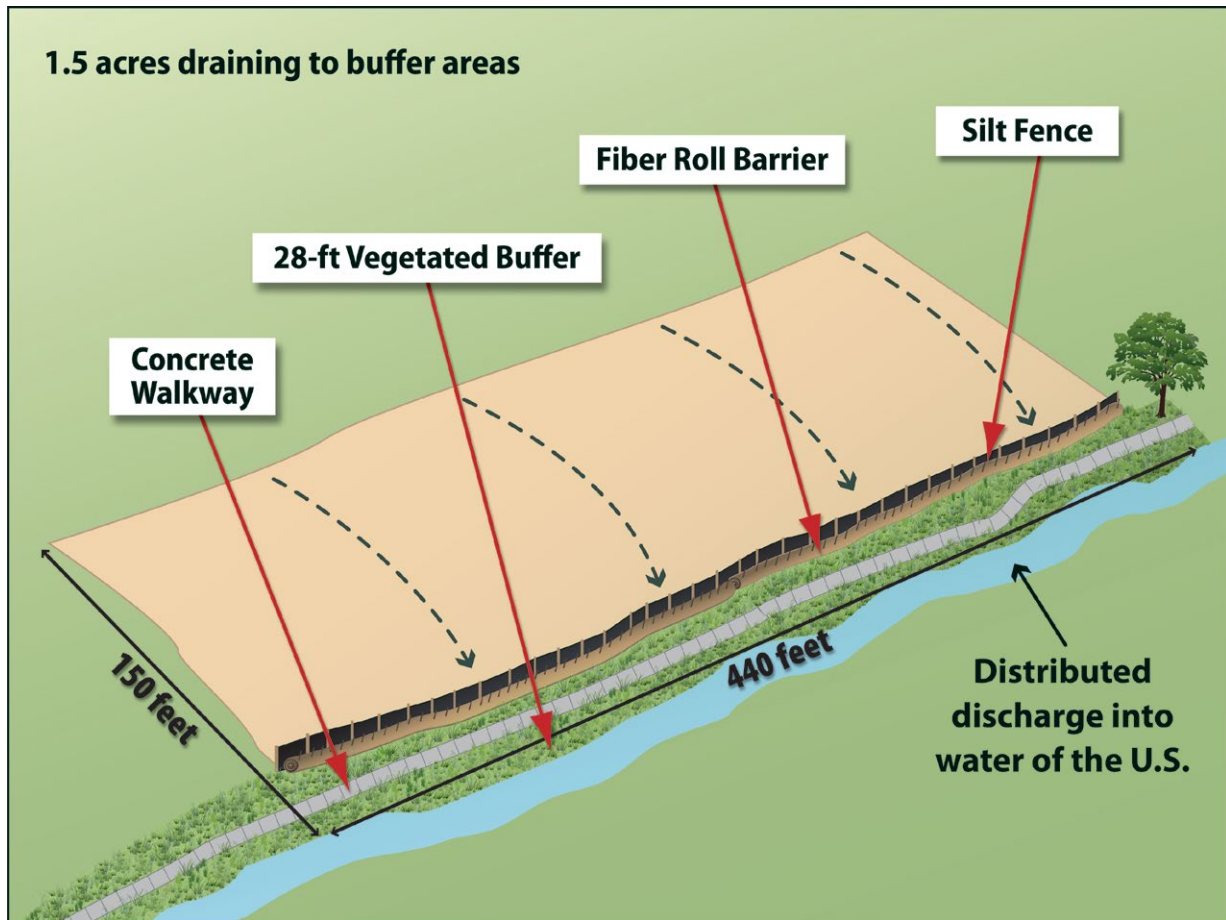
*Example 2. Arid Location With Pre-existing Disturbances in the Natural Buffer (6.5 acre site located in New Mexico)*

An operator of a site in New Mexico determines that it is not practicable to provide a 50-foot buffer, but a 28-foot buffer can be provided. Because the operator will provide a buffer that is less than 50 feet, the operator must determine which controls, in combination with the 28-foot buffer, achieve a sediment load reduction equivalent to the 50-foot buffer. In this example, the project will disturb 6.5 acres of land, but only 1.5 acres of the total disturbed area drains to the buffer area. Within the 28-foot buffer area is a preexisting concrete walkway. Similar to Example 1, the equivalence analysis starts with Step 1 (Part G.2.2.2) with a review of the New Mexico buffer performance (Table G - 10). The operator determines that the predominate vegetation type in the buffer area is prairie grass and the soil type is similar to silt, and that the site is of a uniform, shallow slope (e.g., 3 percent grade). Although the operator will take credit for the disturbance caused by the concrete walkway as a natural buffer in Step 2, here the operator can treat the entire buffer area as being naturally vegetated with prairie grass. Based on this information, the operator refers to Table G - 10 to estimate that the 50-foot buffer would retain 50 percent of eroded soil.

The second step is to determine, based on the 50 percent sediment removal efficiency found in Table G - 10, what sediment controls in combination with the 28-foot buffer area, can be

implemented to reduce sediment loads by 50 percent or more. The operator does not have to account the reduction in buffer function caused by the preexisting walkway, and can take credit for the entire 28-foot buffer being fully vegetated in the analysis. For this example, using the RUSLE2 profile model, the operator determined that installing a fiber roll barrier between the silt fence (already required by Part 2.1.2.2) and the 28-foot buffer will achieve an estimated 84 percent sediment removal efficiency. See Figure G - 6. Note that this operator is subject to the requirement in Part 2.1.2.1b.i to ensure that discharges through the silt fence, fiber roll barrier, and 28-foot buffer do not cause erosion within the buffer. The estimated sediment reduction is greater than the required 50 percent; therefore the operator will have met the buffer alternative requirement.

**Figure G - 6. Example 2 – Equivalent Sediment Load Reductions at a 6.5 ac Site in NM.**



## Appendix H – 2-Year, 24-Hour Storm Frequencies

Part 2.1.3.2 of the permit indicates that if you install a sediment basin, one of the design requirements is to provide storage for either (1) the calculated volume of runoff from a 2-year, 24-hour storm, or (2) 3,600 cubic feet per acre drained. This appendix is intended to provide a guide to permittees to determine the volume of precipitation associated with their local 2-year, 24-hour storm event.

The permittee should start out by determining their local 2-year, 24-hour storm volume. The rainfall frequency atlases, technical papers, and the Precipitation Frequency Data Server (PFDS) developed by the National Oceanic and Atmospheric Administration's (NOAA) National Weather Service (NWS) serve as national standards for rainfall intensity at specified frequencies and durations in the United States. Operators of construction projects subject to the numeric effluent limits can use these standards to determine their local 2-year, 24-hour storm. Table H-1 identifies methods for determining precipitation frequency based on permit area. EPA notes that permittees may also use alternative peer-reviewed data sources not listed in Table H - 1 to determine the 2-year, 24-hour storm for their site.

**Table H - 1 – Method to Determine Precipitation Frequency Based on Permit Area**

PERMIT AREA	METHOD TO DETERMINE PRECIPITATION FREQUENCY
District of Columbia	PFDS; NOAA Atlas 14, Vol. 2
Idaho	NOAA Atlas 2, Vol. 5; Technical Paper 40
Massachusetts	Technical Paper 40
New Hampshire	Technical Paper 40
New Mexico	PFDS; Technical Paper 40
Selected Pacific Islands	PFDS; Technical Paper 40
Puerto Rico and the U.S Virgin Islands	PFDS; Technical Paper 40
Other	PFDS; Technical Paper 40; NOAA Atlas 2 or 14

### How to Determine Your Local 2-year, 24-hour Storm Size

Projects located in the **District of Columbia, New Mexico, Puerto Rico, U.S. Virgin Islands, or Pacific Islands** can use the PFDS at <http://hdsc.nws.noaa.gov/hdsc/pfds/index.html> or use NOAA's Atlas 14 Volumes 2, 3, and 5, respectively at <http://www.nws.noaa.gov/oh/hdsc/currentpf.htm> to determine their precipitation frequency.

The PFDS is an easy to use, point-and-click interface to official U.S. precipitation frequency estimates and intensities. The opening PFDS screen is a clickable map of the United States. Upon clicking on a state, a state-specific interface appears. From this page the user selects the following:

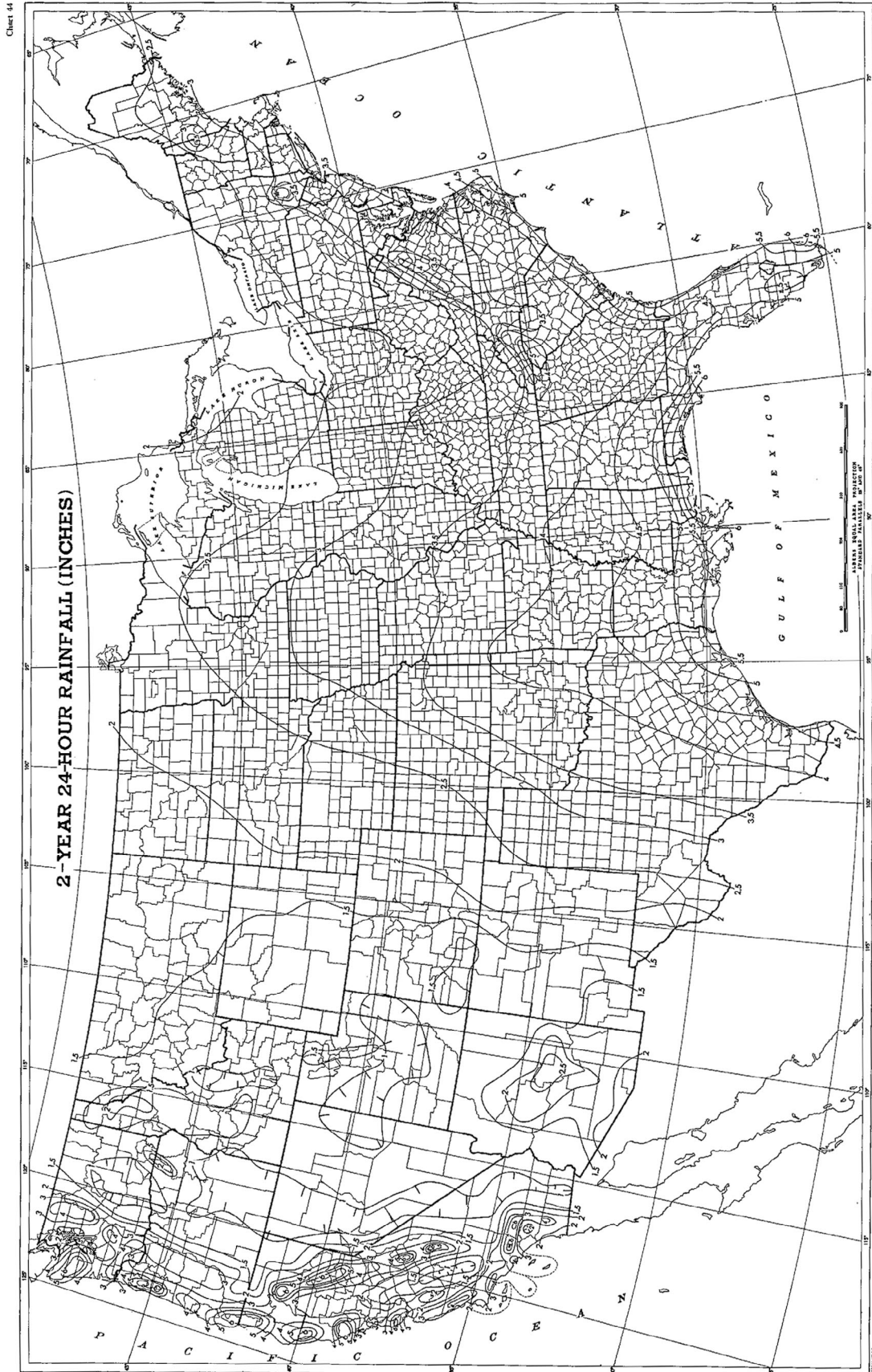
- A location: Either via clicking on the map or manually entering a longitude/latitude coordinate;
- Type of output: Depth-Duration Frequency (DDF) or Intensity-Duration-Frequency (IDF)
- Units: millimeters or inches; and
- Type of estimate: Point or areal.

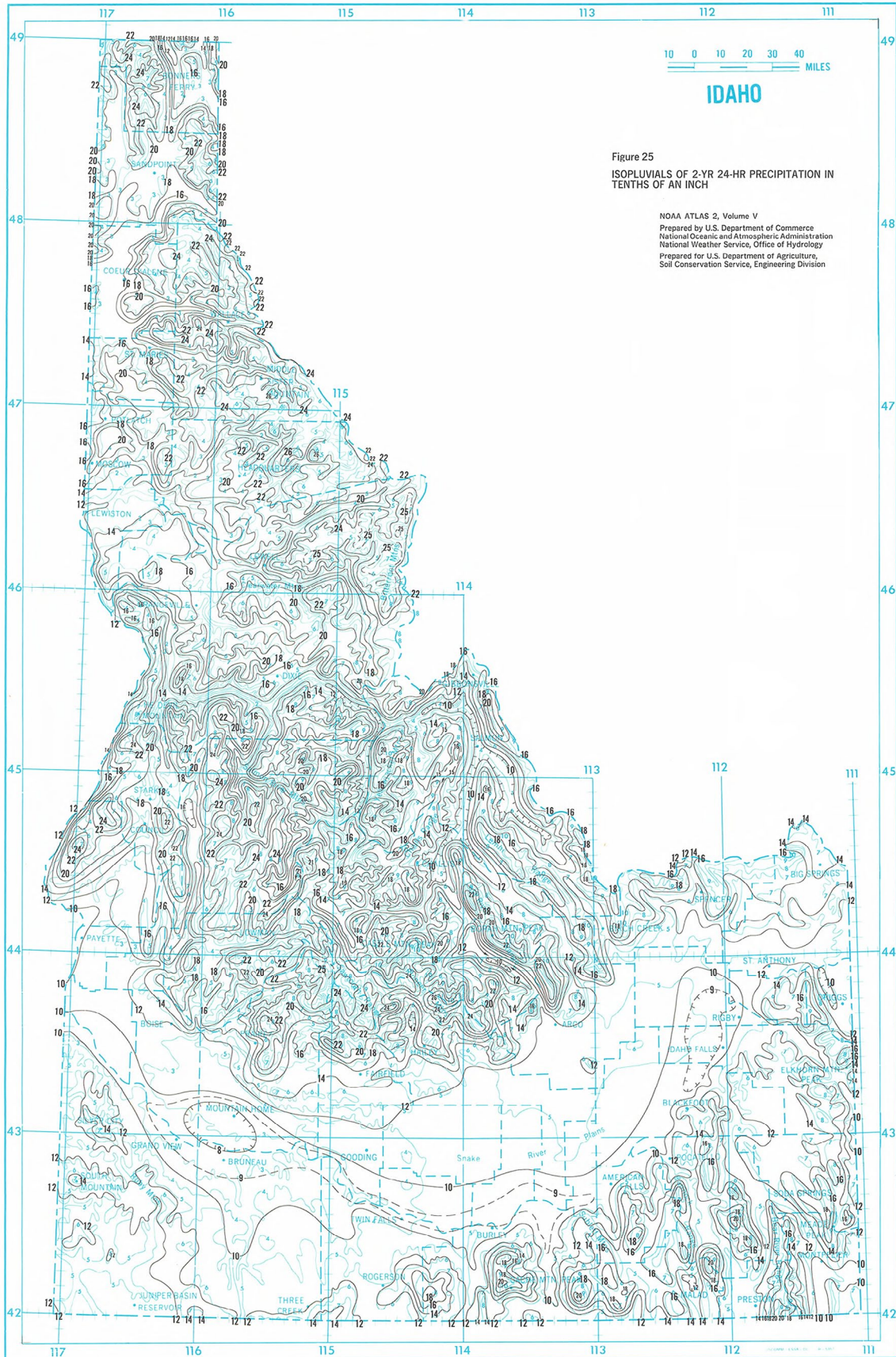
Additionally, PFDS also serves as a tool for providing references and other information for other current precipitation frequency standards that are not yet updated.

Projects located in the **District of Columbia, Puerto Rico, U.S. Virgin Islands, or Pacific Islands** can use NOAA's Atlas 14 Volumes 2, 3, and 5, respectively at <http://www.nws.noaa.gov/oh/hdsc/currentpf.htm> or access the PFDS at <http://hdsc.nws.noaa.gov/hdsc/pfds/index.html> to determine their precipitation frequency.

Projects located in **Massachusetts and New Hampshire**, or other areas not covered by the PFDS or NOAA Atlases will need to use TP-40 to identify the precipitation frequency. TP-40 provides a map of the continental U.S. for the 2-year, 24-hour rainfall. TP40 can be accessed at [http://www.nws.noaa.gov/oh/hdsc/PF\\_documents/TechnicalPaper\\_No40.pdf](http://www.nws.noaa.gov/oh/hdsc/PF_documents/TechnicalPaper_No40.pdf). (See also attached map of TP-40)

Projects located in **Idaho** can use the NOAA Atlas 2, Vol. 5 to determine their precipitation frequency. NOTE: Precipitation Frequencies on the NOAA Atlas 2, Vol. 5 are in tenths of an inch and will have to be converted to inches to determine precipitation frequency. NOAA Atlas 2, Vol. 5 can be accessed at [http://www.nws.noaa.gov/oh/hdsc/PF\\_documents/Atlas2\\_Volume5.pdf](http://www.nws.noaa.gov/oh/hdsc/PF_documents/Atlas2_Volume5.pdf). (See also attached map of NOAA Atlas 2, Vol. 5)







## Appendix I - Standard Permit Conditions

Standard permit conditions in Appendix I are consistent with the general permit provisions required under 40 CFR 122.41.

### I.1 Duty To Comply.

You must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

**I.1.1** You must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards, even if the permit has not yet been modified to incorporate the requirement.

**I.1.2** Penalties for Violations of Permit Conditions: The Director will adjust the civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (61 FR 252, December 31, 1996, pp. 69359-69366, as corrected in 62 FR 54, March 20, 1997, pp.13514-13517) as mandated by the Debt Collection Improvement Act of 1996 for inflation on a periodic basis. This rule allows EPA's penalties to keep pace with inflation. The Agency is required to review its penalties at least once every 4 years thereafter and to adjust them as necessary for inflation according to a specified formula. The civil and administrative penalties following were adjusted for inflation starting in 1996.

#### I.1.2.1 *Criminal Penalties.*

- a. *Negligent Violations.* The CWA provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to criminal penalties of not less than \$2,500 nor more than \$25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation or by imprisonment of not more than two years, or both.
- b. *Knowing Violations.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both.
- c. *Knowing Endangerment.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he or she is placing another person in imminent danger of death or serious bodily injury shall upon conviction be subject to a fine of not more than \$250,000 or by imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the Act, shall, upon

conviction of violating the imminent danger provision be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.

- d. *False Statement.* The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

1.1.2.2 *Civil Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$37,500 per day for each violation).

1.1.2.3 *Administrative Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows

- a. *Class I Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$16,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$37,500).
- b. *Class II Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$11,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$177,500).

## **1.2 Duty to Reapply.**

If you wish to continue an activity regulated by this permit after the expiration date of this permit, you must apply for and obtain authorization as required by the new permit once EPA issues it.

## **1.3 Need to Halt or Reduce Activity Not a Defense.**

It shall not be a defense for you in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**I.4 Duty to Mitigate.**

You must take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

**I.5 Proper Operation and Maintenance.**

You must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by you to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by you only when the operation is necessary to achieve compliance with the conditions of this permit.

**I.6 Permit Actions.**

This permit may be modified, revoked and reissued, or terminated for cause. Your filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

**I.7 Property Rights.**

This permit does not convey any property rights of any sort, or any exclusive privileges.

**I.8 Duty to Provide Information.**

You must furnish to EPA or an authorized representative (including an authorized contractor acting as a representative of EPA), within a reasonable time, any information that EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. You must also furnish to EPA or an authorized representative upon request, copies of records required to be kept by this permit.

**I.9 Inspection and Entry.**

You must allow EPA or an authorized representative (including an authorized contractor acting as a representative of EPA), upon presentation of credentials and other documents as may be required by law, to:

- I.9.1** Enter upon your premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- I.9.2** Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- I.9.3** Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- I.9.4** Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

**I.10 Monitoring and Records.**

- I.10.1 Samples and measurements taken for the purpose of monitoring must be representative of the volume and nature of the monitored activity.
- I.10.2 You must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date the permit expires or the date the permittee's authorization is terminated. This period may be extended by request of EPA at any time.
- I.10.3 Records of monitoring information must include:
  - I.10.3.1 The date, exact place, and time of sampling or measurements;
  - I.10.3.2 The individual(s) who performed the sampling or measurements;
  - I.10.3.3 The date(s) analyses were performed
  - I.10.3.4 The individual(s) who performed the analyses;
  - I.10.3.5 The analytical techniques or methods used; and
  - I.10.3.6 The results of such analyses.
- I.10.4 Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit.
- I.10.5 The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

**I.11 Signatory Requirements.**

- I.11.1 All applications, including NOIs, must be signed as follows:
  - I.11.1.1 For a corporation: By a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
  - I.11.1.2 For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or
  - I.11.1.3 For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive

officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

- I.11.2** Your SWPPP, including changes to your SWPPP, inspection reports, and any other compliance documentation required under this permit, must be signed by a person described in Appendix I, Subsection I.11.1 above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- I.11.2.1 The authorization is made in writing by a person described in Appendix I, Subsection I.11.1;
  - I.11.2.2 The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
  - I.11.2.3 The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.
- I.11.3** Changes to Authorization. If an authorization under Part 1.7 is no longer accurate because a different operator has responsibility for the overall operation of the construction site, a new NOI satisfying the requirements of Part 1.7 must be submitted to EPA. See Table 1 in Part 1.7.2 of the permit. However, if the only change that is occurring is a change in contact information or a change in the facility's address, the operator need only make a modification to the existing NOI submitted for authorization.
- I.11.4** Any person signing documents in accordance with Appendix I, Subsections I.11.1 or I.11.2 above must include the following certification:
- "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
- I.11.5** For persons signing documents electronically, in addition to meeting other applicable requirements in Appendix I, Subsection I.11, such signatures must meet the same signature, authentication, and identity-proofing standards set forth at 40 CFR § 3.2000(b) for electronic reports (including robust second-factor authentication).
- I.11.6** The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.
- I.12 Reporting Requirements.**
- I.12.1** Planned changes. You must give notice to EPA as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- I.12.1.1 The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
- I.12.1.2 The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).
- I.12.2** Anticipated noncompliance. You must give advance notice to EPA of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- I.12.3** Transfers. This permit is not transferable to any person except after notice to EPA. Where a facility wants to change the name of the permittee, the original permittee (the first owner or operators) must submit a Notice of Termination pursuant to Part 8. The new owner or operator must submit a Notice of Intent in accordance with Part 1.7 and Table 1. See also requirements in Appendix I, Subsections I.11.1 and I.11.2.
- I.12.4** Monitoring reports. Monitoring results must be reported at the intervals specified elsewhere in this permit.
  - I.12.4.1 Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by EPA for reporting results of monitoring of sludge use or disposal practices.
  - I.12.4.2 If you monitor any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by EPA.
- I.12.5** Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.
- I.12.6** Twenty-four hour reporting. In addition to reports required elsewhere in this permit:
  - I.12.6.1 You must report any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time you become aware of the circumstances. A written submission must also be provided within five days of the time you become aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
  - I.12.6.2 The following shall be included as information which must be reported within 24 hours under this paragraph.
    - a. Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR 122.41(m)(3)(ii))
    - b. Any upset which exceeds any effluent limitation in the permit
    - c. Violation of a maximum daily discharge limit for any numeric effluent limitation. (See 40 CFR 122.44(g).)
  - I.12.6.3 EPA may waive the written report on a case-by-case basis for reports under Appendix I, Subsection I.12.6.2 if the oral report has been received within 24 hours.

**I.12.7** Other noncompliance. You must report all instances of noncompliance not reported under Appendix I, Subsections I.12.4, I.12.5, and I.12.6, at the time monitoring reports are submitted. The reports must contain the information listed in Appendix I, Subsection I.12.6.

**I.12.8** Other information. Where you become aware that you failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Permitting Authority, you must promptly submit such facts or information.

**I.13 Bypass.**

**I.13.1** Definitions.

I.13.1.1 Bypass means the intentional diversion of waste streams from any portion of a treatment facility See 40 CFR 122.41(m)(1)(i).

I.13.1.2 Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. See 40 CFR 122.41(m)(1)(ii).

**I.13.2** Bypass not exceeding limitations. You may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Appendix I, Subsections I.13.3 and I.13.4. See 40 CFR 122.41(m)(2).

**I.13.3** Notice.

I.13.3.1 Anticipated bypass. If you know in advance of the need for a bypass, you must submit prior notice, if possible at least ten days before the date of the bypass. See 40 CFR 122.41(m)(3)(i).

I.13.3.2 Unanticipated bypass. You must submit notice of an unanticipated bypass as required in Appendix I, Subsection I.12.6 (24-hour notice). See 40 CFR 122.41(m)(3)(ii).

**I.13.4** Prohibition of bypass. See 40 CFR 122.41(m)(4).

I.13.4.1 Bypass is prohibited, and EPA may take enforcement action against you for bypass, unless:

- a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- c. You submitted notices as required under Appendix I, Subsection I.13.3.

I.13.4.2 EPA may approve an anticipated bypass, after considering its adverse effects, if EPA determines that it will meet the three conditions listed above in Appendix I, Subsection I.13.4.1.

**I.14 Upset.**

**I.14.1** Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond your reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. See 40 CFR 122.41 (n)(1).

**I.14.2** Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Appendix I, Subsection I.14.3 are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. See 40 CFR 122.41(n)(2).

**I.14.3** Conditions necessary for a demonstration of upset. See 40 CFR 122.41(n)(3). A permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

I.14.3.1 An upset occurred and that you can identify the cause(s) of the upset;

I.14.3.2 The permitted facility was at the time being properly operated; and

I.14.3.3 You submitted notice of the upset as required in Appendix I, Subsection I.12.6.2.b (24 hour notice).

I.14.3.4 You complied with any remedial measures required under Appendix I, Subsection I.4.

**I.14.4** Burden of proof. In any enforcement proceeding, you, as the one seeking to establish the occurrence of an upset, have the burden of proof. See 40 CFR 122.41(n)(4).

**I.15 Retention of Records.**

Copies of the SWPPP and all documentation required by this permit, including records of all data used to complete the NOI to be covered by this permit, must be retained for at least three years from the date that permit coverage expires or is terminated. This period may be extended by request of EPA at any time.

**I.16 Reopener Clause.**

**I.16.1** Procedures for modification or revocation. Permit modification or revocation will be conducted according to 40 CFR §122.62, §122.63, §122.64 and §124.5.

**I.16.2** Water quality protection. If there is evidence indicating that the stormwater discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, you may be required to obtain an individual permit in accordance with Part 1.7.5 of this permit, or the permit may be modified to include different limitations and/or requirements.

**I.16.3** Timing of permit modification. EPA may elect to modify the permit prior to its expiration (rather than waiting for the new permit cycle) to comply with any new statutory or regulatory requirements, such as for effluent limitation guidelines that may be promulgated in the course of the current permit cycle.



**I.17 Severability.**

Invalidation of a portion of this permit does not necessarily render the whole permit invalid. EPA's intent is that the permit is to remain in effect to the extent possible; in the event that any part of this permit is invalidated, EPA will advise the regulated community as to the effect of such invalidation.

### **Appendix J - Notice of Intent (NOI) Form and Instructions**

Part 1.7.1 requires you to use the electronic NOI system, or "eNOI" system, to prepare and submit your NOI. However, if you are given approval by the EPA Regional Office to use a paper NOI form, and you elect to use it, you must complete and submit the following form.

Submission of this Notice of Intent (NOI) constitutes notice that the operator identified in Section II of this form requests authorization to discharge pursuant to the NPDES Construction General Permit (CGP) permit number identified in Section I of this form. Submission of this NOI also constitutes notice that the operator identified in Section II of this form meets the eligibility requirements of Parts 1.1 and 1.2 of the CGP for the project identified in Section III of this form. Permit coverage is required prior to commencement of construction activity until you are eligible to terminate coverage as detailed in Part 8 of the CGP. To obtain authorization, you must submit a complete and accurate NOI form. Discharges are not authorized if your NOI is incomplete or inaccurate or if you were never eligible for permit coverage. Refer to the instructions at the end of this form.

**I. Approval to Use Paper NOI Form**

Have you been given approval from the Regional Office to use this paper NOI form\*?  YES  NO

If yes, provide the reason you need to use this paper form, the name of the EPA Regional Office staff person who approved your use of this form, and the date of approval:

Reason for using paper form: \_\_\_\_\_

Name of EPA staff person: \_\_\_\_\_

Date approval obtained: \_\_\_\_\_

**\* Note: You are required to obtain approval from the applicable Regional Office prior to using this paper NOI form.**

**II. Permit Information** **Tracking Number** (EPA Use Only):

Permit Number:  (see Appendix B of the CGP for the list of eligible permit numbers)

**III. Operator Information**

Name:

Phone:  -  -  Ext.  Fax (optional):  -  -

E-mail:

IRS Employer Identification Number (EIN):  -

Point of Contact:

First Name, Middle Initial, Last Name:

Mailing Address:

Street:

City:  State:  Zip Code:  -

**NOI Preparer (Complete if NOI was prepared by someone other than the certifier):**

Prepared by:

First Name, Middle Initial, Last Name:

Organization:

Phone:  -  -  Ext.  Fax (optional):  -  -

E-mail:

**IV. Project/Site Information**

Project/Site Name:







**Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity Under an NPDES General Permit**

NPDES Form Date (2/16)

This Form Replaces Form 3510-9 (11/08)

Form Approved OMB No. 2040-0004

**Who Must File an NOI Form**

Under the provisions of the Clean Water Act, as amended (33 U.S.C. 1251 et. seq.; the Act), federal law prohibits stormwater discharges from certain construction activities to waters of the U.S. unless that discharge is covered under a National Pollutant Discharge Elimination System (NPDES) permit. Operator of construction sites where one or more acres are disturbed, smaller sites that are part of a larger common plan of development or sale where there is a cumulative disturbance of at least one acre, or any other site specifically designated by the Director, must submit an NOI to obtain coverage under an NPDES general permit. Each person, firm, public organization, or any other entity that meets either of the following criteria must file this form: (1) they have operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or (2) they have day-to-day operational control of those activities at the project necessary to ensure compliance with the permit conditions. If you have questions about whether you need a NPDES stormwater permit, or if you need information to determine whether EPA or your state agency is the permitting authority, refer to [www.epa.gov/npdes/stormwater/cap](http://www.epa.gov/npdes/stormwater/cap) or telephone EPA's NOI Processing Center at (866) 352-7755.

**Where to File NOI Form**

Completed NOI forms must be sent to the Regional EPA Office corresponding to the area where your construction site is located. The following is a list of Regional Office addresses:

**Region 1: Connecticut, Massachusetts, New Hampshire, Rhode Island, and Vermont.**

U.S. EPA Region 1  
Office of Ecosystem Protection  
5 Post Office Square – CIP  
Boston, MA 02114

**Region 2: New Jersey, New York, Puerto Rico, and Virgin Islands.**

*For Puerto Rico and the Virgin Islands:*  
U.S. EPA Region 2  
Caribbean Environmental Protection Division  
Environmental Management Branch  
Centro Europa Building  
1492 Ponce de Leon Avenue, Suite 417  
San Juan, PR 00907-4127

*For New Jersey and New York:*  
U.S. EPA Region 2  
Division of Environmental Planning and Protection  
290 Broadway  
New York, NY 10007-1866

**Region 3: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia.**

U.S. EPA Region 3  
Water Protection Division (3WP40)  
Stormwater Coordinator  
1650 Arch Street  
Philadelphia, PA 19103

**Region 4: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.**

U.S. EPA Region 4  
Clean Water Act Enforcement Section  
Water Programs Enforcement Branch  
Water Management Division  
Atlanta Federal Center  
61 Forsyth Street SW  
Atlanta, GA 30303

**Region 5: Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.**

U.S. EPA Region 5  
Water Division  
NPDES Programs Branch  
77 W. Jackson Blvd.  
Mail Code WN16J  
Chicago, IL 60604

**Region 6: Arkansas, Louisiana, Oklahoma, Texas, and New Mexico (except see Region 9 for Navajo lands, and see Region 8 for Ute Mountain Reservation lands).**

U.S. EPA Region 6  
Stormwater Coordinator  
Compliance Assurance and Enforcement Division (6EN-WC)  
EPA SW MSGP  
P.O. Box 50625  
Dallas, TX 75205

**Region 7: Iowa, Kansas, Missouri, Nebraska.**

U.S. EPA - Region 7  
901 N. 5th Street  
Kansas City, KS 66101

**Region 8: Colorado, Montana, North Dakota, South Dakota, Wyoming, Utah (except see Region 9 for Goshute Reservation and Navajo Reservation lands), the Ute Mountain Reservation in New Mexico, and the Pine Ridge Reservation in Nebraska.**

U.S. EPA Region 8  
Stormwater Coordinator (8P-W-P)  
999 18th Street, Suite 300  
Denver, CO 80202-2466

**Region 9: Arizona, California, Hawaii, Nevada, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Goshute Reservation in Utah and Nevada, the Navajo Reservation in Utah, New Mexico, and Arizona, the Duck Valley Reservation in Idaho, Fort McDermitt Reservation in Oregon.**

U.S. EPA Region 9  
Water Management Division, WTR-5  
Stormwater Coordinator  
75 Hawthorne Street  
San Francisco, CA 94105

**Region 10: Alaska, Idaho, Oregon (except see Region 9 for Fort McDermitt Reservation), Washington.**

U.S. EPA Region 10  
Office of Water and Watersheds OWW-130  
Stormwater Coordinator  
1200 6th Avenue  
Seattle, WA 98101

**Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity Under an NPDES General Permit**

NPDES Form Date (2/16)

This Form Replaces Form 3510-9 (11/08)

Form Approved OMB No. 2040-0004

**Completing the Form**

Obtain and read a copy of the 2012 Construction General Permit, viewable at [www.epa.gov/npdes/stormwater/cgp](http://www.epa.gov/npdes/stormwater/cgp). To complete this form, type or print uppercase letters, in the appropriate areas only. Please place each character between the marks (abbreviate if necessary) to stay within the number of characters allowed for each item). Use one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions on this form, refer to [www.epa.gov/npdes/stormwater/cgp](http://www.epa.gov/npdes/stormwater/cgp) or telephone EPA's NOI Processing Center at (866) 352-7755. Please submit the original document with signature in ink - do not send a photocopied signature.

**Section I. Approval to Use Paper NOI Form**

You must indicate whether you have been given approval by the EPA Regional Office to use a paper NOI. Note that you are not authorized to use this paper NOI form unless the Regional Office has approved its use. Verbal approval from the Regional Office is sufficient. Where you have obtained approval to use this form, indicate the reason you need to use this form, the name of the EPA Regional Office staff person who provided approval for use of this form, and the date that approval was provided. See [www.epa.gov/npdes/stormwater/contacts](http://www.epa.gov/npdes/stormwater/contacts) for a list of EPA Regional Office contacts.

**Section II. Permit Number**

Provide the number of the permit under which you are applying for coverage (see Appendix B of the general permit for the list of eligible permit numbers).

**Section III. Operator Information**

Provide the legal name of the person, firm, public organization, or any other entity that operates the project described in this application. Refer to Appendix A of the permit for the definition of "operator". Provide the employer identification number (EIN from the Internal Revenue Service; IRS), also commonly referred to as your taxpayer ID. If the applicant does not have an EIN enter "NA" in the space provided. Also provide a point of contact, the operator's mailing address, telephone number, fax number (optional) and e-mail address (to be notified via e-mail of NOI approval when available). Correspondence for the NOI will be sent to this address.

If the NOI was prepared by someone other than the certifier (for example, if the NOI was prepared by the facility SWPPP contact or a consultant for the certifier's signature), include the full name, organization, phone number and email address of the NOI preparer.

**Section IV. Project/Site Information**

Enter the official or legal name and complete street address, including city, state, zip code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for permit coverage to be granted.

Provide the latitude and longitude of your facility either in degrees, minutes, seconds; degrees, minutes, decimal; or degrees decimal format. The latitude and longitude of your

facility can be determined in several different ways, including through the use of global positioning system (GPS) receivers, U.S. Geological Survey (U.S.G.S.) topographic or quadrangle maps, and EPA's web-based siting tools, among others. Refer to [www.epa.gov/npdes/stormwater/cgp](http://www.epa.gov/npdes/stormwater/cgp) for further guidance on the use of these methodologies. For consistency, EPA requests that measurements be taken from the approximate center of the construction site. Applicants must specify which method they used to determine latitude and longitude. If a U.S.G.S. topographic map is used, applicants are required to specify the scale of the map used. If known, enter the horizontal reference datum for your latitude and longitude. The horizontal reference datum used on USGS topographic maps is shown on the bottom left corner of USGS topographic maps; it is also available for GPS receivers. If you use EPA's web siting tool, or if you are unsure of the horizontal reference datum for your site, please check the "unknown" box.

Indicate whether the project is in Indian country lands or located on a property of religious or cultural significance to an Indian tribe, and if so, provide the name of the Indian tribe associated with the area of Indian country (including name of Indian reservation, if applicable), or if not in Indian country, provide the name of the Indian tribe associated with the property.

Indicate whether you are seeking coverage under this permit as a "federal operator" as defined in Appendix A.

Enter the estimated construction start and completion dates using four digits for the year (i.e., 10/06/2012). Indicate to the nearest quarter acre the estimated area to be disturbed.

Indicate whether earth-disturbing activities have already commenced on your project/site. If earth-disturbing activities have commenced on your site because stormwater discharges from the site have been previously covered under a NPDES permit, you must provide the CGP Tracking Number or the NPDES permit number if coverage was under an individual permit.

**Section V. Discharge Information**

Indicate whether discharges from the site will enter into a municipal separate storm sewer system (MS4), as defined in Appendix A.

Also, indicate whether any surface waters (as defined in Appendix A) exist either on or within 50 feet from your site. Note that if "yes", you are required to comply with the requirement in Part 2.1.2.1 of the permit to provide natural buffers or equivalent sediment controls.

You must specify the names of any surface waters that receive stormwater directly from your site and/or from the MS4 to which you discharge. You must also specify the names of any surface waters that you discharge to that are listed as "impaired" as defined in Appendix A, including any waters for which there is an approved or established TMDL, and the pollutants for which the water is impaired or for which there is a TMDL. This information will be used to determine if the site discharges to an impaired waterbody, which triggers additional requirements in Part 3.2.2 of the permit. Applicants must specify which method they used to determine whether or not their site discharges to impaired waters. Also, if a TMDL has been approved or established, identify the title or reference of the TMDL document.



**Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity Under an NPDES General Permit**

NPDES Form Date (2/16)

This Form Replaces Form 3510-9 (11/08)

Form Approved OMB No. 2040-0004

Indicate whether discharges from the site will enter into a surface water that is designated as a Tier 2, Tier 2.5, or Tier 3 water. A list of Tier 2, 2.5, and 3 waters is provided as Appendix F. If the answer is "yes", name all waters designated as Tier 2, Tier 2.5, or Tier 3 to which the site will discharge.

**Section VI. Chemical Treatment Information**

Indicate whether the site will use polymers, flocculants, or other treatment chemicals. Indicate whether the site will employ cationic treatment chemicals. If the answer is "yes" to either question, indicate which chemical(s) you will use. Note that you are not eligible for coverage under this permit to use cationic treatment chemicals unless you notify your applicable EPA Regional Office in advance and the EPA office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards. If you have been authorized to use cationic treatment chemicals by your applicable EPA Regional Office, attach a copy of your authorization letter and include documentation of the appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards. Examples of cationic treatment chemicals include, but are not limited to, cationic polyacrylamide (C-PAM), PolyDADMAC (POLYDIALLYLDIMETHYLAMMONIUM CHLORIDE), and chitosan.

**Section VII. Stormwater Pollution Prevention Plan (SWPPP) Information**

All sites eligible for coverage under this permit are required to prepare a SWPPP in advance of filing the NOI, in accordance with Part 7. Indicate whether the SWPPP has been prepared in advance of filing the NOI.

Indicate the street, city, state, and zip code where the SWPPP can be found. Indicate the contact information (name, organization, phone, fax (optional), and email) for the person who developed the SWPPP for this project.

**Section VIII. Endangered Species Information**

Using the instructions in Appendix D, indicate under which criterion (i.e., A, B, C, D, E, or F) of the permit the applicant is eligible with regard to protection of federally listed endangered and threatened species and designated critical habitat. A description of the basis for the criterion selected must also be provided.

If criterion B is selected, provide the Tracking Number for the other operator who had previously certified their eligibility under criterion A, C, D, E, or F. The Tracking Number was assigned when the operator received coverage under this permit, and is included in the notice of authorization.

If criterion C is selected, you must attach copies of your site map. See Part 7.2.6 of the permit for information about what is required to be in your site map. You must also specify the federally-listed species or federally-designated critical habitat that are located in the "action area" of the project, and provide the distance between the construction site and any listed endangered species or their critical habitat.

If criterion D, E, or F is selected, attach copies of any communications between you and the U.S. Fish and Wildlife Service and National Marine Fisheries Service.

**Section IX. Historic Preservation**

Use the instructions in Appendix E to complete the questions on the NOI form regarding historic preservation.

**Section X. Certification Information**

All applications, including NOIs, must be signed as follows:

*For a corporation:* By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

- (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
- (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

*For a partnership or sole proprietorship:* By a general partner or the proprietor, respectively; or

*For a municipality, state, federal, or other public agency:* By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA). Include the name and title of the person signing the form and the date of signing. An unsigned or undated NOI form will not be considered eligible for permit coverage.

**Modifying Your NOI**

If after submitting your NOI you need to correct or update any fields on this NOI form, you may do so by submitting a paper modification form, which you can obtain at the following link: [http://www.epa.gov/npdes/pubs/cgp\\_modify.pdf](http://www.epa.gov/npdes/pubs/cgp_modify.pdf)

Instructions for Completing EPA Form 3510-9

**Notice of Intent (NOI) for Storm Water Discharges Associated with  
Construction Activity Under an NPDES General Permit**

NPDES Form Date (2/16)

This Form Replaces Form 3510-9 (11/08)

Form Approved OMB No. 2040-0004

**Paperwork Reduction Act Notice**

Public reporting burden for this application is estimated to average 3.7 hours. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Chief, Information Policy Branch 2136, U.S.

Environmental Protection, Agency, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460. Include the OMB control number on any correspondence. Do not send the completed form to this address.

Visit this website for mailing instruction:

[www.epa.gov/npdes/stormwater/application\\_coverage](http://www.epa.gov/npdes/stormwater/application_coverage)

Visit this website for instructions on how to submit electronically:

[www.epa.gov/npdes/stormwater/cgpenoi](http://www.epa.gov/npdes/stormwater/cgpenoi)

**Appendix K - Notice of Termination (NOT) Form and Instructions**

Part 8.3 requires you to use the electronic NOI system, or "eNOI" system, to prepare and submit your NOT. However, where your EPA Regional Office specifically authorizes you to use a paper NOT form, you are required to complete and submit the following form.



Submission of this Notice of Termination constitutes notice that the operator identified in Section II of this form is no longer authorized discharge pursuant to the NPDES Construction General Permit (CGP) from the site identified in Section III of this form. All necessary information must be included on this form. Refer to the instructions at the end of this form.

**I. Approval to Use Paper NOT Form**

Have you been given approval from the Regional Office to use this paper NOT form\*?  YES  NO

\* Note: You must have been given approval by the Regional Office prior to using this paper NOT form.

**II. Permit Information**

NPDES Stormwater General Permit Tracking Number:

Reason for Termination (Check only one):

- You have completed earth-disturbing activities at your site, and you have met all other requirements in Part 8.2.1.
- Another operator has assumed control over all areas of the site and that operator has submitted an NOI and obtained coverage under the CGP.
- You have obtained coverage under an individual permit or another general NPDES permit addressing stormwater discharges from the construction site.

**III. Operator Information**

Name:

IRS Employer Identification Number (EIN):  -

Mailing Address:

Street:

City:  State:  Zip Code:  -

Phone:  -  -  Ext.  Fax (optional):  -  -

E-mail:

**IV. Project/Site Information**

Project/Site Name:

Project/Site Address:

Street/Location:

City:  State:  Zip Code:  -

County or similar government subdivision:

**V. Certification Information**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name:

Title:

Signature: \_\_\_\_\_ Date:  /  /

Email:

**Notice of Termination (NOT) of Coverage Under an NPDES General Permit for  
Stormwater Discharges Associated with Construction Activity**

NPDES Form Date (2/16)

This Form Replaces Form 3510-13 (12/08)

Form Approved OMB No. 2040-0004

**Who May File an NOT Form**

Permittees who are presently covered under the EPA-issued 2012 Construction General Permit (CGP) for Stormwater Discharges Associated with Construction Activity may submit an NOT form when: (1) earth-disturbing activities at the site are completed and the conditions in Parts 8.2.1.1 thru 8.2.1.5 are met; or (2) the permittee has transferred all areas under its control to another operator, and that operator has submitted and obtained coverage under this permit; or (3) the permittee has obtained coverage under a different NPDES permit for the same discharges.

**Completing the Form**

Type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions about this form, refer to [www.epa.gov/npdes/stormwater/cgp](http://www.epa.gov/npdes/stormwater/cgp) or telephone EPA's NOI Processing Center at (866) 352-7755. Please submit original document with signature in ink - do not send a photocopied signature.

**Section I. Approval to Use Paper NOT Form**

You must indicate whether you have been given approval by the EPA Regional Office to use a paper NOT. Note that you are not authorized to use this paper NOT form unless the Regional Office has approved its use.

**Section II. Permit Number**

Enter the existing NPDES Stormwater General Permit Tracking Number assigned to the project by EPA's Stormwater Notice Processing Center. If you do not know the permit tracking number, refer to <http://www.epa.gov/npdes/stormwater/cgp> or contact EPA's NOI Processing Center at (866) 352-7755.

Indicate your reason for submitting this Notice of Termination by checking the appropriate box. Check only one:

*You have completed earth-disturbing activities at your site and, if applicable, construction support activities covered by this permit (see Part 1.6.3) and you have met all other requirements in Part 8.2.1.*

*Another operator has assumed control over all areas of the site and that operator has submitted an NOI and obtained coverage under the CGP.*

*You have obtained coverage under an individual permit or another general NPDES permit addressing stormwater discharges from the construction site.*

**Section III. Operator Information**

Provide the legal name of the person, firm, public organization, or any other entity that operates the project described in this application and is covered by the permit tracking number identified in Section I. Refer to Appendix A of the permit for the definition of "operator". Provide the employer identification number (EIN from the Internal Revenue Service; IRS). If the applicant does not have an EIN enter "NA" in the space provided. Enter the complete mailing address, telephone number, and email address of the operator. Optional: enter the fax number of the operator.

**Section IV. Project/Site Information**

Enter the official or legal name and complete street address, including city, state, zip code, and county or similar government

subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for termination of permit coverage to be valid.

**Section V. Certification Information**

All applications, including NOIs, must be signed as follows:

*For a corporation:* By a responsible corporate officer. For the purpose of this Part, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

*For a partnership or sole proprietorship:* By a general partner or the proprietor, respectively; or

*For a municipality, state, federal, or other public agency:* By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated NOT form will not be considered valid termination of permit coverage.

**Paperwork Reduction Act Notice**

Public reporting burden for this application is estimated to average 0.5 hours per notice, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form including any suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, 2136, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Include the OMB number on any correspondence. Do not send the completed form to this address.

Visit this website for mailing instruction:

[www.epa.gov/npdes/stormwater/application\\_coverage](http://www.epa.gov/npdes/stormwater/application_coverage)

Visit this website for instructions on how to submit electronically:

[www.epa.gov/npdes/stormwater/cgpenoi](http://www.epa.gov/npdes/stormwater/cgpenoi)

**Appendix C - Copy of NOI and EPA Authorization email**

Company: U.S. Army Corps of Engineers, Portland District  
ATTN: Barbara Cisneros  
P.O. Box 2946  
Portland OR 97208

Project/Site: MCR Jetty A Rehabilitation  
Mouth of the Columbia River (MCR) Jetty A  
Ilwaco WA 98264

Permit Tracking Number: WAR12B25F

This email acknowledges that a complete Notice of Intent (NOI) form seeking coverage under EPA's Construction General Permit (CGP) is now active. Your NOI was completed and submitted on Tuesday, July 7, 2015. Coverage under this permit began at the conclusion of your 14 day waiting period on Tuesday, July 21, 2015, unless otherwise notified by EPA.

For tracking purposes, the following number has been assigned to your NOI form:WAR12B25F. Attached to this email, you will find an electronic copy of your completed NOI which should be posted at your site.

As stated above, this email acknowledges receipt of a complete NOI. However, it is not an EPA determination of the validity of the information you provided. Your eligibility for coverage under this permit is based on the validity of the certification you provided. Your electronic signature on this form certifies that you have read, understood, and are implementing all of the applicable requirements. An important aspect of this certification requires that you have correctly determined whether you are eligible for coverage under this permit.

As you know, the CGP requires you to have developed a Stormwater Pollution Prevention Plan (SWPPP) prior to submitting your NOI. The CGP also includes specific requirements for erosion and sediment control, stabilization, pollution prevention, inspections, corrective actions, and staff training. You must also comply with any additional location-specific requirements applicable to your state or tribal area as described in the CGP. Note that a copy of the CGP must be kept with your SWPPP. An electronic copy of the CGP and additional guidance materials can be viewed and downloaded at: <http://www.epa.gov/npdes/stormwater>

You have indicated in your NOI that there are surface waters that exist within or immediately adjacent to your site. Because of the proximity of these waters to your construction activities, be advised that you are required to comply with the buffer requirements in Part 2.1.2.1. This provision requires that you comply with one of the following three compliance alternatives:

- Provide and maintain a 50-foot buffer of undisturbed natural vegetation; or
- Provide and maintain an undisturbed naturally vegetated buffer that is less than 50 feet and is supplemented by additional erosion and sediment controls, which in combination achieves the sediment load reduction equivalent to a 50-foot buffer of undisturbed natural vegetation; or
- If it is infeasible to provide and maintain an undisturbed naturally vegetated buffer of any size,

you must implement erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot buffer of undisturbed natural vegetation.

You must document the compliance alternative you have selected in your SWPPP, and comply with the applicable additional requirements described in Parts 2.1.2.1.b and 2.1.2.1.c.

You have indicated in your NOI that you discharge to at least one surface water that is listed as impaired by the state or tribe in which your project is located. If your site discharges to one or more surface waters that are impaired for sediment or a sediment-related parameter (e.g., total suspended solids or turbidity) or nutrients (e.g., nitrogen or phosphorus), you are required to comply with additional stormwater control requirements pertaining to site inspections in Part 4.1.3 and the deadline to complete site stabilization in Part 2.2.1.3.c. If your site discharges to surface waters that are impaired for pollutants other than a sediment or nutrients, or related pollutants, you are only subject to additional requirements if EPA informs you separately of such requirements.

If you have general questions regarding the stormwater program or your responsibilities under the CGP, please call your region contact. Regional contact email and phone number can be found at: <http://cfpub.epa.gov/npdes/contacts.cfm>

If you have questions about your NOI form, please call the EPA NOI Processing Center at 1-866-352-7755 (toll free) or send an inquiry via the online form at: <http://cfpub.epa.gov/npdes/noicontact.cfm>

If you have difficulty accessing CDX, please contact the CDX Help Desk at: (888) 890-1995.

You can return to the eNOI system using the following link at any time  
<https://cdx.epa.gov/SSL/cdx/login.asp>.

EPA NOI Processing Center  
Operated by Avanti Corporation  
1200 Pennsylvania Ave., NW  
Mail Code: 4203M  
Washington, DC 20460  
1-866-352-7755



Submission of this Notice of Intent (NOI) constitutes notice that the operator identified in Section II of this form requests authorization to discharge pursuant to the NPDES Construction General Permit (CGP) permit number identified in Section I of this form. Submission of this NOI also constitutes notice that the operator identified in Section II of this form meets the eligibility requirements of Parts 1.1 and 1.2 of the CGP for the project identified in Section III of this form. Permit coverage is required prior to commencement of construction activity until you are eligible to terminate coverage as detailed in Part 8 of the CGP. To obtain authorization, you must submit a complete and accurate NOI form. Discharges are not authorized if your NOI is incomplete or inaccurate or if you were never eligible for permit coverage. Refer to the instructions at the end of this form.

**I. Approval to Use Paper NOI Form**

Have you been given approval from the Regional Office to use this paper NOI form\*? Yes      NO

If yes, provide the reason you need to use this paper form, the name of the EPA Regional Office staff person who approved your use of this form, and the date of approval:

Reason for using paper form:

Name of EPA staff person:

Date approval obtained:

**\* Note: You are required to obtain approval from the applicable Regional Office prior to using this paper NOI form.**

**II. Permit Information: Tracking Number (EPA Use Only) WAR12B25F**

Permit Number: WAR12000F (see Appendix B of the CGP for the list of eligible permit numbers)

**III. Operator Information**

Name: U.S. Army Corps of Engineers, Portland District

Phone: (503) 808-4784

Fax (Optional): (503) 808-4756

Email: barbara.g.cisneros@usace.army.mil

IRS Employer Identification Number (EIN):

Point of Contact (First Name, Middle Initial, Last Name): Barbara G Cisneros

Mailing Address:

Street: P.O. Box 2946

City: Portland

State: OR

Zip: 97208

**NOI Preparer (Complete if NOI was prepared by someone other than the certifier):**

Prepared by (First Name, Middle Initial, Last Name): Barbara G Cisneros

Organization: US ARMY CORPS OF ENGINEERS

Phone: (503) 808-4784

Fax (Optional):

E-mail: barbara.g.cisneros@usace.army.mil

**IV. Project/Site Information**

Project/Site Name: MCR Jetty A Rehabilitation

**Project/Site Address:**

Street/Location:

City: Ilwaco State: WA Zip: 98264

County or similar government subdivision: Pacific

**For the project/site for which you are seeking permit coverage, provide the following information:**

Latitude/Longitude (Use one of three possible formats, and specify method)

Latitude 1. _____	N(degrees, minutes, seconds)	Longitude 1. _____	W(degrees, minutes, seconds)
2. _____	N(degrees, minutes, decimal)	2. _____	W(degrees, minutes, decimal)
3. <u>46.2764</u>	N(degrees, decimals)	3. <u>124.0422</u>	W(degrees, decimals)

Latitude/Longitude Data Source: U.S.G.S topographical map    EPA Web Site    GPS    Other: Google Satellite Image

If you used a U.S.G.S. topographic map, what was the scale?

Horizontal Reference Datum:    NAD 27    NAD 83 or WGS 84    Unknown

Is your project located in Indian Country lands?    Yes    No

If yes, provide the name of the Indian tribe associated with the area of Indian country (including name of Indian reservation, if applicable), or if not in Indian country, provide the name of the Indian tribe associated with the property:

Are you requesting coverage under this NOI as a "federal operator" as defined in Appendix A?    Yes    No

Estimated Project Start Date: 10/01/2015    Estimated Project Completion Date: 09/30/2018

Estimated Area to be Disturbed (to the nearest quarter acre): 28.0

Have earth-disturbing activities commenced on your project/site?    Yes    No

If yes, is your project an emergency-related project?    Yes    No

Have stormwater discharges from your project/site been covered previously under an NPDES permit?    Yes    No

If yes, provide the Tracking Number if you had coverage under EPA's CGP or the NPDES permit number if you had coverage under an EPA individual permit:

**V. Discharge Information**

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)?    Yes    No

Are there any surface waters within 50 feet of your project's earth disturbances?    Yes    No

**Receiving Waters and Wetlands Information: (Attach a separate list if necessary)**

Surface water(s) to which discharge	Impaired Water	Listed Water Pollutant(s)	Tier 2, 2.5 or 3	Source	TMDL Name and Pollutant
Columbia River	Yes	DIOXINS POLYCHLORINATED BIPHENYLS (PCBS) TEMPERATURE	No	Washington State Department of Ecology 303(d) list	Total Maximum Daily Loading (TMDL) to Limit Discharges of 2,3,7,8-TCDD (Dioxin) to the Columbia River Basin

Describe the methods you used to complete the above table: Please refer to the Source(s) in the above table.

**VI. Chemical Treatment Information**

Will you use polymers, flocculants, or other treatment chemicals at your construction site?    Yes    No

If yes, will you use cationic treatment chemicals\* at your construction site?    Yes    No

If yes, have you been authorized to use cationic treatment chemicals by your applicable EPA Regional Office in advance of filing your NOI\*? Yes No

If you have been authorized to use cationic treatment chemicals by your applicable EPA Regional Office, attach a copy of your authorization letter and include documentation of the appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards.

Please indicate the treatment chemicals that you will use:

\* Note: You are ineligible for coverage under this permit unless you notify your applicable EPA Regional Office in advance and the EPA office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards.

### VII. Stormwater Pollution Prevention Plan (SWPPP) Information

Has the SWPPP been prepared in advance of filing this NOI? Yes No

#### SWPPP Contact Information:

First Name, Middle Initial, Last Name: Michelle M Rhodes

Organization: U.S. Army Corps of Engineers, Portland District

Phone: (503) 808-4853

Fax (Optional):

E-mail: Michelle.M.Rhodes@usace.army.mil

### VIII. Endangered Species Protection

Using the instructions in Appendix D of the CGP, under which criterion listed in Appendix D are you eligible for coverage under this permit (only check 1 box)?

A B C D E F

Provide a brief summary of the basis for criterion selection listed in Appendix D (e.g., communication with U.S. Fish and Wildlife Service or National Marine Fisheries Service, specific study):Received Biological Opinion from NMFS and Letter of Concurrence from USFWS

If you select criterion B, provide the Tracking Number from the other operator's notification of authorization under this permit:

If you select criterion C, you must attach a copy of your site map (see Part 7.2.6 of the permit), and you must answer the following questions:

What federally-listed species or federally-designated critical habitat are located in your "action area":

What is the distance between your site and the listed species or critical habitat (miles):

If you select criterion D, E, or F, attach copies of any letters or other communications between you and the U.S. Fish and Wildlife Service or National Marine Fisheries Service.

### IX. Historic Preservation

Is your project/site located on a property of religious or cultural significance to an Indian tribe? Yes No

If yes, provide the name of the Indian tribe associated with the property:

Are you installing any stormwater controls as described in Appendix E that require subsurface earth disturbance? (Appendix E, Step 1) Yes No

If yes, have prior surveys or evaluations conducted on the site have already determined historic properties do not exist, or that prior disturbances have precluded the existence of historic properties? (Appendix E, Step 2) Yes No

If no, have you determined that your installation of subsurface earth-disturbing stormwater controls will have no effect on historic properties? (Appendix E, Step 3) Yes No

If no, did the SHPO, THPO, or other tribal representative (whichever applies) respond to you within the 15 calendar days to indicate whether the subsurface earth disturbances caused by the installation of stormwater controls affect historic properties? (Appendix E, Step 4) Yes No

If yes, describe the nature of their response:

<input type="checkbox"/>	Written indication that adverse effects to historic properties from the installation of stormwater controls can be mitigated by agreed upon actions.
<input type="checkbox"/>	No agreement has been reached regarding measures to mitigate effects to historic properties from the installation of stormwater controls.
<input type="checkbox"/>	Other: The Corps has determined and Department of Antiquities and Historic Properties has concurred that there would be no adverse effects to historic properties. Related documents are included in Appendix K.

## X. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name: Jose L Aguilar

Title: District Commander, U.S. Army Corps of Engineers, Portland District

Signature: \_\_\_\_\_ Date: Tuesday, July 7, 2015

E-mail: Jose.L.Aguilar@usace.army.mil

**Appendix D - Copy of Inspection Form**

General Information				
<b>Name of Project</b>	MCR Jetty A Rehabilitation	<b>CGP Tracking No.</b>		<b>Inspection Date</b>
<b>Inspector Name, Title &amp; Contact Information</b>				
<b>Present Phase of Construction</b>				
<b>Inspection Location</b> (if multiple inspections are required, specify location where this inspection is being conducted)				
<p><b>Inspection Frequency</b> <i>(Note: you may be subject to different inspection frequencies in different areas of the site. Check all that apply.)</i></p> <p><b>Standard Frequency:</b>   <input type="checkbox"/> Weekly      <input type="checkbox"/> Every 14 days and within 24 hours of a 0.25" rain</p> <p><b>Increased Frequency:</b>   <input type="checkbox"/> Every 7 days and within 24 hours of a 0.25" rain (for areas of sites discharging to sediment or nutrient-impaired waters or to waters designated as Tier 2, Tier 2.5, or Tier 3)</p> <p><b>Reduced Frequency:</b></p> <ul style="list-style-type: none"> <li>- <input type="checkbox"/> Once per month (for stabilized areas)</li> <li>- <input type="checkbox"/> Once per month and within 24 hours of a 0.25" rain (for arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought)</li> <li>- <input type="checkbox"/> Once per month (for frozen conditions where earth-disturbing activities are being conducted)</li> </ul>				
<p><b>Was this inspection triggered by a 0.25" storm event?</b>   <input type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p><b>If yes, how did you determined whether a 0.25" storm event has occurred?</b></p> <p><input type="checkbox"/> Rain gauge on site      <input type="checkbox"/> Weather station representative of site. Specify weather station source:</p> <p><b>Total rainfall amount that triggered the inspection (in inches):</b></p>				
<p><b>Unsafe Conditions for Inspection</b></p> <p><b>Did you determine that any portion of your site was unsafe for inspection per CGP Part 4.1.5?</b>   <input type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p><b>If "yes", complete the following:</b></p> <ul style="list-style-type: none"> <li>- Describe the conditions that prevented you from conducting the inspection in this location:</li> <li>- Location(s) where conditions were found:</li> <li>-</li> </ul>				

Condition and Effectiveness of Erosion and Sediment (E&S) Controls (CGP Part 2.1)				
Type/Location of E&S Control [Add an additional sheet if necessary]	Repairs or Other Maintenance Needed?*	Corrective Action Required?*	Date on Which Maintenance or Corrective Action First Identified?	Notes
1.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
2.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
3.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
4.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
5.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
6.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
7.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
8.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
9.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
10.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		

\* **Note:** The permit differentiates between conditions requiring repairs and maintenance, and those requiring corrective action. The permit requires maintenance in order to keep controls in effective operating condition and requires repairs if controls are not operating as intended. Corrective actions are triggered only for specific, more serious conditions, which include: 1) A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in Part 2 and/or 3; 2) You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.1; 3) One of the prohibited discharges in Part 2.3.1 is occurring or has occurred; or 4) EPA requires corrective actions as a result of a permit violation found during an inspection carried out under Part 4.2. If a condition on your site requires a corrective action, you must also fill out a corrective action form found at [www.epa.gov/npdes/stormwater/swppp](http://www.epa.gov/npdes/stormwater/swppp). See Part 5 of the permit for more information.

<b>Condition and Effectiveness of Pollution Prevention (P2) Practices (CGP Part 2.3)</b>				
<b>Type/Location of P2 Practices [Add an additional sheet if necessary]</b>	<b>Repairs or Other Maintenance Needed?*</b>	<b>Corrective Action Required?*</b>	<b>Date on Which Maintenance or Corrective Action First Identified?</b>	<b>Notes</b>
1.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
2.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
3.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
4.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
5.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
6.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
7.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
8.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
9.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
10.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		

**\* Note:** The permit differentiates between conditions requiring repairs and maintenance, and those requiring corrective action. The permit requires maintenance in order to keep controls in effective operating condition and requires repairs if controls are not operating as intended. Corrective actions are triggered only for specific, more serious conditions, which include: 1) A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in Part 2 and/or 3; 2) You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.1; 3) One of the prohibited discharges in Part 2.3.1 is occurring or has occurred; or 4) EPA requires corrective actions as a result of a permit violation found during an inspection carried out under Part 4.2. If a condition on your site requires a corrective action, you must also fill out a corrective action form found at [www.epa.gov/npdes/stormwater/swppp](http://www.epa.gov/npdes/stormwater/swppp). See Part 5 of the permit for more information.



<b>Stabilization of Exposed Soil (CGP Part 2.2)</b>			
<b>Stabilization Area [Add an additional sheet if necessary]</b>	<b>Stabilization Method</b>	<b>Have You Initiated Stabilization?</b>	<b>Notes</b>
1.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
2.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
3.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
4.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
5.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	

<b>Description of Discharges (CGP Part 4.1.6.6)</b>	
<b>Was a stormwater discharge or other discharge occurring from any part of your site at the time of the inspection?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>If "yes", provide the following information for each point of discharge:</b>	
<b>Discharge Location</b>	<b>Observations</b>
1.	Describe the discharge:  At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? <input type="checkbox"/> Yes <input type="checkbox"/> No  If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
2.	Describe the discharge:  At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? <input type="checkbox"/> Yes <input type="checkbox"/> No  If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:

**Contractor or Subcontractor Certification and Signature**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

**Signature of Contractor or Subcontractor:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Printed Name and Affiliation:**

**Certification and Signature by Permittee**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

In making this certification, I am relying on the Contractor's or Subcontractor's qualifications as a Certified Erosion and Sediment Control Lead (CESCL) on behalf of the U.S. Army Corps of Engineers.

On behalf of the U.S. Army Corps of Engineers,

**Signature of Permittee or "Duly Authorized Representative":** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Printed Name and Affiliation:**

**Appendix E – Copy of Corrective Action Form**

<b>Section A – Initial Report (CGP Part 5.4.1)</b>					
<i>(Complete this section within 24 hours of discovering the condition that triggered corrective action)</i>					
<b>Name of Project</b>	MCR Jetty A Rehabilitation	<b>CGP Tracking No.</b>		<b>Today's Date</b>	
<b>Date Problem First Discovered</b>		<b>Time Problem First Discovered</b>			
<b>Name and Contact Information of Individual Completing this Form</b>					
<b>What site conditions triggered the requirement to conduct corrective action</b> <i>(check the box that applies):</i>					
<input type="checkbox"/> A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in Part 2 and/or 3 <input type="checkbox"/> The stormwater controls that have been installed and maintained are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.1 of the permit <input type="checkbox"/> A Part 2.3.1 prohibited discharge has occurred or is occurring <input type="checkbox"/> EPA requires corrective action as a result of permit violations found during an EPA inspection carried out under Part 4.2					
<b>Provide a description of the problem:</b>					
<b>Deadline for completing corrective action</b> <i>(Enter date that is either: (1) no more than 7 calendar days after the date you discovered the problem, or (2) if it is infeasible to complete work within the first 7 days, enter the date that is as soon as practicable following the 7th day):</i>					
<b>If your estimated date of completion falls after the 7-day deadline, explain (1) why you believe it is infeasible to complete work within 7 days, and (2) why the date you have established for making the new or modified stormwater control operational is the soonest practicable timeframe:</b>					
<b>Section B – Corrective Action Progress (CGP Part 5.4.2)</b>					
<i>(Complete this section no later than 7 calendar days after discovering the condition that triggered corrective action)</i>					
<b>Section B.1 – Why the Problem Occurred</b>					
<b>Cause(s) of Problem</b> <i>(Add an additional sheet if necessary)</i>			<b>How This Was Determined and the Date You Determined the Cause</b>		
1.					
2.					
<b>Section B.2 – Stormwater Control Modifications to be Implemented to Correct the Problem</b>					
<b>List of Stormwater Control Modification(s) Needed to Correct Problem</b> <i>(Add an additional sheet if necessary)</i>	<b>Date of Completion</b>	<b>SWPPP Update Necessary?</b>	<b>Notes</b>		
1.		<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide date SWPPP modified:			
2.		<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide date SWPPP modified:			

**Section C – Certification and Signature (CGP Part 5.4.3)**

**Section C.1 – Certification and Signature by Contractor or Subcontractor**

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

**Signature of Contractor or Subcontractor:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Printed Name and Affiliation:**

**Section C.2 – Certification and Signature by Permittee**

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

In making this certification, I am relying on the Contractor’s or Subcontractor’s qualifications as a Certified Erosion and Sediment Control Lead (CESCL) on behalf of the U.S. Army Corps of Engineers.

On behalf of the U.S. Army Corps of Engineers,

**Signature of Permittee or  
“Duly Authorized Representative”:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Printed Name and Affiliation:**

**Appendix F – *Sample* SWPPP Amendment Log**

**Sample SWPPP Amendment Log**

<b>No.</b>	<b>Description of the Amendment</b>	<b>Date of Amendment</b>	<b>Amendment Prepared by [Name(s) and Title]</b>

**Appendix G – *Sample* Subcontractor Certifications/Agreements**



SUBCONTRACTOR CERTIFICATION  
STORMWATER POLLUTION PREVENTION PLAN

Project Number: \_\_\_\_\_

Project Title: \_\_\_\_\_

Operator(s): \_\_\_\_\_

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

**I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the practices described in the SWPPP.**

This certification is hereby signed in reference to the above named project:

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone  
Number: \_\_\_\_\_

Type of construction service to be provided: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Appendix H - *Sample* Grading and Stabilization Activities Log**

**Sample Grading and Stabilization Activities Log**

<b>Date Grading Activity Initiated</b>	<b>Description of Grading Activity</b>	<b>Description of Stabilization Measure and Location</b>	<b>Date Grading Activity Ceased (Indicate Temporary or Permanent)</b>	<b>Date When Stabilization Measures Initiated</b>

**Appendix I - *Sample* SWPPP Training Log**

**Sample SWPPP Training Log**

**Stormwater Pollution Prevention Training Log**

Project Name: \_\_\_\_\_

Project Location: \_\_\_\_\_

Instructor's Name(s): \_\_\_\_\_

Instructor's Title(s): \_\_\_\_\_

Course Location: \_\_\_\_\_ Date: \_\_\_\_\_

Course Length (hours): \_\_\_\_\_

Stormwater Training Topic: *(check as appropriate)*

- Sediment and Erosion Controls       Emergency Procedures
- Stabilization Controls                       Inspections/Corrective Actions
- Pollution Prevention Measures

Specific Training Objective:

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		

## **Appendix J - Endangered Species Documentation**



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Oregon Fish and Wildlife Office  
2600 SE 98<sup>th</sup> Avenue, Suite 100  
Portland, Oregon 97266  
Phone: (503)231-6179 FAX: (503)231-6195

Reply To: 8331.10082(11)  
File Name: MCR\_major jetty rehabilitation\_informal.doc  
TAILS: 13420-2011-I-0082  
TS Number: 11-491  
Doc Type: Final

FEB 23 2011

Ms. Joyce E. Casey  
Chief, Environmental Resources Branch  
Portland District, Corps of Engineers  
P.O. Box 2946  
Portland, Oregon 97208-2946

Subject: Major Rehabilitation of the Jetty System at the Mouth of the Columbia River Navigation Channel, Clatsop County Oregon and Pacific County, Washington (USFWS Number: 13420-2011-I-0082)

Dear Ms. Casey:

This is in response to your letter received on February 8, 2011 transmitting a Biological Assessment (BA) and request for concurrence on the proposed rehabilitation of the North and South Jetties and Jetty A at the mouth of the Columbia River (MCR) navigation channel, Clatsop County Oregon and Pacific County, Washington. Of interest to the Fish and Wildlife Service (Service) is your evaluation of the impacts to listed bull trout (*Salvelinus confluentus*) and critical habitat, marbled murrelet (*Brachyramphus marmoratus*), and western snowy plover (*Charadrius alexandrinus nivosus*). The BA submitted for this proposed action includes your determination that the proposed action "may affect but is not likely to adversely affect" the above species and critical habitat. Our review and comments regarding these determinations are provided pursuant to section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1536 et seq.).

### Consultation History

The Service has coordinated with the Corps on this evolving preferred alternative since 2005. Previously, the Corps submitted an earlier version of this BA proposing a larger jetty rebuild. That BA was withdrawn in January of 2008 due to significant changes in the proposed action. On February 10, 2010, the Service sent comments to the Corps based on a revised environmental assessment (CENWP-PM-E-10-03) received in our office January 14, 2010. The current proposal constitutes a new proposed action with a smaller project footprint and was determined to be the preferred alternative.

## Proposed Action

The North and South Jetties and Jetty A have badly deteriorated areas where degradation has accelerated in recent years due to increased storm activity and loss of sand shoal material upon which the jetties are constructed. The purpose of this proposal is to perform modifications and repairs to the jetties at the mouth of the Columbia River that would strengthen the jetty structures, extend their functional life, and maintain deep-draft navigation. Scheduled repairs addressing the existing loss of cross sections and the addition of engineering features designed to minimize future cross section instability are planned. New groins will be constructed primarily on existing relic stone and the head capping will be placed on relic as well as jetty stone that is above MLLW. An armor stone cap of stone or equivalent concrete armor will be placed on the head the jetties. Detailed descriptions of the repair schedule, placement, and rock tonnage are provided in the BA and are incorporated here by reference.

The proposed jetty repair would be conducted by marine and/or land access activities which would include stone placement from both land and water. This includes the construction of haul roads and access ramps, placement of mooring dolphins for barges delivering stone to the jetties, and construction of equipment and rock storage areas. Placement by water could occur via the use of a jack-up barge on the South Jetty, and regular dredging and disposal of infill is expected to occur at off-loading facilities. The duration of the construction schedule is 20 years, with a 50-year operational lifetime for the MCR jetty system. Jetty rehabilitation work would occur throughout the year, where weather and other conditions allow for safe operation.

## Conclusion

Based upon the information in the biological assessment, we concur with your determination that the proposed action **“may affect but is not likely to adversely affect”** bull trout and proposed critical habitat for the following reasons: 1) it is unlikely bull trout will be within the action area; and 2) the primary constituent elements of critical habitat are not likely to be degraded to an extent that is measureable or permanent.

Based upon the information in the biological assessment, we concur with your determination that the proposed action **“may affect but is not likely to adversely affect”** marbled murrelet for the following reasons: 1) conservation measures will be implemented to reduce potential noise disturbance by haul trucks through nesting habitat at Cape Disappointment State Park; 2) abundant foraging habitat is available adjacent to the activity and any disturbance would be minor and temporary; and 3) effects to prey resources would be temporary and would not impact resources known to be limiting factors to murrelet populations.

Based upon the information in the biological assessment, we concur with your determination that the proposed action **“may affect but is not likely to adversely affect”** the western snowy plover because it is unlikely to occur within the action area, and therefore exposure to effects of the proposed action is low.



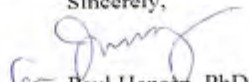
## Conservation Recommendations

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, and to help implement recovery plans or to develop information. The Service recommends that the following conservation measures be implemented as a means of furthering the conservation of western snowy plovers:

1. The construction activities are proposed in the vicinity of areas known to have historical winter and breeding snowy plover populations, and are directly adjacent to the Columbia River South Jetty Snowy Plover Management Area (SPMA). During this 20-year project timeframe, the Oregon Park and Recreation Department (OPRD) will be implementing a management plan for plovers within the SPMA to restore sufficient habitat for snowy plover nesting and brood rearing to occur, reduce the amount of predators present, and keep human disturbance to a minimum. If snowy plovers attempt to nest adjacent to this activity, they could experience disturbance effects. Therefore, the Corps should survey for plover presence during the nesting season (March 15 through September 15) in areas of suitable habitat. This will help determine if snowy plovers are nesting in any given year during the life of this project. Surveys should be conducted with the Service Breeding Window Survey Protocol and coordinated with OPRD and the Service. Monitoring of plovers should be conducted a minimum of once every two weeks during the nesting season. Nesting surveys could cease after July 15, if plovers are not observed. Should plovers be observed, the Corps should immediately contact the Service and determine the next steps.
2. The Corps should consider using the heavy equipment that will already be in place at the south jetty staging area to restore and enhance nesting habitat on Clatsop Spit by removing European beach grass (*Ammophila arenaria*) or other invasive species. This area has been identified as a SPMA and is an important area for restoration of suitable habitat under the Oregon State Parks Habitat Conservation Plan for the western snowy plover.
3. The Corps should work with the OPRD to identify and prioritize specific areas for habitat creation. The Corps should consider the beneficial use of dredging material from the off-loading facilities to cover and eliminate European beach grass, especially if there is an opportunity for dune augmentation at the SPMA.
4. All garbage should be contained or removed regularly from the project site to minimize the risk of attracting additional predators, such as corvids, to the area.

If you have any questions or need more information, please Kathy Roberts of my staff at (503) 231-6179.

Sincerely,

  
Paul Henson, PhD  
State Supervisor



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Northwest Region  
7600 Sand Point Way N.E., Bldg. 1  
Seattle, WA 98115

Refer to NMFS No:  
2010/06104

March 18, 2011

Joyce E. Casey  
Chief, Environmental Resources Branch  
U.S. Army Corps of Engineers, Portland District  
P.O. Box 2946  
Portland, Oregon 97208-2946

Re: Endangered Species Act Biological Opinion and Conference Report and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the Major Rehabilitation of the Jetty System at the Mouth of the Columbia River.

Dear Ms. Casey:

The enclosed document contains a biological opinion (Opinion) and conference report prepared by the National Marine Fisheries Service (NMFS) pursuant to section 7(a)(2) of the Endangered Species Act (ESA) on the effects of the U.S. Army Corps of Engineers' proposed major rehabilitation of the jetty system at the mouth of the Columbia River. The Corps' authority for this action comes from the original authority for construction of the project granted by Senate Executive Document 13, 47<sup>th</sup> Congress, 2<sup>nd</sup> Session (5 July 1884), and subsequently renewed with authorizations related to construction, operation and maintenance of the Columbia River navigation channel. In this Opinion, NMFS concludes that the proposed action is not likely to jeopardize the continued existence of eulachon (*Thaleichthys pacificus*), Steller sea lions (*Eumetopias jubatus*), and humpback whales (*Megaptera novaeangliae*).

Furthermore, NMFS concluded that the proposed action may affect, but is not likely to adversely affect the following species:

- Fin whale (*Balaenoptera physalus*)
- Southern Resident killer whale (*Orcinus orca*)
- Sperm whale (*Physeter macrocephalus*)
- Sei whale (*B. borealis*)
- Blue whale (*B. musculus*)
- Leatherback sea turtle (*Dermochelys coriacea*)#
- Lower Columbia River (LCR) Chinook salmon (*O. tshawytscha*)\*
- Upper Willamette River (UWR) Chinook salmon (*O. tshawytscha*)\*
- Upper Columbia River (UCR) spring-run Chinook salmon (*O. tshawytscha*)\*
- Snake River (SR) spring/summer-run Chinook salmon (*O. tshawytscha*)\*
- SR fall-run Chinook salmon (*O. tshawytscha*)\*
- Columbia River (CR) chum salmon (*O. keta*)\*



- LCR coho salmon (*O. kisutch*)#
- Oregon Coast coho salmon (*O. kisutch*)
- Southern Oregon/Northern California Coasts coho salmon (*O. kisutch*)
- SR sockeye salmon (*O. nerka*)\*
- LCR steelhead (*O. mykiss*)\*
- UWR steelhead (*O. mykiss*)\*
- Middle Columbia River steelhead (*O. mykiss*)\*
- UCR steelhead (*O. mykiss*)\*
- SR basin steelhead (*O. mykiss*)\*
- Southern distinct population segment (DPS) green sturgeon (*Acipenser medirostris*)\*

Additionally, NMFS concluded that the proposed action is not likely to adversely affect designated critical habitat for the above species or proposed critical habitat for eulachon, leatherback turtles, and LCR coho salmon.

The Corps also requested a conference report for critical habitat that NMFS proposed for leatherback turtles, LCR coho salmon, and eulachon. An action agency is not required to consult on proposed critical habitat unless its action is likely to destroy or adversely modify the proposed critical habitat. Nonetheless, NMFS encourages action agencies to complete a conference process to identify and resolve any conflicts that may arise between a proposed action and proposed critical habitat. Here, the effects of the proposed action on proposed critical habitat are likely to be similar to the effects on critical habitats that are already designated in the action area. Please note, however, that the Corps has a duty to reinitiate this consultation if NMFS designates these critical habitats before the action is completed and may comply with that duty by requesting that NMFS adopt the conference report as a final report or biological opinion.

The NMFS is not including an incidental take statement for eulachon as NMFS has not issued protective regulations for eulachon under section 4(d) of the ESA. Additionally, NMFS is not including an incidental take authorization for marine mammals at this time because the incidental take of marine mammals has not been authorized under section 101(a)(5) of the Marine Mammal Protection Act and/or its 1994 Amendments. Following issuance of such regulations or authorizations for marine mammals, NMFS may amend this biological opinion to include an incidental take statement for marine mammals, as appropriate.

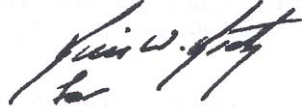
This document also includes the results of our analysis of the action's likely effects on essential fish habitat (EFH) pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), and includes no conservation recommendations to avoid, minimize, or otherwise offset potential adverse effects on EFH, as NMFS determined that there are no conservation recommendations, in addition to those proposed by the Corps, that can be implemented that would avoid, minimize, or offset potential adverse effects. Therefore, no response is required.

In response to increased oversight of overall EFH program effectiveness by the Office of Management and Budget, NMFS established a quarterly reporting requirement to determine how many conservation recommendations are provided as part of each EFH consultation and how many are adopted by the action agency. Therefore, we request that in your statutory reply to the

EFH portion of this consultation, you clearly identify the number of conservation recommendations accepted, if applicable.

If you have questions regarding this consultation, please contact Robert Anderson, Fishery Biologist with the Oregon State Habitat Office, at 503.231.2226, or Zachary Radmer, Fishery Biologist with the Oregon State Habitat Office, at 503.872.2738. For questions about the marine mammal determinations contact Alison Agness of the Northwest Region, Protected Resources Division at 206.526.6152.

Sincerely,

A handwritten signature in black ink, appearing to read "William W. Stelle, Jr.", written in a cursive style.

William W. Stelle, Jr.  
Regional Administrator

Other related ESA documents can be found at the following website:

<http://www.nwp.usace.army.mil/Missions/Current/ColumbiaRiverjetties.aspx>

## **Appendix K - Historic Properties Documentation**



Allyson Brooks Ph.D., Director  
State Historic Preservation Officer

March 3, 2015

Ms. Joyce Casey  
Corps of Engineers, Portland District  
PO Box 2946  
Portland, Oregon 97208-2946

Re: Jetty A Maintenance Work Project  
Log No: 041414-13-COE-P

Dear Ms. Casey:

Thank you for contacting our department. We have reviewed the materials you provided for the proposed Jetty A Maintenance Work Project at the Mouth of the Columbia River, Pacific County, Washington.

We concur with your proposed revision of the Area of Potential Effect and your Determination of No Adverse Effect.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

In the event that archaeological or historic materials are discovered during project activities, work in the immediate vicinity must stop, the area secured, and the concerned tribes and this department notified.

These comments are based on the information available at the time of this review and on the behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised.

Thank you for the opportunity to comment and a copy of these comments should be included in subsequent environmental documents.

Sincerely,

A handwritten signature in blue ink, appearing to read 'R. Whitlam', is written over a horizontal line.

Robert G. Whitlam, Ph.D.  
State Archaeologist  
(360) 890-2615  
email: [rob.whitlam@dahp.wa.gov](mailto:rob.whitlam@dahp.wa.gov)

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State of Washington • Department of Archaeology & Historic Preservation  
P.O. Box 48343 • Olympia, Washington 98504-8343 • (360) 586-3065  
[www.dahp.wa.gov](http://www.dahp.wa.gov)



## **Appendix L – Relevant Design Specifications**

Relevant specifications are primarily:

01 57 20.00 25 ENVIRONMENTAL PROTECTION

01 57 23.00 25 TEMPORARY STORM WATER POLLUTION CONTROL

31 11 00.00 25 CLEARING AND GRUBBING

32 90 00.00 25 SITE RESTORATION

35 20 23.13 25 DREDGING

35 31 26.40 25 JETTY REPAIRS

35 52 00.00 25 MATERIAL OFF-LOADING FACILITY CONSTRUCTION



**DEPARTMENT OF THE ARMY**  
Corps of Engineers, Portland District

**Inadvertent Discovery Plan (IDP)**

**Background**

Traditionally, tribes have managed the lands in Oregon and Washington for thousands of years. Although these lands are now broken up into segments of various ownerships and managing agencies, Native Americans still retain a strong connection to their ancestral lands. For Oregon and Washington tribes, archaeological/burial sites are not simply artifacts of the tribe's cultural past, but are considered sacred and represent a continuing connection with their ancestors. Native American ancestral remains, funerary objects, sacred objects and objects of cultural patrimony associated with Oregon and Washington Tribes are protected under state and federal law. These laws recognize and codify the tribes' rights in the decision-making process regarding ancestral remains and associated objects. Therefore, both the discovered ancestral remains and/or archaeological objects should be treated in a sensitive and respectful manner by all parties involved.

The Portland District Corps of Engineers, (Corps) makes every attempt to work effectively with Native American Tribes, landowners, resource agencies, historic preservation organizations, stakeholders, applicants and the public to comply with the National Historic Preservation Act and other applicable laws and regulations, Executive Orders, Presidential Memoranda, and policy guidance documents. Respectful and meaningful coordination and consultations between the Corps, Native American Tribes, and the State Historic Preservation Office are conducted as we strive to balance economic needs with historic preservation concerns.

This IDP ensures all parties involved, during inadvertent discovery of cultural materials, are contacted and fulfill their obligation under state and federal laws, including but not limited to:

National Historic Preservation Act (NHPA) – [54 USC 3001] [36 CFR 60]  
Native American Graves Protection and Repatriation Act – [25 USC 3001] [43 CFR 10]  
Indian Graves and Records – [RCW 27.44]  
Abandoned and Historic Cemeteries and Historic Graves – [RCW 68.60]  
Archaeological Sites and Resources – [RCW 27.53]  
Post-Review Discoveries – [36 CFR 800.13]  
Consultation and Coordination with Indian Tribal Governments – [Executive Order – 13175]

**Suspend Work**

**Cultural Resources and Human Burials:** In the event evidence of human burials, human remains, cultural items, suspected cultural items, or historic properties, as identified by the National Historic Preservation Act, are discovered and/or may be affected during the course of the work authorized, the Contractor shall **Immediately Cease All Ground Disturbing Activities**. Examples of cultural material that constitutes such sites include but are not limited to the following: 1) historic sites can include glass bottles, cans, building foundations<sup>1</sup>; and 2) prehistoric sites include lithic flakes, shell, beads, ovens, etc. **Given the setting of this undertaking, be especially cognizant of any material related to a possible shipwreck which**

<sup>1</sup> The Corps and Washington Department of Archaeology and Historic Preservation are aware of concrete structural foundations that are present on Jetty A. The placement of material over these foundations or any other located on Jetty A does not require notification. Conversely if substantial excavation is required on or adjacent to a concrete structural foundation the Corps shall be notified before that work proceeds.

**could consist of items such as water logged pieces of wood, and substantial pieces of rusted metal. In addition, individuals working on site should be cognizant of material related to remnants of the trestle that may be present in the project area. This would include waterlogged/creosote treated timbers.**

Failure to stop work immediately and until such time as the Corps has coordinated with all appropriate agencies and complied with the provisions of the National Historic Preservation Act and other pertinent regulations, could result in violation of state and federal laws. Violators are subject to civil and criminal penalties.

#### **Notification Process for Contractor on Site**

The person(s) making the discovery shall immediately notify the Corps of Engineers, and other appropriate agencies as necessary.

- Notification to the Portland District shall be made by phone with a voicemail message and/or email to Chris Page (503-808-4389, [christopher.m.page@usace.army.mil](mailto:christopher.m.page@usace.army.mil)), Daniel Mulligan (503-808-4768, [daniel.m.mulligan@usace.army.mil](mailto:daniel.m.mulligan@usace.army.mil)) and Mike Flowers (503-808-4762, [Michael.A.Flowers@usace.army.mil](mailto:Michael.A.Flowers@usace.army.mil)) as soon as possible following discovery but in no case later than 24 hours. The phone call and/or email shall clearly specify the purpose is to report a cultural resource discovery, provide the project name, discovery location, and contact information for follow-up purposes.
- Follow up the initial phone call and/or email notification with an email and phone call to the Corps of Engineers Project Manager identified for this project.

#### **Notification Process for Corps Project Manager**

The Project Manager or person(s) designated to manage the inadvertent discovery shall immediately notify the following agencies:

- Washington Department of Archaeology and Historic Preservation, Dr. Rob Whitlam, office phone (360) 586-3080.
- Washington State Police [**if human remains are found**], Office of Government and Media Relations office phone (360) 596-4010.

#### **Tribes:**

- Confederated Tribes of the Grand Ronde Community of Oregon, David Harrelson (503) 879-2320.
- Confederated Tribes of the Siletz Reservation, Oregon, Robert Kentta (541) 351-0148.
- Cowlitz Indian Tribe, Washington, Dave Burlingame, (360) 577-6962.
- Yakama Indian Nation, Jon Shellenberger, (509) 865-5121 ext. 6323.
- Confederated Tribes of the Umatilla Reservation, Oregon, Carey Miller (541) 276-3629; Teara Farrow (541) 276-3629; Eric Quaempts (541) 276-3447.
- Nez Perce Tribe of Idaho, Patrick Baird (208) 621-3851.
- Confederated Tribes of the Warm Springs Reservation of Oregon, Holly Shea (541) 553-2422.

The Corps will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Registry of Historic Places. In addition, the Corps will coordinate a Site Avoidance Plan (SAP) and/or a Scope of Work (SOW) with the DAHP, and the tribe(s) to avoid or excavate the archaeological/burial site. In the event the Corps decides to delegate their cultural resource protection responsibilities to another federal or state agency, the Corps shall contact the interested parties and provide those parties with the appropriate new contact person(s).

### **Plan of Action (POA)**

In the event human burials, human remains, cultural items, suspected cultural items, or historic properties, as identified by the National Historic Preservation Act, are discovered and/or may be affected during the course of the work authorized, the archaeological monitor, and/or designee, has the authority to temporarily stop all ground disturbance activities to further inspect the material(s). (Note: if an archaeological monitor is not a condition of this project, work should still be temporarily stopped if any cultural material is identified and the abovementioned notification procedures should be implemented. Examples of cultural material that constitutes such sites but are not limited to the following: 1) historic sites can include glass bottles, cans, building foundations; and 2) prehistoric sites include lithic flakes, shell, beads, ovens, etc.

**Given the setting of this undertaking, be especially cognizant of any material related to a possible shipwreck which could include items such as water logged pieces of wood, and rusted metal. In addition, individuals working on site should be cognizant of material related to the former trestle that may have eroded into the project area. This would include any waterlogged/creosote treated timbers.** If upon closer examination the materials discovered are not consistent with human burials, human remains, cultural items, suspected cultural items, or historic properties, as identified by the National Historic Preservation Act, the monitor will allow work to proceed but with caution and at a slower rate until the monitor is confident no sites are represented.

Upon positive identification of human burials, human remains, cultural items, suspected cultural items, or historic properties, as identified by the National Historic Preservation Act, the monitor will maintain the cease work order, make efforts to secure the discovery location, take reasonable steps to ensure the confidentiality of the discovery site, take reasonable steps to restrict access to the site of discovery, and immediately notify the Corps of the positive discovery as defined in the notification process above.

### **Human Remains POA**

If human burials and/or human remains are discovered, the monitor will treat the remains with sensitivity and respect, ensure all unauthorized personnel have vacated the site location in a safe manner, make reasonable efforts to secure the location, and stabilize the remains if necessary, e.g. they are endangered of falling out a trench wall. Every reasonable effort will be made by the monitor(s) to ensure the remains are not physically handled or examined by unauthorized personnel until the proper notifications have been made. Reference is made to the Tribal Position Paper on Human Remains found on SHPO's website at:

[http://www.oregon.gov/OPRD/HCD/ARCH/docs/Tribal\\_position\\_paper\\_on\\_Human\\_Remains.pdf](http://www.oregon.gov/OPRD/HCD/ARCH/docs/Tribal_position_paper_on_Human_Remains.pdf).

### **Treatment Plan (TP)**

A treatment plan (TP) will be developed between the Corps, DAHP, and Tribe(s) during consultation to ensure the proper handling and curation of human remains and/or cultural items is clearly outlined and agreed upon. The TP will define the items found; develop a strategy for handling/moving human remains and/or cultural items; develop a strategy for determining whether additional human remains and/or cultural items are endangered; determine if additional testing is necessary to identify site boundaries; and, determine the disposition of the human remains and/or cultural items. The TP will be agreed upon by all parties involved before any future ground disturbance activities resume.

***Construction related activities and/or ground disturbance activities shall not resume until authorization from the Corps has been given.***

This plan was developed to ensure the safeguarding of our Nation's heritage through inadvertent discovery, and to ensure the Corps' Tribal-Trust responsibilities are met with Diligence, Responsiveness, Reliability, Accuracy, and Respect to our fellow government agencies.

**BILLING CODE 3510-22-P**

**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**XRIN 0648-XD978-X**

**Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to the Rehabilitation of Jetty A at the Mouth of the Columbia River**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Notice; proposed incidental harassment authorization; request for comments.

**SUMMARY:** NMFS has received a request from the U.S. Army Corps of Engineers, Portland District (Corps) for authorization to take marine mammals incidental to the rehabilitation of jetty system at the mouth of the Columbia River (MCR): North Jetty, South Jetty, and Jetty A. The Corps is requesting an Incidental Harassment Authorization (IHA) for the first season of pile installation and removal at Jetty A only.

**DATES:** Comments and information must be received no later than [*insert date 30 days after date of publication in the FEDERAL REGISTER*].

**ADDRESSES:** Comments on the application should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service. Physical comments should be sent to 1315 East-West Highway, Silver Spring, MD 20910 and electronic comments should be sent to *ITP.Pauline@noaa.gov*.

Instructions: NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments received

electronically, including all attachments, must not exceed a 25-megabyte file size. Attachments to electronic comments will be accepted in Microsoft Word or Excel or Adobe PDF file formats only. All comments received are a part of the public record and will generally be posted to the Internet at <http://www.nmfs.noaa.gov/pr/permits/incidental/construction.htm> without change. All personal identifying information (e.g., name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

**FOR FURTHER INFORMATION CONTACT:** Robert Pauline, Office of Protected Resources, NMFS, (301) 427-8401.

**SUPPLEMENTARY INFORMATION:**

**Availability**

An electronic copy of the Corps' application and supporting documents, as well as a list of the references cited in this document, may be obtained by visiting the Internet at: <http://www.nmfs.noaa.gov/pr/permits/incidental/construction.htm>. In case of problems accessing these documents, please call the contact listed above.

**Background**

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

An authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. NMFS has defined “negligible impact” in 50 CFR 216.103 as “an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.”

Except with respect to certain activities not pertinent here, the MMPA defines "harassment" as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

### **Summary of Request**

On February 13, 2015, NMFS received an application from the Corps for the taking of marine mammals incidental to the rehabilitation of Jetty A at the mouth of the Columbia River (MCR). On June 9, 2015 NMFS received a revised application. NMFS determined that the application was adequate and complete on June 12, 2015. The Corps proposes to conduct in-water work that may incidentally harass marine mammals (i.e., pile driving and removal). This IHA would be valid from May 1, 2016 through April 30, 2017.

The use of vibratory pile driving is expected to produce underwater sound at levels that have the potential to result in behavioral harassment of marine mammals. Species with the

expected potential to be present during the project timeframe include killer whale (*Orcinus orca*), Steller sea lion (*Eumatopius jubatus*), gray whale (*Eschrichtius robustus*), harbor porpoise (*Phocoena phocoena*), California sea lion (*Zalophus californianus*), and harbor seal (*Phoca vitulina richardii*).

## **Description of the Specified Activity**

### *Overview*

The Corps is seeking an IHA for the first year of pile installation and, possibly, removal work at Jetty A related to construction and maintenance of a barge offloading facility. The barge facility will be used for activities associated with the rehabilitation of Jetty A. The Corps is seeking this authorization by the end of August 2015 for contract bid schedule reasons. Because the work may extend beyond two seasons the Corps will request an LOA for any additional years of pile maintenance and removal at Jetty A. Jetty A is not a haul-out site for pinnipeds so pile installation and removal were the only activities identified as having the potential to adversely affect marine mammals at Jetty A.

### *Dates and Duration*

Work on the first year of pile installation may begin as early as May 2016 and would extend through September 2017. Work is anticipated for two seasons stone placement for head stabilization and trunk repairs starting in 2016. Because the work may extend to two seasons the Corps will be requesting an LOA for the second year of pile maintenance and removal at Jetty A.

The scheduled program of repair and rehabilitation priorities are described in detail in Section 1 of the Corps' IHA application. The sequence and overall timing for remaining work requiring an IHA and future LOA at the three MCR jetties include:



1. Jetty A Scheduled Repairs and Head Stabilization will require an IHA and future LOA for pile installation of an offloading facilities. Construction and stone placement will likely occur in 2016 and 2017. The Corps will request an LOA after the IHA expires to cover additional years of pile maintenance and removal.

2. North Jetty Scheduled Repair and Head Stabilization will require an LOA in the future for pile installation and removal at offloading facility. Construction/placement is planned for 2016-2019.

3. South Jetty Interim Repair and Head Determination will require an LOA for pile installation and removal at two barge offloading facilities. This work would be covered under a future LOA.

The work season generally extends from April through October, with extensions, contractions, and additional work windows outside of the summer season varying by weather patterns. To avoid the presence of Southern resident killer whales, the Corps will prohibit pile installation for offloading facilities from October 1 until on or after May 1 since that is their primary feeding season when they may be present at the MCR plume. Installation would occur from May 1 to September 30 each year.

#### *Specified Geographic Region*

This activity will take place at the three MCR jetties in Pacific County, Washington, and Clatsop County, Oregon. The scheduled program of repair and rehabilitation priorities are described and illustrated in Section 1 of the application.

#### *Detailed Description of Activities*

Jetty A Scheduled Repair would occur as part of the Corps' Major Rehabilitation program for the jetties. Scheduled repairs would address the loss of cross-section, reduce future cross-section

instability, and stabilize the head (terminus). Scheduled cross-section repairs are primarily above mean lower low water (MLLW), with a majority of stone placement not likely to extend below - 5 feet MLLW. The jetty head (Southern-most end section) would be stabilized at approximately station (STA) 89+00 with large armoring stone placed on relic jetty stone that is mostly above MLLW. Stations (STA) indicate lineal distance along the jetty relative to a fixed reference point (0+00) located at the landward-most point on the jetty root (See Application Figure 2).

Construction of an offloading facility will be necessary to transport materials to the Jetty A project site. This construction would require dredging and pile installation. There is a small chance that delivery and placement could occur exclusively via overland methods. If such were the case, the Corps would not have a need an IHA.

Four offloading facilities will eventually be required for completion of entire project. However, only construction of the first facility would be covered under the proposed Authorization. Construction of all four offloading facilities combined will require up to 96 wood or steel piles and up to 373 sections of Z-piles, H-piles, and sheet pile to retain rock fill. A vibratory hammer will be used for pile installation due to the soft sediments (sand) in the project area and only untreated wood will be used, where applicable. No impact driving will be necessary under this Authorization. The piles will be located within 200 feet of the jetty structure. The presence of relic stone may require locating the piling further from the jetty so that use of this method is not precluded by the existing stone. The dolphins/Z- and H-piles would be composed of either untreated timber or steel piles installed to a depth of approximately 15 to 25 feet below grade in order to withstand the needs of off-loading barges and heavy construction equipment. Because vibratory hammers will be used in areas with velocities greater than 1.6 feet per second, the need for hydroacoustic attenuation is not an anticipated issue.

Piling will be fitted with pointed caps to prevent perching by piscivorous birds to minimize opportunities for avian predation on listed species. Some of the pilings and offloading facilities will be removed at the end of the construction period.

Pile installation is assumed to occur for about 10 hours a day, with a total of approximately 15 piles installed per day. Each offloading facility would have about ¼ of the total piles mentioned. As noted above, up to 96 piles could be installed, and up to 373 sections of sheet pile to retain rock fill. This is a total of 469 initial installation and 469 removal events, over the span of about 67 days. In order to round the math, the NMFS has assumed 68 days, so that each of the four offloading facilities takes about 17 days total for installation and removal. This is likely to be the maximum number of days for pile installation at Jetty A. The Corps is still determining whether or not to remove some or all of these offloading facilities once jetty rehabilitation work is completed. It is possible that portions of these facilities may not survive ocean conditions. Longer-term offloading facilities at South and North Jetties may need to be repaired if used more than one season. The Corps will also be conducting post-construction pedestrian surveys along the jetties, and will have construction activities for about four seasons on the South Jetty.

Note that only a portion of the activities described above will be covered under the IHA. Actions covered under the authorization would include installing a maximum of 24 piles for use as dolphins and a maximum of 93 sections of Z or H piles for retention of rock fill over 17 days. The piles would be a maximum diameter of 24 inches and would only be installed by vibratory driving method. The possibility exists that smaller diameter piles may be used but for this analysis it is assumed that 24 inch piles will be driven.

### **Description of Marine Mammals in the Area of the Specified Activity**

Marine mammals known to occur in the Pacific Ocean offshore at the MCR include whales, orcas, dolphins, porpoises, sea lions, and harbor seals. Most cetacean species observed by Green and others (1992) occurred in Pacific slope or offshore waters (600 to 6,000 feet in depth). Harbor porpoises (*Phocoena phocoena*) and gray whales (*Eschrichtius robustus*) were prevalent in shelf waters less than 600 feet in depth. Orcas are known to feed on Chinook salmon at the MCR, and humpback whales (*Megaptera novaeangliae*) may transit through the area offshore of the jetties. While humpbacks have been observed offshore they are unlikely to be found inside of the jetty system. The marine mammal species potentially present in the activity area are shown in Table 1.

Pinniped species that occur in the vicinity of the jetties include Pacific harbor seals (*Phoca vitulina richardsi*), California sea lions (*Zalophus californianus*), and Steller sea lions (*Eumetopias jubatus*). Their use is primarily confined to the South Jetty. According to the Washington Department of Fish and Wildlife (WDFW) aerial survey counts from 2000-2014, there are no records for harbor seals, Steller sea lions or California sea lions using Jetty A (WDFW 2014).

In the species accounts provided here, we offer a brief introduction to the species and relevant stock as well as available information regarding population trends and threats, and describe any information regarding local occurrence.

**Table 1. Marine Mammal Species Potentially Present in the Project Area**

Species	Stock(s) Abundance Estimate <sup>1</sup>	ESA Status	MMPA* Status	Frequency of Occurrence <sup>3</sup>
Killer Whale ( <i>Orcinus orca</i> ) <i>Eastern N. Pacific, Southern Resident Stock</i>	85	Endangered	Depleted and Strategic	Infrequent/ Rare
Killer Whale ( <i>Orcinus orca</i> ) <i>Eastern N. Pacific, West Coast Transient Stock</i>	243	--	Non-depleted	Rare

Gray Whale ( <i>Eschrichtius robustus</i> ) Eastern North Pacific Stock, (Pacific Coast Feed Group)	18,017 (173)	Delisted/ Recovered (1994)	Non-depleted	Rare
Harbor Porpoise ( <i>Phocoena phocoena</i> ) Northern Oregon/Washington Coast Stock	21,487	--	Non-depleted	Likely
Steller Sea Lion ( <i>Eumetopias jubatus</i> ) Eastern U.S. Stock/DPS**	63,160 – 78,198	Delisted/ Recovered (2013)	Depleted and Strategic <sup>2</sup>	Likely
California Sea Lion ( <i>Zalophus californianus</i> ) U.S. Stock	296,750	--	Non-depleted	Likely
Harbor Seal ( <i>Phoca vitulina richardii</i> ) Oregon and Washington Stock	24,732 <sup>4</sup>	--	Non-depleted	Seasonal

<sup>1</sup> NOAA/NMFS 2014 marine mammal stock assessment reports at <http://www.nmfs.noaa.gov/pr/sars/species.htm>.

<sup>2</sup> May be updated based on the recent delisting status.

<sup>3</sup> Frequency defined here in the range of:

- Rare – Few confirmed sightings, or the distribution of the species is near enough to the area that the species could occur there.
- Infrequent – Confirmed, but irregular sightings.
- Likely – Confirmed and regular sightings of the species in the area year-round.
- Seasonal – Confirmed and regular sightings of the species in the area on a seasonal basis.

<sup>4</sup> Data is 8 years old. No current abundance estimates exist.

\* MMPA = Marine Mammal Protection Act

\*\* DPS = Distinct population segment.

## Cetaceans

### Killer Whale

During construction of the project, it is possible that two killer whale stocks, the Eastern North Pacific Southern resident and Eastern North Pacific West Coast transient stocks could be in the nearshore vicinity of the MCR. However, based on the restrictions to the work window for pile installation, it is unlikely that either West Coast transient or Southern resident killer whales will be present in the area during the period of possible acoustic effects.

Since the first complete census of this stock in 1974 when 71 animals were identified, the number of Southern resident killer whales has fluctuated annually. Between 1974 and 1993 the Southern Resident stock increased approximately 35%, from 71 to 96 individuals (Ford *et al.* 1994), representing a net annual growth rate of 1.8% during those years. Following the peak

census count of 99 animals in 1995, the population size has fluctuated and currently stands at 85 animals as of the 2013 census (Carretta *et al.* 2014).

The Southern resident killer whale population consists of three pods, designated J, K, and L pods, that reside from late spring to fall in the inland waterways of Washington State and British Columbia (NMFS 2008a). During winter, pods have moved into Pacific coastal waters and are known to travel as far south as central California. Winter and early spring movements and distribution are largely unknown for the population. Sightings of members of K and L pods in Oregon (L pod at Depoe Bay in April 1999 and Yaquina Bay in March 2000, unidentified Southern residents at Depoe Bay in April 2000, and members of K and L pods off of the Columbia River) and in California (17 members of L pod and four members of K pod at Monterey Bay in 2000; L pod members at Monterey Bay in March 2003; L pod members near the Farallon Islands in February 2005 and again off Pt. Reyes in January 2006) have considerably extended the Southern limit of their known range (NMFS 2008a). Sightings of Southern resident killer whales off the coast of Washington, Oregon, and California indicate that they are utilizing resources in the California Current ecosystem in contrast to other North Pacific resident pods that exclusively use resources in the Alaskan Gyre system (NMFS 2008a).

During the 2011 Section 7 Endangered Species Act (ESA) consultation, NMFS indicated Southern resident killer whales are known to feed on migrating Chinook salmon in the Columbia River plume during the peak salmon runs in March through April. Anecdotal evidence indicates that orcas historically were somewhat frequent visitors in the vicinity of the estuary, but have been less common in current times (Wilson 2015). However, there is low likelihood of them being in close proximity to any of the pile installation locations, and there would be minimal overlap of their presence during the peak summer construction season. To further avoid any

overlap with Southern resident killer whales use during pile installation, the Corps would limit the pile installation window to start on or after May 1 and end after September 30 of each year to avoid peak adult salmon runs.

Southern Resident killer whales were listed as endangered under the ESA in 2005 and consequently the stock is automatically considered as a “strategic” stock under the MMPA. This stock was considered “depleted” prior to its 2005 listing under the ESA.

The West Coast transient stock ranges from Southeast Alaska to California. Preliminary analysis of photographic data resulted in the following minimum counts for ‘transient’ killer whales belonging to the West Coast Transient Stock (NOAA 2013b). Over the time series from 1975 to 2012, 521 individual transient killer whales have been identified. Of these, 217 are considered part of the poorly known “outer coast” subpopulation and 304 belong to the well-known “inner coast” population. However, of the 304, the number of whales currently alive is not certain. A recent mark-recapture estimate that does not include the “outer coast” subpopulation or whales from California for the west coast transient population resulted in an estimate of 243 in 2006. This estimate applies to the population of West Coast transient whales that occur in the inside waters of southeastern Alaska, British Columbia, and northern Washington. Given that the California transient numbers have not been updated since the publication of the catalogue in 1997 the total number of transient killer whales reported above should be considered as a minimum count for the West Coast transient stock (NOAA 2014a)

For this project, it is possible only the inner-coast species would be considered for potential exposure to acoustic effects. However, they are even less likely to be in the project area than Southern resident killer whales, especially outside of the peak salmon runs. The Corps is avoiding pile installation work during potential peak feeding timeframes in order to further

reduce the potential for acoustic exposure. It is possible, however, that West Coast transients come in to feed on the pinniped population hauled out on the South Jetty.

This stock of killer whales is not designated as “depleted” under the MMPA nor are they listed as “threatened” or “endangered” under the ESA. Furthermore, the West Coast transient stock of killer whales is also not classified as a strategic stock

### *Gray Whale*

During summer and fall, most gray whales in the Eastern North Pacific stock feed in the Chukchi, Beaufort and northwestern Bering Seas. An exception is the relatively small number of whales (approximately 200) that summer and feed along the Pacific coast between Kodiak Island, Alaska and northern California (Carretta *et al.* 2014), also known as the “Pacific Coast Feeding Group.” The minimum population estimate for the Eastern North Pacific stock using the 2006/2007 abundance estimate of 19,126 and its associated coefficient of variation (CV) of 0.071 is 18,017 animals. The minimum population estimate for Pacific Coast Feeding Group gray whales is calculated as the lower 20th percentile of the log-normal distribution of the 2010 mark-recapture estimate, or 173 animals (Carretta *et al.* 2014). If gray whales were in the vicinity of MCR, the Pacific Coast Feeding Group would be the most likely visitor. Anecdotal evidence indicates they have been seen at MCR, but are not a common visitor, as they mostly remain in the vicinity of the offshore shelf-break (Griffith 2015).

In 1994, the Eastern North Pacific stock of gray whales was removed from the Endangered Species List as it was no longer considered “endangered” or “threatened” under the ESA. NMFS has not designated gray whales as “depleted” under the MMPA. The Eastern North Pacific gray whale stock is not classified as “strategic.”

### *Harbor Porpoise*



The harbor porpoise inhabits temperal, subarctic, and arctic waters. In the eastern North Pacific, harbor porpoises range from Point Barrow, Alaska, to Point Conception, California. Harbor porpoise primarily frequent coastal waters and occur most frequently in waters less than 100 m deep (Hobbs and Waite 2010). They may occasionally be found in deeper offshore waters.

Harbor porpoise are known to occur year-round in the inland transboundary waters of Washington and British Columbia, Canada and along the Oregon/Washington coast. Aerial survey data from coastal Oregon and Washington, collected during all seasons, suggest that harbor porpoise distribution varies by depth. Although distinct seasonal changes in abundance along the west coast have been noted, and attributed to possible shifts in distribution to deeper offshore waters during late winter seasonal movement patterns are not fully understood. Harbor porpoises are sighted regularly at the MCR (Griffith 2015, Carretta *et al.* 2014).

According to the online database, Ocean Biogeographic Information System, Spatial Ecological Analysis of Megavertebrate Populations (Halpin 2009 at OBIS-SEAMAP 2015), West Coast populations have more restricted movements and do not migrate as much as East Coast populations. Most harbor porpoise groups are small, generally consisting of less than five or six individuals, though for feeding or migration they may aggregate into large, loose groups of 50 to several hundred animals. Behavior tends to be inconspicuous, compared to most dolphins, and they feed by seizing prey which consists of wide variety of fish and cephalopods ranging from benthic or demersal.

The Northern Oregon/Washington coast stock of harbor porpoise inhabits the waters near the proposed project area. The population estimate for this stock is calculated at 21,847 with a minimum population estimate of 15,123. (Carretta *et al.*, 2014)

Harbor porpoise are not listed as “depleted” under the MMPA, listed as “threatened” or “endangered” under the Endangered Species Act, or classified as “strategic.”

### *Pinnipeds*

#### *Steller Sea Lion*

The Steller sea lion is a pinniped and the largest of the eared seals. Steller sea lion populations that primarily occur east of 144° W (Cape Suckling, Alaska) comprise the Eastern Distinct Population Segment (DPS), which was de-listed and removed from the list of Endangered Species List on November 4, 2013 (78 FR 66140). This stock is found in the vicinity of MCR. The population west of 144° W longitude comprises the Western DPS, which is listed as endangered, based largely on over-fishing of the seal’s food supply.

The range of the Steller sea lion includes the North Pacific Ocean rim from California to northern Japan. Steller sea lions forage in nearshore and pelagic waters where they are opportunistic predators. They feed primarily on a wide variety of fishes and cephalopods. Steller sea lions use terrestrial haulout sites to rest and take refuge. They also gather on well-defined, traditionally used rookeries to pup and breed. These habitats are typically gravel, rocky, or sand beaches; ledges; or rocky reefs (Allen and Angliss, 2013).

The MCR South Jetty is used by Steller sea lions for hauling out and is not designated critical habitat. Use occurs chiefly at the concrete block structure at the terminus, or head of the jetty, and at the emergent rubble mound comprised of the eroding jetty trunk near the terminus.

Previous monthly averages between 1995 and 2004 for Steller sea lions hauled-out at the South Jetty head ranged from about 168 to 1,106 animals. More recent data from ODFW from 2000-2014 reflects a lower frequency of surveys, and numbers ranged from zero animals to 606 Steller sea lions (ODFW 2014). More frequent surveys by WDFW for the same time frame

(2000-2014) put the monthly range at 177 to 1,663 animals throughout the year. According to ODFW (2014), most counts of animals remain at or near the jetty tip.

Steller sea lions are present, in varying abundances, all year as is shown in the Corps application. Abundance is typically lower as the summer progresses when adults are at the breeding rookeries. Steller sea lions are most abundant in the vicinity during the winter months and tend to disperse elsewhere to rookeries during breeding season between May and July. Abundance increases following the breeding season. However, this is not always true as evidenced by a flyover count of the South Jetty on May 23, 2007 where 1,146 Steller sea lions were observed on the concrete block structure and none on the rubble mound (ODFW 2007). Those counts represent a high-use day on the South Jetty. According to ODFW (2014), during the summer months it is not uncommon to have between 500-1,000 Steller sea lions present, the majority of which are immature males and females (no pups or pregnant females). All population age classes, and both males and females, use the South Jetty to haul out. Only non-breeding individuals are typically found on the jetty during May-July, and a greater percentage of juveniles are present. There is probably a lot of turnover in sea lion numbers using the jetty. That is, the 100 or so sea lions hauled out one week might not be the same individuals hauled out the following week. Recent ODFW and WDFW survey data continue to support these findings. The most recent estimate from 2007 put the populations between 63,160 and 78,198.(Allen and Angliss, 2013). The best available information indicates the eastern stock of Steller sea lion increased at a rate of 4.18% per year between 1979 and 2010 based on an analysis of pup counts in California, Oregon, British Columbia and Southeast Alaska (Allen and Angliss, 2013).

*California Sea Lion*

California sea lions are found from the Southern tip of Baja California to southeast Alaska. They breed mainly on offshore islands from Southern California's Channel Islands south to Mexico. Non-breeding males often roam north in spring foraging for food. Since the mid-1980s, increasing numbers of California sea lions have been documented feeding on fish along the Washington coast and – more recently – in the Columbia River as far upstream as Bonneville Dam, 145 miles from the river mouth. The population size of the U.S. stock of California sea lions is estimated at 296,750 animals (Carretta *et al.* 2014). As with Steller sea lions, according to ODFW (2014) most counts of California sea lions are also concentrated near the tip of the jetty, although sometimes haul out about halfway down the jetty. Survey information (2007 and 2014) from ODFW indicates that California sea lions are relatively less prevalent in the Pacific Northwest during June and July, though in the months just before and after their absence there can be several hundred using the South Jetty. More frequent WDFW surveys (2014) indicate greater numbers in the summer, and use remains concentrated to fall and winter months. Nearly all California sea lions in the Pacific Northwest are sub-adult and adult males (females and young generally stay in California). Again, there is probably a lot of turnover in sea lion numbers using the jetty. (ODFW 2014).

California sea lions in the U.S. are not listed as "endangered" or "threatened" under the Endangered Species Act, listed as "depleted" under the MMPA, or classified as "strategic" under the MMPA.

### *Harbor Seal*

Harbor seals range from Baja California, north along the western coasts of the U.S., British Columbia and southeast Alaska, west through the Gulf of Alaska, Prince William Sound, and the Aleutian Islands, and north in the Bering Sea to Cape Newenham and the Pribilof

Islands. They haul out on rocks, reefs, beaches, and drifting glacial ice and feed in marine, estuarine, and occasionally fresh waters. Harbor seals generally are non-migratory, with local movements associated with tides, weather, season, food availability, and reproduction. Harbor seals do not make extensive pelagic migrations, though some long distance movement of tagged animals in Alaska (900 km) and along the U.S. west coast (up to 550 km) have been recorded. Harbor seals have also displayed strong fidelity to haulout sites (Carretta *et al.* 2014).

The 1999 harbor seal population estimate for the Oregon/Washington Coast stock was about 24,732 animals. However, the data used was over 8 years old and, therefore, there are no current abundance estimates. Harbor seals are not considered to be “depleted” under the MMPA or listed as “threatened” or “endangered” under the ESA. The Oregon/Washington Coast stock of harbor seals is not classified as a “strategic” stock (Carretta *et al.* 2014).

Further information on the biology and local distribution of these species can be found in the Corps application available online at:

<http://www.nmfs.noaa.gov/pr/permits/incidental/construction.htm> and the NMFS Marine

Mammal Stock Assessment Reports, which may be found at:

<http://www.nmfs.noaa.gov/pr/species/>.

### **Potential Effects of the Specified Activity on Marine Mammals and Their Habitat**

This section includes a summary and discussion of the ways that stressors, (e.g. pile driving,) and potential mitigation activities, associated with the rehabilitation of Jetty A at MCR may impact marine mammals and their habitat. The *Estimated Take by Incidental Harassment* section later in this document will include an analysis of the number of individuals that are expected to be taken by this activity. The *Negligible Impact Analysis* section will include the analysis of how this specific activity will impact marine mammals and will consider the content

of this section, the *Estimated Take by Incidental Harassment* section, and the *Proposed Mitigation* section to draw conclusions regarding the likely impacts of this activity on the reproductive success or survivorship of individuals and from that on the affected marine mammal populations or stocks. In the following discussion, we provide general background information on sound and marine mammal hearing before considering potential effects to marine mammals from sound produced by vibratory pile driving.

#### *Description of Sound Sources*

Sound travels in waves, the basic components of which are frequency, wavelength, velocity, and amplitude. Frequency is the number of pressure waves that pass by a reference point per unit of time and is measured in hertz (Hz) or cycles per second. Wavelength is the distance between two peaks of a sound wave; lower frequency sounds have longer wavelengths than higher frequency sounds and attenuate (decrease) more rapidly in shallower water. Amplitude is the height of the sound pressure wave or the 'loudness' of a sound and is typically measured using the decibel (dB) scale. A dB is the ratio between a measured pressure (with sound) and a reference pressure (sound at a constant pressure, established by scientific standards). It is a logarithmic unit that accounts for large variations in amplitude; therefore, relatively small changes in dB ratings correspond to large changes in sound pressure. When referring to sound pressure levels (SPLs; the sound force per unit area), sound is referenced in the context of underwater sound pressure to 1 microPascal ( $\mu\text{Pa}$ ). One pascal is the pressure resulting from a force of one newton exerted over an area of one square meter. The source level (SL) represents the sound level at a distance of 1 m from the source (referenced to 1  $\mu\text{Pa}$ ). The received level is the sound level at the listener's position. Note that all underwater sound levels in

this document are referenced to a pressure of 1  $\mu\text{Pa}$  and all airborne sound levels in this document are referenced to a pressure of 20  $\mu\text{Pa}$ .

Root mean square (rms) is the quadratic mean sound pressure over the duration of an impulse. Rms is calculated by squaring all of the sound amplitudes, averaging the squares, and then taking the square root of the average (Urlick, 1983). Rms accounts for both positive and negative values; squaring the pressures makes all values positive so that they may be accounted for in the summation of pressure levels (Hastings and Popper, 2005). This measurement is often used in the context of discussing behavioral effects, in part because behavioral effects, which often result from auditory cues, may be better expressed through averaged units than by peak pressures.

When underwater objects vibrate or activity occurs, sound-pressure waves are created. These waves alternately compress and decompress the water as the sound wave travels. Underwater sound waves radiate in all directions away from the source (similar to ripples on the surface of a pond), except in cases where the source is directional. The compressions and decompressions associated with sound waves are detected as changes in pressure by aquatic life and man-made sound receptors such as hydrophones.

Even in the absence of sound from the specified activity, the underwater environment is typically loud due to ambient sound. Ambient sound is defined as environmental background sound levels lacking a single source or point (Richardson *et al.*, 1995), and the sound level of a region is defined by the total acoustical energy being generated by known and unknown sources. These sources may include physical (e.g., waves, earthquakes, ice, atmospheric sound), biological (e.g., sounds produced by marine mammals, fish, and invertebrates), and

anthropogenic sound (e.g., vessels, dredging, aircraft, construction). A number of sources contribute to ambient sound, including the following (Richardson *et al.*, 1995):

- Wind and waves: The complex interactions between wind and water surface, including processes such as breaking waves and wave-induced bubble oscillations and cavitation, are a main source of naturally occurring ambient noise for frequencies between 200 Hz and 50 kHz (Mitson, 1995). In general, ambient sound levels tend to increase with increasing wind speed and wave height. Surf noise becomes important near shore, with measurements collected at a distance of 8.5 km from shore showing an increase of 10 dB in the 100 to 700 Hz band during heavy surf conditions.
- Precipitation: Sound from rain and hail impacting the water surface can become an important component of total noise at frequencies above 500 Hz, and possibly down to 100 Hz during quiet times.
- Biological: Marine mammals can contribute significantly to ambient noise levels, as can some fish and shrimp. The frequency band for biological contributions is from approximately 12 Hz to over 100 kHz.
- Anthropogenic: Sources of ambient noise related to human activity include transportation (surface vessels and aircraft), dredging and construction, oil and gas drilling and production, seismic surveys, sonar, explosions, and ocean acoustic studies. Shipping noise typically dominates the total ambient noise for frequencies between 20 and 300 Hz. In general, the frequencies of anthropogenic sounds are below 1 kHz and, if higher frequency sound levels are created, they attenuate rapidly (Richardson *et al.*, 1995). Sound from identifiable anthropogenic sources other than the activity of interest (e.g., a



passing vessel) is sometimes termed background sound, as opposed to ambient sound.

Representative levels of anthropogenic sound are displayed in Table 2.

The sum of the various natural and anthropogenic sound sources at any given location and time—which comprise “ambient” or “background” sound—depends not only on the source levels (as determined by current weather conditions and levels of biological and shipping activity) but also on the ability of sound to propagate through the environment. In turn, sound propagation is dependent on the spatially and temporally varying properties of the water column and sea floor, and is frequency-dependent. As a result of the dependence on a large number of varying factors, ambient sound levels can be expected to vary widely over both coarse and fine spatial and temporal scales. Sound levels at a given frequency and location can vary by 10-20 dB from day to day (Richardson *et al.*, 1995). The result is that, depending on the source type and its intensity, sound from the specified activity may be a negligible addition to the local environment or could form a distinctive signal that may affect marine mammals.

Table 2—Representative Sound Levels of Anthropogenic Sources

Sound source	Frequency range (Hz)	Underwater sound level	Reference
Small vessels	250-1,000	151 dB rms at 1 m	Richardson <i>et al.</i> , 1995.
Tug docking gravel barge	200-1,000	149 dB rms at 100 m	Blackwell and Greene, 2002.
Vibratory driving of 72-in steel pipe pile	10-1,500	180 dB rms at 10 m	Reyff, 2007.
Impact driving of 36-in steel pipe pile	10-1,500	195 dB rms at 10 m	Laughlin, 2007.

Impact driving of 66-in cast-in-steel-shell (CISS) pile	10-1,500	195 dB rms at 10 m	Reviewed in Hastings and Popper, 2005.
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In-water construction activities associated with the project include vibratory pile driving and removal. There are two general categories of sound types: Impulse and non-pulse (defined in the following). Vibratory pile driving is considered to be continuous or non-pulsed while impact pile driving is considered to be an impulse or pulsed sound type. The distinction between these two sound types is important because they have differing potential to cause physical effects, particularly with regard to hearing (e.g., Ward, 1997 in Southall *et al.*, 2007). Please see Southall *et al.*, (2007) for an in-depth discussion of these concepts. Note that information related to impact hammers is included here for comparison. The Corps does not intend to employ the use of impact hammers as part of this proposed project. Pulsed sound sources (e.g., explosions, gunshots, sonic booms, impact pile driving) produce signals that are brief (typically considered to be less than one second), broadband, atonal transients (ANSI, 1986; Harris, 1998; NIOSH, 1998; ISO, 2003; ANSI, 2005) and occur either as isolated events or repeated in some succession. Pulsed sounds are all characterized by a relatively rapid rise from ambient pressure to a maximal pressure value followed by a rapid decay period that may include a period of diminishing, oscillating maximal and minimal pressures, and generally have an increased capacity to induce physical injury as compared with sounds that lack these features.

Non-pulsed sounds can be tonal, narrowband, or broadband, brief or prolonged, and may be either continuous or non-continuous (ANSI, 1995; NIOSH, 1998). Some of these non-pulsed sounds can be transient signals of short duration but without the essential properties of pulses

(e.g., rapid rise time). Examples of non-pulsed sounds include those produced by vessels, aircraft, machinery operations such as drilling or dredging, vibratory pile driving, and active sonar systems (such as those used by the U.S. Navy). The duration of such sounds, as received at a distance, can be greatly extended in a highly reverberant environment.

The likely or possible impacts of the proposed pile driving program in the MCR area on marine mammals could involve both non-acoustic and acoustic stressors. Potential non-acoustic stressors could result from the physical presence of the equipment and personnel. Any impacts to marine mammals are expected to primarily be acoustic in nature. Acoustic stressors could include effects of heavy equipment operation, dredging and disposal actions, and pile installation at Jetty A.

#### *Marine Mammal Hearing*

When considering the influence of various kinds of sound on the marine environment, it is necessary to understand that different kinds of marine life are sensitive to different frequencies of sound. Based on available behavioral data, audiograms have been derived using auditory evoked potentials, anatomical modeling, and other data, Southall *et al.* (2007) designate “functional hearing groups” for marine mammals and estimate the lower and upper frequencies of functional hearing of the groups. The functional groups and the associated frequencies are indicated below (though animals are less sensitive to sounds at the outer edge of their functional range and most sensitive to sounds of frequencies within a smaller range somewhere in the middle of their functional hearing range):

- Low frequency cetaceans (13 species of mysticetes): functional hearing is estimated to occur between approximately 7 Hz and 30 kHz;

- Mid-frequency cetaceans (32 species of dolphins, six species of larger toothed whales, and 19 species of beaked and bottlenose whales): functional hearing is estimated to occur between approximately 150 Hz and 160 kHz;
- High frequency cetaceans (eight species of true porpoises, six species of river dolphins, Kogia, the franciscana, and four species of cephalorhynchids): functional hearing is estimated to occur between approximately 200 Hz and 180 kHz;
- Phocid pinnipeds in Water: functional hearing is estimated to occur between approximately 75 Hz and 75 kHz; and
- Otariid pinnipeds in Water: functional hearing is estimated to occur between approximately 100 Hz and 40 kHz.

As mentioned previously in this document, nine marine mammal species (seven cetacean and two pinniped) may occur in the project area. Of the three cetacean species likely to occur in the proposed project area, one is classified as low-frequency cetaceans (i.e., minke), one is classified as a mid-frequency cetacean (i.e., killer whale), and one is classified as a high-frequency cetaceans (i.e., harbor porpoise) (Southall *et al.*, 2007). Additionally, harbor seals are classified as members of the phocid pinnipeds in water functional hearing group while Stellar sea lions and California sea lions are grouped under the Otariid pinnipeds in water functional hearing group. A species' functional hearing group is a consideration when we analyze the effects of exposure to sound on marine mammals.

### *Acoustic Impacts*

Potential Effects of Pile Driving Sound—The effects of sounds from pile driving might result in one or more of the following: temporary or permanent hearing impairment, non-auditory physical or physiological effects, behavioral disturbance, and masking (Richardson *et al.*, 1995;

Gordon *et al.*, 2004; Nowacek *et al.*, 2007; Southall *et al.*, 2007). The effects of pile driving on marine mammals are dependent on several factors, including the size, type, and depth of the animal; the depth, intensity, and duration of the pile driving sound; the depth of the water column; the substrate of the habitat; the standoff distance between the pile and the animal; and the sound propagation properties of the environment. Impacts to marine mammals from pile driving activities are expected to result primarily from acoustic pathways. As such, the degree of effect is intrinsically related to the received level and duration of the sound exposure, which are in turn influenced by the distance between the animal and the source. The further away from the source, the less intense the exposure should be. The substrate and depth of the habitat affect the sound propagation properties of the environment. Shallow environments are typically more structurally complex, which leads to rapid sound attenuation. In addition, substrates that are soft (e.g., sand) would absorb or attenuate the sound more readily than hard substrates (e.g., rock) which may reflect the acoustic wave. Soft porous substrates would also likely require less time to drive the pile, and possibly less forceful equipment, which would ultimately decrease the intensity of the acoustic source.

In the absence of mitigation, impacts to marine species would be expected to result from physiological and behavioral responses to both the type and strength of the acoustic signature (Viada *et al.*, 2008). The type and severity of behavioral impacts are more difficult to define due to limited studies addressing the behavioral effects of impulse sounds on marine mammals. Potential effects from impulse sound sources can range in severity from effects such as behavioral disturbance or tactile perception to physical discomfort, slight injury of the internal organs and the auditory system, or mortality (Yelverton *et al.*, 1973).

Hearing Impairment and Other Physical Effects—Marine mammals exposed to high intensity sound repeatedly or for prolonged periods can experience hearing threshold shift (TS), which is the loss of hearing sensitivity at certain frequency ranges (Kastak *et al.*, 1999; Schlundt *et al.*, 2000; Finneran *et al.*, 2002, 2005). TS can be permanent (PTS), in which case the loss of hearing sensitivity is not recoverable, or temporary (TTS), in which case the animal's hearing threshold would recover over time (Southall *et al.*, 2007). Marine mammals depend on acoustic cues for vital biological functions, (e.g., orientation, communication, finding prey, avoiding predators); thus, TTS may result in reduced fitness in survival and reproduction. However, this depends on the frequency and duration of TTS, as well as the biological context in which it occurs. TTS of limited duration, occurring in a frequency range that does not coincide with that used for recognition of important acoustic cues, would have little to no effect on an animal's fitness. Repeated sound exposure that leads to TTS could cause PTS. PTS constitutes injury, but TTS does not (Southall *et al.*, 2007). The following subsections discuss in somewhat more detail the possibilities of TTS, PTS, and non-auditory physical effects.

Temporary Threshold Shift—TTS is the mildest form of hearing impairment that can occur during exposure to a strong sound (Kryter, 1985). While experiencing TTS, the hearing threshold rises, and a sound must be stronger in order to be heard. In terrestrial mammals, TTS can last from minutes or hours to days (in cases of strong TTS). For sound exposures at or somewhat above the TTS threshold, hearing sensitivity in both terrestrial and marine mammals recovers rapidly after exposure to the sound ends. Few data on sound levels and durations necessary to elicit mild TTS have been obtained for marine mammals, and none of the published data concern TTS elicited by exposure to multiple pulses of sound. Available data on TTS in marine mammals are summarized in Southall *et al.* (2007).

Given the available data, the received level of a single pulse (with no frequency weighting) might need to be approximately 186 dB re 1  $\mu\text{Pa}^2\text{-s}$  (i.e., 186 dB sound exposure level [SEL] or approximately 221-226 dB p-p [peak]) in order to produce brief, mild TTS. Exposure to several strong pulses that each have received levels near 190 dB rms (175-180 dB SEL) might result in cumulative exposure of approximately 186 dB SEL and thus slight TTS in a small odontocete, assuming the TTS threshold is (to a first approximation) a function of the total received pulse energy.

The above TTS information for odontocetes is derived from studies on the bottlenose dolphin (*Tursiops truncatus*) and beluga whale (*Delphinapterus leucas*). There is no published TTS information for other species of cetaceans. However, preliminary evidence from a harbor porpoise exposed to pulsed sound suggests that its TTS threshold may have been lower (Lucke *et al.*, 2009). As summarized above, data that are now available imply that TTS is unlikely to occur unless odontocetes are exposed to pile driving pulses stronger than 180 dB re 1  $\mu\text{Pa}$  rms.

**Permanent Threshold Shift**—When PTS occurs, there is physical damage to the sound receptors in the ear. In severe cases, there can be total or partial deafness, while in other cases the animal has an impaired ability to hear sounds in specific frequency ranges (Kryter, 1985). There is no specific evidence that exposure to pulses of sound can cause PTS in any marine mammal. However, given the possibility that mammals close to a sound source can incur TTS, it is possible that some individuals might incur PTS. Single or occasional occurrences of mild TTS are not indicative of permanent auditory damage, but repeated or (in some cases) single exposures to a level well above that causing TTS onset might elicit PTS.

Relationships between TTS and PTS thresholds have not been studied in marine mammals but are assumed to be similar to those in humans and other terrestrial mammals, based

on anatomical similarities. PTS might occur at a received sound level at least several decibels above that inducing mild TTS if the animal were exposed to strong sound pulses with rapid rise time. Based on data from terrestrial mammals, a precautionary assumption is that the PTS threshold for impulse sounds (such as pile driving pulses as received close to the source) is at least 6 dB higher than the TTS threshold on a peak-pressure basis and probably greater than 6 dB (Southall *et al.*, 2007). On an SEL basis, Southall *et al.* (2007) estimated that received levels would need to exceed the TTS threshold by at least 15 dB for there to be risk of PTS. Thus, for cetaceans, Southall *et al.* (2007) estimate that the PTS threshold might be an M-weighted SEL (for the sequence of received pulses) of approximately 198 dB re 1  $\mu\text{Pa}^2\text{-s}$  (15 dB higher than the TTS threshold for an impulse). Given the higher level of sound necessary to cause PTS as compared with TTS, it is considerably less likely that PTS could occur.

Measured source levels from impact pile driving can be as high as 214 dB rms. Although no marine mammals have been shown to experience TTS or PTS as a result of being exposed to pile driving activities, captive bottlenose dolphins and beluga whales exhibited changes in behavior when exposed to strong pulsed sounds (Finneran *et al.*, 2000, 2002, 2005). The animals tolerated high received levels of sound before exhibiting aversive behaviors. Experiments on a beluga whale showed that exposure to a single watergun impulse at a received level of 207 kPa (30 psi) p-p, which is equivalent to 228 dB p-p, resulted in a 7 and 6 dB TTS in the beluga whale at 0.4 and 30 kHz, respectively. Thresholds returned to within 2 dB of the pre-exposure level within four minutes of the exposure (Finneran *et al.*, 2002). Although the source level of pile driving from one hammer strike is expected to be much lower than the single watergun impulse cited here, animals being exposed for a prolonged period to repeated hammer strikes could receive more sound exposure in terms of SEL than from the single watergun impulse (estimated



at 188 dB re 1  $\mu\text{Pa}^2\text{-s}$ ) in the aforementioned experiment (Finneran *et al.*, 2002). However, in order for marine mammals to experience TTS or PTS, the animals have to be close enough to be exposed to high intensity sound levels for a prolonged period of time. Based on the best scientific information available, these SPLs are far below the thresholds that could cause TTS or the onset of PTS.

**Non-auditory Physiological Effects**—Non-auditory physiological effects or injuries that theoretically might occur in marine mammals exposed to strong underwater sound include stress, neurological effects, bubble formation, resonance effects, and other types of organ or tissue damage (Cox *et al.*, 2006; Southall *et al.*, 2007). Studies examining such effects are limited. In general, little is known about the potential for pile driving to cause auditory impairment or other physical effects in marine mammals. Available data suggest that such effects, if they occur at all, would presumably be limited to short distances from the sound source and to activities that extend over a prolonged period. The available data do not allow identification of a specific exposure level above which non-auditory effects can be expected (Southall *et al.*, 2007) or any meaningful quantitative predictions of the numbers (if any) of marine mammals that might be affected in those ways. Marine mammals that show behavioral avoidance of pile driving, including some odontocetes and some pinnipeds, are especially unlikely to incur auditory impairment or non-auditory physical effects.

#### *Disturbance Reactions*

Disturbance includes a variety of effects, including subtle changes in behavior, more conspicuous changes in activities, and displacement. Behavioral responses to sound are highly variable and context-specific and reactions, if any, depend on species, state of maturity,

experience, current activity, reproductive state, auditory sensitivity, time of day, and many other factors (Richardson *et al.*, 1995; Wartzok *et al.*, 2003; Southall *et al.*, 2007).

Habituation can occur when an animal's response to a stimulus wanes with repeated exposure, usually in the absence of unpleasant associated events (Wartzok *et al.*, 2003). Animals are most likely to habituate to sounds that are predictable and unvarying. The opposite process is sensitization, when an unpleasant experience leads to subsequent responses, often in the form of avoidance, at a lower level of exposure. Behavioral state may affect the type of response as well. For example, animals that are resting may show greater behavioral change in response to disturbing sound levels than animals that are highly motivated to remain in an area for feeding (Richardson *et al.*, 1995; NRC, 2003; Wartzok *et al.*, 2003).

Controlled experiments with captive marine mammals showed pronounced behavioral reactions, including avoidance of loud sound sources (Ridgway *et al.*, 1997; Finneran *et al.*, 2003). Observed responses of wild marine mammals to loud pulsed sound sources (typically seismic guns or acoustic harassment devices, but also including pile driving) have been varied but often consist of avoidance behavior or other behavioral changes suggesting discomfort (Morton and Symonds, 2002; Thorson and Reyff, 2006; see also Gordon *et al.*, 2004; Wartzok *et al.*, 2003; Nowacek *et al.*, 2007). Responses to continuous sound, such as vibratory pile installation, have not been documented as well as responses to pulsed sounds.

With both types of pile driving, it is likely that the onset of pile driving could result in temporary, short term changes in an animal's typical behavior and/or avoidance of the affected area. These behavioral changes may include (Richardson *et al.*, 1995): changing durations of surfacing and dives, number of blows per surfacing, or moving direction and/or speed; reduced/increased vocal activities; changing/cessation of certain behavioral activities (such as

socializing or feeding); visible startle response or aggressive behavior (such as tail/fluke slapping or jaw clapping); avoidance of areas where sound sources are located; and/or flight responses (e.g., pinnipeds flushing into water from haul-outs or rookeries). Pinnipeds may increase their haul-out time, possibly to avoid in-water disturbance (Thorson and Reyff, 2006).

The biological significance of many of these behavioral disturbances is difficult to predict, especially if the detected disturbances appear minor. However, the consequences of behavioral modification could be expected to be biologically significant if the change affects growth, survival, or reproduction. Significant behavioral modifications that could potentially lead to effects on growth, survival, or reproduction include:

- Drastic changes in diving/surfacing patterns (such as those thought to cause beaked whale stranding due to exposure to military mid-frequency tactical sonar);
- Habitat abandonment due to loss of desirable acoustic environment; and
- Cessation of feeding or social interaction.

The onset of behavioral disturbance from anthropogenic sound depends on both external factors (characteristics of sound sources and their paths) and the specific characteristics of the receiving animals (hearing, motivation, experience, demography) and is difficult to predict (Southall *et al.*, 2007).

**Auditory Masking** - Natural and artificial sounds can disrupt behavior by masking, or interfering with, a marine mammal's ability to hear other sounds. Masking occurs when the receipt of a sound is interfered with by another coincident sound at similar frequencies and at similar or higher levels. Chronic exposure to excessive, though not high-intensity, sound could cause masking at particular frequencies for marine mammals that utilize sound for vital biological functions. Masking can interfere with detection of acoustic signals such as

communication calls, echolocation sounds, and environmental sounds important to marine mammals. Therefore, under certain circumstances, marine mammals whose acoustical sensors or environment are being severely masked could also be impaired from maximizing their performance fitness in survival and reproduction. If the coincident (masking) sound were anthropogenic, it could be potentially harassing if it disrupted hearing-related behavior. It is important to distinguish TTS and PTS, which persist after the sound exposure, from masking, which occurs only during the sound exposure. Because masking (without resulting in TS) is not associated with abnormal physiological function, it is not considered a physiological effect, but rather a potential behavioral effect.

Masking occurs at the frequency band which the animals utilize so the frequency range of the potentially masking sound is important in determining any potential behavioral impacts. Because sound generated from in-water vibratory pile driving is mostly concentrated at low frequency ranges, it may have less effect on high frequency echolocation sounds made by porpoises. However, lower frequency man-made sounds are more likely to affect detection of communication calls and other potentially important natural sounds such as surf and prey sound. It may also affect communication signals when they occur near the sound band and thus reduce the communication space of animals (e.g., Clark *et al.*, 2009) and cause increased stress levels (e.g., Foote *et al.*, 2004; Holt *et al.*, 2009).

Masking has the potential to impact species at the population or community levels as well as at individual levels. Masking affects both senders and receivers of the signals and can potentially have long-term chronic effects on marine mammal species and populations. Recent research suggests that low frequency ambient sound levels have increased by as much as 20 dB (more than three times in terms of SPL) in the world's ocean from pre-industrial periods, and that

most of these increases are from distant shipping (Hildebrand, 2009). All anthropogenic sound sources, such as those from vessel traffic, pile driving, and dredging activities, contribute to the elevated ambient sound levels, thus intensifying masking.

Vibratory pile driving is relatively short-term, with rapid oscillations occurring for 10 to 30 minutes per installed pile. It is possible that vibratory pile driving resulting from this proposed action may mask acoustic signals important to the behavior and survival of marine mammal species, but the short-term duration and limited affected area would result in insignificant impacts from masking. Any masking event that could possibly rise to Level B harassment under the MMPA would occur concurrently within the zones of behavioral harassment already estimated for vibratory pile driving, and which have already been taken into account in the exposure analysis.

Acoustic Effects, Airborne - Marine mammals that occur in the project area could be exposed to airborne sounds associated with pile driving that have the potential to cause harassment, depending on their distance from pile driving activities. Airborne pile driving sound would have less impact on cetaceans than pinnipeds because sound from atmospheric sources does not transmit well underwater (Richardson *et al.*, 1995); thus, airborne sound would only be an issue for pinnipeds either hauled-out or looking with heads above water in the project area. Most likely, airborne sound would cause behavioral responses similar to those discussed above in relation to underwater sound. For instance, anthropogenic sound could cause hauled-out pinnipeds to exhibit changes in their normal behavior, such as reduction in vocalizations, or cause them to temporarily abandon their habitat and move further from the source. Studies by Blackwell *et al.* (2004) and Moulton *et al.* (2005) indicate a tolerance or lack of response to unweighted airborne sounds as high as 112 dB peak and 96 dB rms. However, since there are no

haulout areas in the immediate vicinity of Jetty A, pinnipeds are unlikely to be disturbed by airborne acoustics associated with pile driving activities. Therefore, such impacts will not be considered as part of the analysis

#### *Vessel Interaction*

Besides being susceptible to vessel strikes, cetacean and pinniped responses to vessels may result in behavioral changes, including greater variability in the dive, surfacing, and respiration patterns; changes in vocalizations; and changes in swimming speed or direction (NRC 2003). There will be a temporary and localized increase in vessel traffic during construction. A maximum of three work barges will be present at any time during the in-water and over water work. The barges will be located near each other where construction is occurring

#### **Potential Effects on Marine Mammal Habitat**

The primary potential impacts to marine mammal habitat are associated with elevated sound levels produced by vibratory and impact pile driving and removal in the area. However, other potential impacts to the surrounding habitat from physical disturbance are also possible.

*Potential Pile Driving Effects on Prey* - Construction activities would produce continuous (i.e., vibratory pile driving) sounds. Fish react to sounds that are especially strong and/or intermittent low-frequency sounds. Short duration, sharp sounds can cause overt or subtle changes in fish behavior and local distribution. Hastings and Popper (2005) identified several studies that suggest fish may relocate to avoid certain areas of sound energy. Additional studies have documented effects of pile driving on fish, although several are based on studies in support of large, multiyear bridge construction projects (e.g., Scholik and Yan, 2001, 2002; Popper and

Hastings, 2009). Sound pulses at received levels of 160 dB may cause subtle changes in fish behavior. SPLs of 180 dB may cause noticeable changes in behavior (Pearson *et al.*, 1992; Skalski *et al.*, 1992). SPLs of sufficient strength have been known to cause injury to fish and fish mortality. The most likely impact to fish from pile driving activities at the project area would be temporary behavioral avoidance of the area. The duration of fish avoidance of this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated. Additionally, NMFS 2011 Biological Opinion indicated that no adverse effects were anticipated for critical habitat of prey species for marine mammals. In general, impacts to marine mammal prey species are expected to be minor and temporary due to the short timeframe for the project.

*Effects to Foraging Habitat* - Pile installation may temporarily increase turbidity resulting from suspended sediments. Any increases would be temporary, localized, and minimal. The Corps must comply with state water quality standards during these operations by limiting the extent of turbidity to the immediate project area. In general, turbidity associated with pile installation is localized to about a 25-foot radius around the pile (Everitt *et al.* 1980). Cetaceans are not expected to be close enough to the project pile driving areas to experience effects of turbidity, and any pinnipeds will be transiting the terminal area and could avoid localized areas of turbidity. Therefore, the impact from increased turbidity levels is expected to be discountable to marine mammals. Furthermore, pile driving and removal at the project site will not obstruct movements or migration of marine mammals.

Natural tidal currents and flow patterns in MCR waters routinely disturb sediments. High volume tidal events can result in hydraulic forces that re-suspend benthic sediments, temporarily

elevating turbidity locally. Any temporary increase in turbidity as a result of the proposed action is not anticipated to measurably exceed levels caused by these normal, natural periods.

### **Proposed Mitigation**

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, “and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking” for certain subsistence uses.

For the proposed project, the Corps worked with NMFS and proposed the following mitigation measures to minimize the potential impacts to marine mammals in the project vicinity. The primary purposes of these mitigation measures are to minimize sound levels from the activities, and to monitor marine mammals within designated zones of influence corresponding to NMFS’ current Level A and B harassment thresholds which are depicted in Table 3 found later in the *Estimated Take by Incidental Harassment* section.

The Corps committed to the use of vibratory hammers for pile installation and will implement a soft-start procedure. In order to avoid exposure of Southern resident killer whales (*Orcinus orca*) the Corps also is limiting the installation window to on or after May 1 and will avoid installation or removal after September 30

*Monitoring Protocols* – Monitoring would be conducted before, during, and after pile driving and removal activities. In addition, observers shall record all incidents of marine mammal occurrence, regardless of distance from activity, and shall document any behavioral reactions in concert with distance from piles being driven. Observations made outside the shutdown zone will not result in shutdown; that pile segment would be completed without



cessation, unless the animal approaches or enters the shutdown zone, at which point all pile driving activities would be halted. Monitoring will take place from 15 minutes prior to initiation through thirty minutes post-completion of pile driving activities. Pile driving activities include the time to remove a single pile or series of piles, as long as the time elapsed between uses of the pile driving equipment is no more than thirty minutes. Please see Section 13 of the Application for details on the marine mammal monitoring plan developed by the Corps with NMFS' cooperation.

The following additional measures apply to visual monitoring:

(1) Monitoring will be conducted by qualified observers, who will be placed at the best vantage point(s) practicable to monitor for marine mammals and implement shutdown/delay procedures when applicable by calling for the shutdown to the hammer operator. These vantage points include Jett A or the barge. Qualified observers are trained biologists, with the following minimum qualifications:

(a) Visual acuity in both eyes (correction is permissible) sufficient for discernment of moving targets at the water's surface with ability to estimate target size and distance; use of binoculars may be necessary to correctly identify the target;

(b) Advanced education in biological science or related field (undergraduate degree or higher required);

(c) Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience);

(d) Experience or training in the field identification of marine mammals, including the identification of behaviors;

(e) Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;

(f) Writing skills sufficient to prepare a report of observations including but not limited to the number and species of marine mammals observed; dates and times when in-water construction activities were conducted; dates and times when in-water construction activities were suspended to avoid potential incidental injury from construction sound of marine mammals observed within a defined shutdown zone; and marine mammal behavior; and

(g) Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.

(2) Prior to the start of pile driving activity, the shutdown zone will be monitored for 15 minutes to ensure that it is clear of marine mammals. Pile driving will only commence once observers have declared the shutdown zone clear of marine mammals; animals will be allowed to remain in the shutdown zone (i.e., must leave of their own volition) and their behavior will be monitored and documented. The shutdown zone may only be declared clear, and pile driving started, when the entire shutdown zone is visible (i.e., when not obscured by dark, rain, fog, etc.). In addition, if such conditions should arise during impact pile driving that is already underway, the activity would be halted.

If a marine mammal approaches or enters the shutdown zone during the course of pile driving operations, activity will be halted and delayed until either the animal has voluntarily left and been visually confirmed beyond the shutdown zone or 15 minutes have passed without re-detection of the animal. Monitoring will be conducted throughout the time required to drive a pile.

*Soft Start* - The use of a soft start procedure is believed to provide additional protection to marine mammals by warning or providing a chance to leave the area prior to the hammer operating at full capacity, and typically involves a requirement to initiate sound from the hammer at reduced energy followed by a waiting period. This procedure is repeated two additional times. It is difficult to specify the reduction in energy for any given hammer because of variation across drivers. The project will utilize soft start techniques for all vibratory pile driving. We require the Corps to initiate sound from vibratory hammers for fifteen seconds at reduced energy followed by a thirty-second waiting period, with the procedure repeated two additional times. Soft start will be required at the beginning of each day's pile driving work and at any time following a cessation of pile driving of 20 minutes or longer.

In addition to the measures described later in this section, the Corps would employ the following standard mitigation measures:

(a) Conduct briefings between construction supervisors and crews, marine mammal monitoring team, and Corps staff prior to the start of all pile driving activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

(b) For in-water heavy machinery work other than pile driving (using, e.g., standard barges, tug boats, barge-mounted excavators, or clamshell equipment used to place or remove material), if a marine mammal comes within 10 m, operations shall cease and vessels shall reduce speed to the minimum level required to maintain steerage and safe working conditions. This type of work could include the following activities: (1) movement of the barge to the pile location or (2) positioning of the pile on the substrate via a crane (i.e., stabbing the pile).

#### *Monitoring and Shutdown for Pile Driving*

The following measures would apply to the Corps' mitigation through shutdown and disturbance zones:

*Shutdown Zone* – For all pile driving activities, the Corps will establish a shutdown zone. Shutdown zones are intended to contain the area in which SPLs equal or exceed the 180/190 dB rms acoustic injury criteria, with the purpose being to define an area within which shutdown of activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area), thus preventing injury of marine mammals. The estimated shutdown zone for Level A injury to cetaceans would be 1 meter. The Corps, however, would implement a minimum shutdown zone of 10 m radius for all marine mammals around all vibratory pile driving and removal activities. These precautionary measures are intended to further reduce the unlikely possibility of injury from direct physical interaction with construction operations.

*Disturbance Zone* – Disturbance zones are the areas in which sound pressure levels (SPLs) equal or exceed 120 dB rms (for continuous sound) for pile driving installation and removal. Disturbance zones provide utility for monitoring conducted for mitigation purposes (i.e., shutdown zone monitoring) by establishing monitoring protocols for areas adjacent to the shutdown zones. Monitoring of disturbance zones enables observers to be aware of and communicate the presence of marine mammals in the project area but outside the shutdown zone and thus prepare for potential shutdowns of activity. However, the primary purpose of disturbance zone monitoring is for documenting incidents of Level B harassment; disturbance zone monitoring is discussed in greater detail later (see “Proposed Monitoring and Reporting”). Nominal radial distances for disturbance zones are shown in Table 4 later in this notice. The shutdown zone for Level B injury would extend 7,356 meters from the sound source. Given the size of the disturbance zone for vibratory pile driving, it is impossible to guarantee that all

animals would be observed or to make comprehensive observations of fine-scale behavioral reactions to sound. We discuss monitoring objectives and protocols in greater depth in “Proposed Monitoring and Reporting.”

In order to document observed incidents of harassment, monitors record all marine mammal observations, regardless of location. The observer’s location, as well as the location of the pile being driven, is known from a GPS. The location of the animal is estimated as a distance from the observer, which is then compared to the location from the pile and the estimated zone of influence (ZOI) for relevant activities (i.e., pile installation and removal). This information may then be used to extrapolate observed takes to reach an approximate understanding of actual total takes.

*Time Restrictions* - Work would occur only during daylight hours, when visual monitoring of marine mammals can be conducted. In order minimize impact to Southern resident killer whales, in-water work will not be conducted during their primary feeding season extending from October 1 until on or after May 1. Installation could occur from May 1 through September 30 each year.

#### *Mitigation Conclusions*

NMFS has carefully evaluated the applicant’s proposed mitigation measures and considered a range of other measures in the context of ensuring that NMFS prescribes the means of affecting the least practicable impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included consideration of the following factors in relation to one another:

- The manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals

- The proven or likely efficacy of the specific measure to minimize adverse impacts as planned
- The practicability of the measure for applicant implementation,

Any mitigation measure(s) prescribed by NMFS should be able to accomplish, have a reasonable likelihood of accomplishing (based on current science), or contribute to the accomplishment of one or more of the general goals listed below:

1. Avoidance or minimization of injury or death of marine mammals wherever possible (goals 2, 3, and 4 may contribute to this goal).
2. A reduction in the numbers of marine mammals (total number or number at biologically important time or location) exposed to received levels of pile driving, or other activities expected to result in the take of marine mammals (this goal may contribute to 1, above, or to reducing harassment takes only).
3. A reduction in the number of times (total number or number at biologically important time or location) individuals would be exposed to received levels of pile driving, or other activities expected to result in the take of marine mammals (this goal may contribute to 1, above, or to reducing harassment takes only).
4. A reduction in the intensity of exposures (either total number or number at biologically important time or location) to received levels of pile driving, or other activities expected to result in the take of marine mammals (this goal may contribute to a, above, or to reducing the severity of harassment takes only).

5. Avoidance or minimization of adverse effects to marine mammal habitat, paying special attention to the food base, activities that block or limit passage to or from biologically important areas, permanent destruction of habitat, or temporary destruction/disturbance of habitat during a biologically important time.
6. For monitoring directly related to mitigation – an increase in the probability of detecting marine mammals, thus allowing for more effective implementation of the mitigation.

Based on our evaluation of the applicant's proposed measures, as well as other measures considered by NMFS, NMFS has preliminarily determined that the proposed mitigation measures provide the means of effecting the least practicable impact on marine mammals species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

### **Proposed Monitoring and Reporting**

In order to issue an ITA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth, "requirements pertaining to the monitoring and reporting of such taking." The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for incidental take authorizations (ITAs) must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area.

Monitoring measures prescribed by NMFS should accomplish one or more of the following general goals:

1. An increase in the probability of detecting marine mammals, both within the mitigation zone (thus allowing for more effective implementation of the mitigation) and in general to generate more data to contribute to the analyses mentioned below;

2. An increase in our understanding of how many marine mammals are likely to be exposed to levels of pile driving that we associate with specific adverse effects, such as behavioral harassment, TTS, or PTS;

3. An increase in our understanding of how marine mammals respond to stimuli expected to result in take and how anticipated adverse effects on individuals (in different ways and to varying degrees) may impact the population, species, or stock (specifically through effects on annual rates of recruitment or survival) through any of the following methods:

- Behavioral observations in the presence of stimuli compared to observations in the absence of stimuli (need to be able to accurately predict received level, distance from source, and other pertinent information);
- Physiological measurements in the presence of stimuli compared to observations in the absence of stimuli (need to be able to accurately predict received level, distance from source, and other pertinent information);
- Distribution and/or abundance comparisons in times or areas with concentrated stimuli versus times or areas without stimuli;

4. An increased knowledge of the affected species; and

5. An increase in our understanding of the effectiveness of certain mitigation and monitoring measures.

The Corps submitted a marine mammal monitoring plan as part of the IHA application for this project, which can be found at



[www.nmfs.noaa.gov/pr/permits/incidental/construction.htm](http://www.nmfs.noaa.gov/pr/permits/incidental/construction.htm). The plan may be modified or supplemented based on comments or new information received from the public during the public comment period.

#### *Visual Marine Mammal Observation*

The Corps will collect sighting data and behavioral responses to construction for marine mammal species observed in the region of activity during the period of activity. All observers will be trained in marine mammal identification and behaviors and are required to have no other construction-related tasks while conducting monitoring. The Corps will monitor the shutdown zone and disturbance zone before, during, and after pile driving, with at least one located at a best practicable vantage point, such as on the Jetty A or the barge. Based on our requirements, the Marine Mammal Monitoring Plan would implement the following procedures for pile driving:

- Individuals meeting the minimum qualifications identified in the applicant's monitoring plan, Section 13 of the application, Level A and Level B harassment zones during impact during vibratory pile driving.
- The area within the Level B harassment threshold for impact driving (shown in Figure 19 of the application) will be monitored by the field monitor stationed either on Jetty A or a pile driving rig. Any marine mammal documented within the Level B harassment zone during impact driving would constitute a Level B take (harassment), and will be recorded and reported as such.
- During vibratory pile driving, a shutdown zone will be established to include all areas where the underwater SPLs are anticipated to equal or exceed the Level A (injury) criteria for marine mammals (180 dB isopleth for cetaceans; 190 dB isopleth for

pinnipeds). Pile installation will not commence or will be suspended temporarily if any marine mammals are observed within or approaching the area. The shutdown zone will always be a minimum of 10 meters (33 feet) to prevent injury from physical interaction of marine mammals with construction equipment

- The individuals will scan the waters within each monitoring zone activity using binoculars (Vector 10X42 or equivalent), spotting scopes (Swarovski 20-60 zoom or equivalent), and visual observation.
- Use a hand-held or boat-mounted GPS device or rangefinder to verify the required monitoring distance from the project site.
- If waters exceed a sea-state which restricts the observers' ability to make observations within the marine mammal shutdown zone (e.g. excessive wind or fog), pile installation will cease. Pile driving will not be initiated until the entire shutdown zone is visible.
- Conduct pile driving only during daylight hours from sunrise to sunset when it is possible to visually monitor marine mammals.
- The waters will be scanned 15 minutes prior to commencing pile driving at the beginning of each day, and prior to commencing pile driving after any stoppage of 15 minutes or greater. If marine mammals enter or are observed within the designated marine mammal shutdown zone during or 15 minutes prior to pile driving, the monitors will notify the on-site construction manager to not begin until the animal has moved outside the designated radius.
- The waters will continue to be scanned for at least 30 minutes after pile driving has completed each day, and after each stoppage of 20 minutes or greater.

### *Data Collection*

We require that observers use approved data forms. Among other pieces of information, the Corps will record detailed information about any implementation of shutdowns, including the distance of animals to the pile and description of specific actions that ensued and resulting behavior of the animal, if any. In addition, the Corps will attempt to distinguish between the number of individual animals taken and the number of incidents of take. We require that, at a minimum, the following information be collected on the sighting forms:

- Date and time that monitored activity begins or ends;
- Construction activities occurring during each observation period;
- Weather parameters (e.g., percent cover, visibility);
- Water conditions (e.g., sea state, tide state);
- Species, numbers, and, if possible, sex and age class of marine mammals;
- Description of any observable marine mammal behavior patterns, including bearing and direction of travel and distance from pile driving activity;
- Distance from pile driving activities to marine mammals and distance from the marine mammals to the observation point;
- Locations of all marine mammal observations; and
- Other human activity in the area.

### *Proposed Reporting Measures*

The Corps would provide NMFS with a draft monitoring report within 90 days of the conclusion of the proposed construction work. This report will detail the monitoring protocol, summarize the data recorded during monitoring, and estimate the number of marine mammals

that may have been harassed. If no comments are received from NMFS within 30 days, the draft final report will constitute the final report. If comments are received, a final report must be submitted within 30 days after receipt of comments.

In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the IHA (if issued), such as an injury (Level A harassment), serious injury or mortality (e.g., ship-strike, gear interaction, and/or entanglement), the Corps would immediately cease the specified activities and immediately report the incident to Jolie Harrison (*Jolie.Harrison@NOAA.gov*), Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and Brent Norberg (*Brent.Norberg@noaa.gov*), the West Coast Regional Stranding Coordinator. The report would include the following information:

- Time, date, and location (latitude/longitude) of the incident;
- Name and type of vessel involved;
- Vessel's speed during and leading up to the incident;
- Description of the incident;
- Status of all sound source use in the 24 hours preceding the incident;
- Water depth;
- Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility);
- Description of all marine mammal observations in the 24 hours preceding the incident;
- Species identification or description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s) (if equipment is available).

Activities would not resume until NMFS is able to review the circumstances of the prohibited take. NMFS would work with the Corps to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The Corps would not be able to resume their activities until notified by NMFS via letter, email, or telephone.

In the event that the Corps discovers an injured or dead marine mammal, and the lead MMO determines that the cause of the injury or death is unknown and the death is relatively recent (i.e., in less than a moderate state of decomposition as described in the next paragraph), the Corps would immediately report the incident to Jolie Harrison (*Jolie.Harrison@NOAA.gov*), Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and Brent Norberg (*Brent.Norberg@noaa.gov*), the West Coast Regional Stranding Coordinator .

The report would include the same information identified in the paragraph above. Activities would be able to continue while NMFS reviews the circumstances of the incident. NMFS would work with the Corps to determine whether modifications in the activities are appropriate.

In the event that the Corps discovers an injured or dead marine mammal, and the lead MMO determines that the injury or death is not associated with or related to the activities authorized in the IHA (e.g., previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), the Corps would report the incident to Jolie Harrison (*Jolie.Harrison@NOAA.gov*), Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the NMFS West Coast Stranding Hotline and/or by email to Brent Norberg (*Brent.Norberg@noaa.gov*), the West Coast Regional Stranding Coordinator, within 24 hours of the discovery. The Corps would provide photographs or video footage (if

available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network.

### **Estimated Take by Incidental Harassment**

Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines “harassment” as: “. . . any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].”

All anticipated takes would be by Level B harassment resulting from vibratory pile driving and removal and may result in temporary changes in behavior. Injurious or lethal takes are not expected due to the expected source levels and sound source characteristics associated with the activity, and the proposed mitigation and monitoring measures are expected to further minimize the possibility of such take.

If a marine mammal responds to a stimulus by changing its behavior (e.g., through relatively minor changes in locomotion direction/speed or vocalization behavior), the response may or may not constitute taking at the individual level, and is unlikely to affect the stock or the species as a whole. However, if a sound source displaces marine mammals from an important feeding or breeding area for a prolonged period, impacts on animals or on the stock or species could potentially be significant (e.g., Lusseau and Bejder, 2007; Weilgart, 2007). Given the many uncertainties in predicting the quantity and types of impacts of sound on marine mammals, it is common practice to estimate how many animals are likely to be present within a particular distance of a given activity, or exposed to a particular level of sound.

Upland work can generate airborne sound and create visual disturbance that could potentially result in disturbance to marine mammals (specifically, pinnipeds) that are hauled out or at the water's surface with heads above the water. However, because there are no regular haul-outs in the vicinity of Jetty A, we believe that incidents of incidental take resulting from airborne sound or visual disturbance are unlikely.

The Corps requested authorization for the incidental taking of small numbers of killer whale, Gray whale, harbor porpoise, Steller sea lion, California sea lion, and harbor seal near the MCR project area that may result from vibratory pile driving and removal during construction activities associated with the rehabilitation of Jetty A at the MCR.

In order to estimate the potential incidents of take that may occur incidental to the specified activity, we must first estimate the extent of the sound field that may be produced by the activity and then consider in combination with information about marine mammal density or abundance in the project area. We first provide information on applicable sound thresholds for determining effects to marine mammals before describing the information used in estimating the sound fields, the available marine mammal density or abundance information, and the method of estimating potential incidences of take.

#### *Sound Thresholds*

We use generic sound exposure thresholds to determine when an activity that produces sound might result in impacts to a marine mammal such that a take by harassment might occur. To date, no studies have been conducted that explicitly examine impacts to marine mammals from pile driving sounds or from which empirical sound thresholds have been established. These thresholds (Table 3) are used to estimate when harassment may occur (i.e., when an animal is exposed to levels equal to or exceeding the relevant criterion) in specific contexts; however,

useful contextual information that may inform our assessment of effects is typically lacking and we consider these thresholds as step functions. NMFS is working to revise these acoustic guidelines; for more information on that process, please visit [www.nmfs.noaa.gov/pr/acoustics/guidelines.htm](http://www.nmfs.noaa.gov/pr/acoustics/guidelines.htm).

**Table 3. Underwater Injury and Disturbance Threshold Decibel Levels for Marine Mammals**

<b>Criterion</b>	<b>Criterion Definition</b>	<b>Threshold*</b>
Level A harassment	PTS (injury) conservatively based on TTS**	190 dB RMS for pinnipeds 180 dB RMS for cetaceans
Level B harassment	Behavioral disruption for impulse noise (e.g., impact pile driving)	160 dB RMS
Level B harassment	Behavioral disruption for non-pulse noise (e.g., vibratory pile driving, drilling)	120 dB RMS

\*All decibel levels referenced to 1 micropascal (re: 1  $\mu$ Pa). Note all thresholds are based off root mean square (RMS) levels

\*\* PTS=Permanent Threshold Shift; TTS=Temporary Threshold Shift

#### *Distance to Sound Thresholds*

Underwater Sound Propagation Formula—Pile driving generates underwater noise that can potentially result in disturbance to marine mammals in the project area. Transmission loss (TL) is the decrease in acoustic intensity as an acoustic pressure wave propagates out from a source. TL parameters vary with frequency, temperature, sea conditions, current, source and receiver depth, water depth, water chemistry, and bottom composition and topography. The general formula for underwater TL is:

$$TL = B * \log_{10} (R_1/R_2), \text{ where}$$

TL = transmission loss in dB

$R_1$  = the distance of the modeled SPL from the driven pile, and



$R_2$  = the distance from the driven pile of the initial measurement.

This formula neglects loss due to scattering and absorption, which is assumed to be zero here. The degree to which underwater sound propagates away from a sound source is dependent on a variety of factors, most notably the water bathymetry and presence or absence of reflective or absorptive conditions including in-water structures and sediments. Spherical spreading occurs in a perfectly unobstructed (free-field) environment not limited by depth or water surface, resulting in a 6 dB reduction in sound level for each doubling of distance from the source ( $20 \cdot \log[\text{range}]$ ). Cylindrical spreading occurs in an environment in which sound propagation is bounded by the water surface and sea bottom, resulting in a reduction of 3 dB in sound level for each doubling of distance from the source ( $10 \cdot \log[\text{range}]$ ). A practical spreading value of fifteen is often used under conditions where water increases with depth as the receiver moves away from the shoreline, resulting in an expected propagation environment that would lie between spherical and cylindrical spreading loss conditions. Practical spreading loss (4.5 dB reduction in sound level for each doubling of distance) is assumed here.

The Corps does not have information or modeling results related to pile installation activities. However, some features of the proposed action are similar to those recently proposed by the Navy, WSDOT, and other entities which were issued IHA/LOAs. For these reasons, NMFS considered some of the results from previous, representative monitoring efforts. Though the MCR navigation channel is a major commercial thoroughfare, there are no ports or piers in the immediate proximity of the jetties, as the seas are too dangerous. The location and setting of the MCR jetties is far more dynamic than a naval pier setting in the Puget Sound, the substrate is mostly sand, and the natural background noise is likely to be much higher with the large,

breaking wave sets, dynamic currents, and high winds. The Corps project is also in the immediate proximity of the open ocean, with less opportunity for sound attenuation by land.

NMFS considered representative results from underwater monitoring for concrete, steel, and wood piles that were installed via both impact and vibratory hammers in water depths from 5 to 15 meters (Illingworth and Rodkin 2007, WSDOT 2011 cited in Naval Base Kitsap 2014, Navy 2014, and NMFS 2011b). Transmission loss and propagation estimates are affected by the size and depth of the piles, the type of hammer and installation method, frequency, temperature, sea conditions, currents, source and receiver depth, water depth, water chemistry, and bottom composition and topography. NMFS reviewed several documents that included relevant monitoring results for radial distances and proxy sound levels encompassed by underwater pile driving noise. These distances for impact driving and vibratory driving for 24-in steel piles were summarized previously in Table 15 and Table 16 in the Application.

Since no site-specific, in-water noise attenuation data is available, the practical spreading model described and used by NMFS was used to determine transmission loss and the distances at which impact and vibratory pile driving or removal source levels are expected to attenuate down to the pertinent acoustic thresholds. The underwater practical spreading model is provided below:

$$R_2 = R_1 * 10^{((dB_{at R1} - dB_{acoustic\ threshold})/15)}$$

*where:*

$R_1$  = distance of a known or measured sound level.

$R_2$  = estimated distance required for sound to attenuate to a prescribed acoustic threshold.

NMFS used representative sound levels from different studies to determine appropriate proxy sound levels and to model estimated distances until pertinent thresholds ( $R_1$  and dB at  $R_1$ ). Studies which met the following parameters were considered: pile materials comprised of wood, concrete, and steel pipe piles; pile sizes 24- up to 30-inches diameter, and pile driver type of either vibratory and impact hammers. These types and sizes of piles were considered in order to evaluate a representative range of sound levels that may result from the Proposed Action. In some cases since there was little or no data specific to 24-inch piles, NMFS analyzed 30-inch piles as the next larger pile size with available data. The Corps will include a maximum pile size of 24-inches as a constraint in its construction contracts, though it will consult with NMFS regarding the originally proposed size.

Results of the practical spreading model provided the distance of the radii that were used to establish a ZOI or area affected by the noise criteria. At the MCR, the channel is about 3 miles across between the South and North Jetty. These jetties, as well as Jetty A, could attenuate noise, but the flanking sides on two of the jetties are open ocean, and Jetty A is slightly further interior in the estuary. Clatsop Spit, Cape Disappointment, Hammond Point, as well as the Sand Islands, are also land features that would attenuate noise. Therefore, as a conservative estimate, the NMFS is using (and showing on ZOI maps) the maximum distance and area but has indicated jetty attenuation in the ZOI area maps (See Figure 19 in the Application).

NMFS selected proxy values for impact installation methods and calculated distances to acoustic thresholds for comparison and contextual purposes. As note previously, the Corps is not proposing impact installation. NMFS ultimately relied most heavily on the proxy values developed by the Navy (2014).

For impact installation, NMFS used *193 rms dB re 1 μPa rms* at a distance of 10 meters, which is comprised of the range of average rms of n-weighted piles used to determine the recommended proxy source SPLs at 10m as determined by Navy (2014). The Tongue Point data (182 db re 1 μPa rms at a distance of 10 meters for 24-in steel piles (Navy 2014) is likely applicable to this MCR jetty project because it is of similar sandy rather than gravelly substrate; and it is within the same geographical and hydraulic context, though it is likely more sheltered than conditions at the jetties. Therefore, 193 rms dB re 1 μPa rms is an extremely conservative proxy estimate for impact installation, as sandy substrate and the hydraulic context at the MCR project area would further reduce spreading distance. Note that impact driving is not being proposed by the Corps.

For vibratory installation, NMFS proposes *163 dB re 1 μPa rms*. The proxy value of 163 dB re 1 μPa rms is greater than the 24-inch pipe pile proxy and equal to the sheet pile values proposed by Navy (2014) at 161 dB re 1 μPa rms and 163 dB re 1 μPa rms, respectively, and is also higher than the Friday Harbor Ferry sample (162 dB re 1 μPa rms) (Navy 2014 and Laughlin 2010a cited in Washington State Ferries 2013, respectively). NMFS also proposes 163 dB re 1 μPa rms to reflect sheet pile installation, which registered higher than the pipe pile levels in the proxy study. Given the comparative differences between the substrate and context used in the Navy study relative to the MCR, 163 dB re 1 μPa rms is a very conservative evaluation level. Results are listed in Table 4.

**Table 4. Calculated Area Encompassed within Zone of Influence at MCR Jetties for Underwater Marine Mammal Sound Thresholds at Jetty A**

Jetty	Underwater Threshold	Distance – m (ft)	Area Excluding Land & Jetty
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			Masses - km <sup>2</sup> (mi <sup>2</sup> )
<b>Jetty A: ~ Station 78+50, River Side</b>	Impact driving, pinniped injury (190 dB)*	16 (52.5)	<0.001 (0.0003)
	Impact driving, cetacean injury (180 dB)*	74 (242.8)	0.01 (0.004)
	Impact driving, disturbance (160 dB)*	1,585 (5,200.1, or ~1 mile)	3.38 (1.31)
	Vibratory driving, pinniped injury (190 dB)	0	0
	Vibratory driving, cetacean injury (180 dB)	1 (3.3)	<0.000003 (0.000001)
	Vibratory driving, disturbance (120 dB)	7,356 (4.6 miles)	23.63 (9.12)

Note that the actual area insonified by pile driving activities is significantly constrained by local topography relative to the total threshold radius. The actual insonified area was determined using a straight line-of-sight projection from the anticipated pile driving locations. This area is depicted in Table 4 and represented in the Application submitted by the Corps in Figure 19 of the Application.

The method used for calculating potential exposures to impact and vibratory pile driving noise for each threshold was estimated using local marine mammal data sets, the Biological Opinion, best professional judgment from state and federal agencies, and data from IHA estimates on similar projects with similar actions. All estimates are conservative and include the following assumptions:

- During construction, each species could be present in the project area each day. The potential for a take is based on a 24-hour period. The model assumes that there can be one potential take (Level B harassment exposure) per individual per 24-hours.
- All pilings installed at each site would have an underwater noise disturbance equal to the piling that causes the greatest noise disturbance (i.e., the piling furthest from shore) installed with the method that has the largest ZOI. The largest underwater disturbance ZOI would be

produced by vibratory driving steel piles. The ZOIs for each threshold are not spherical and are truncated by land masses which would dissipate sound pressure waves.

- Exposures were based on estimated work days. Numbers of days were based on an average production rate of 15 pilings per day for a total of 68 pile installation days. This means construction at each jetty offloading facility would occur over an approximate span of ~ 17 days.
- In absence of site specific underwater acoustic propagation modeling, the practical spreading loss model was used to determine the ZOI.

### *Killer Whale*

Southern resident killer whales have been observed offshore near the study area and ZOI, but the Corps does not have fine-scale details on frequency of use. However, as noted in Section 3, members of K and L pods were sighted off the Oregon Coast in 1999 and 2000 and whales move as far north as Canada down to California, passing the MCR. While killer whales do occur in the Columbia River plume, where fresh water from the river intermixes with salt water from the ocean, they are rarely seen in the interior of the Columbia River Jetty system. The insonified area associated with the proposed action at Jetty A does not extend out into the open ocean where killer whales are likely to be found. Furthermore, the Corps has limited its pile installation window in order to avoid peak salmon runs and any overlap with the presence of Southern residents. To ensure no Level B acoustical harassment occurs, the Corps will restrict pile installation from October 1 until on or after May 1 of each season. However, this restriction was enacted primarily for construction work at the North and South jetties, where the insonified zone will radiate out towards the open ocean. As such NMFS is not anticipating any acoustic exposure to Southern residents. Also note that in the 2011 Biological Opinion, NMFS issued a

not likely to adversely affect determination. Therefore, NMFS has determined that authorization of take for Southern residents is not warranted.

Western Transient killer whales may be traversing offshore over a greater duration of time than the feeding resident. They are rarely observed inside of the jetty system.

The Southwest Fisheries Science Center (SWFSC) stratum model under the Marine Animal Monitor Model provides an estimated density of 0.00070853 animals per km<sup>2</sup> for summer killer whales for areas near MCR, which may provide a surrogate proxy value for assuming possible densities near the jetties (Barlow *et al.* 2009, Halpin *et al.* 2009 at OBIS-SEAMAP). Given anecdotal evidence (Griffith 2015) and sightings recorded on the OBIS network from surveys done in 2005 (Halpin *et al.* 2009, OBIS-SEAMAP 2015), this density may be appropriate for the MCR vicinity.

The following formula was used to calculate exposure using

$$\text{Exposure Estimate} = (0.000708^{\text{DensityEstimate}} * 23.63^{\text{ZOI Jetty A}} * 17^{\text{days}}) = 0.28 \text{ killer whale exposures}$$

Where:

**N<sub>DensityEstimate</sub>** = Represents estimated density of species within the 4.6-mile radius encompassing the ZOI at Jetty A; using the density model suggested by NOAA (2015), this equates to 0.000708 animals per km<sup>2</sup> (Barlow *et al.* 2009).

**Days** = Total days of pile installation or removal activity (~17 days)

Given the low density and rare occurrence of transient killer whales in the ZOI, exposure of feeding or transient killer whales to Level B acoustical harassment from pile driving is unlikely to occur. However, NMFS proposes to authorize take of small number due to the remote chance

that transient orcas remain in the vicinity to feed on pinnipeds that frequent the haulouts at the South Jetty.

NMFS proposes to authorize the take of 8 transients because solitary killer whales are rarely observed, and transient whales travel in pods of 2-15 members. NMFS has assumed a pod size of 8.

### *Gray Whale*

Based on anecdotal information and sightings between 2006 and 2011 (Halpin *et al.* 2009 at OBIS SEAMAP 2015), gray whales may be in the proximity of the proposed action area and exposed to underwater acoustic disturbances. However, no data exists that is specific to presence and numbers in the MCR vicinity and gray whale density estimates were not available on the SERDP or OBIS-SEAMAP web model sites. Anecdotal evidence also indicates gray whales have been seen at MCR, but are not a common visitor, as they mostly remain in the vicinity of the further offshore shelf-break (Griffith 2015). According to NOAA's Cetacean Mapping classification of the MCR vicinity pertaining to gray whale use, its Biologically Important Area categorization is indicated as a migration corridor (<http://cetsound.noaa.gov/biologically-important-area-map>). As primarily bottom feeders, gray whales are the most coastal of all great whales; they primarily feed in shallow continental shelf waters and live much of their lives within a few tens of kilometers of shore (Barlow *et. al.* 2009 on OBIS-SEAMAP 2015).

A relatively small number of whales (approximately 200) summer and feed along the Pacific coast between Kodiak Island, Alaska and northern California (Darling 1984, Gosho *et al.* 2011, Calambokidis *et al.* 2012 cited in NOAA 2014c).

The Pacific Coast Feeding Group or northbound summer migrants would be the most likely gray whales to be in the vicinity of MCR. Since no information pertaining to gray whale



densities could be identified, NMFS elected to apply proxy data for estimating densities. As a proxy, data pertinent to humpback whales (0.0039 animals per km<sup>2</sup>) was selected because both are baleen species found near the MCR vicinity for the same purposes (as a migration route or temporary feeding zone). However, the number of estimated exposures at Jetty A was increased to account for the fact that gray whales are more likely to be in the nearshore environment than humpback whales. This increase was proposed strictly as a conservative assumption to acknowledge the distinct preference gray whales may have over humpbacks for nearshore feeding.

The following formula was used to calculate exposure:

Exposure Estimate =  $(0.0039_{\text{DensityEstimate}} * 23.63_{\text{ZOI Jetty A}} * 17_{\text{days}}) + 1 = 1.56$  gray whale exposures

Migrating gray whales often travel in groups of 2, although larger pods do occur. For gray whales, NMFS is proposing 4 Level B authorized takes.

### *Harbor Porpoise*

Harbor porpoises are known to occupy shallow, coastal waters and, therefore, are likely to be found in the vicinity of the MCR. They are known to occur within the proposed project area, however, density data for this region is unavailable (Griffith 2015).

The SWFSC stratum model under the Marine Animal Monitor Model provides an estimated density per km<sup>2</sup> of year-round porpoises for areas near northern California, which may provide a surrogate proxy value for assuming possible densities near the jetties. Though not in the project vicinity, the range of 3.642 animals/km<sup>2</sup> (Barlow *et al.* 2009, Halpin *et al.* 2009) is a relatively high density compared to values moving even further south along the model

boundaries, for which the northern-most extent ends in California. Given anecdotal evidence (Griffith 2015) and sightings recorded on the OBIS network from surveys done between 1989 and 2005, (Halpin *et al.* 2009, OBIS-SEAMAP 2015), this higher density may be appropriate for the MCR vicinity, or may be conservative.

The formula previously described was used to arrive at a take estimate for harbor porpoise.

$$\text{Exposure Estimate} = (3.642_{\text{DensityEstimate}} * 23.63_{\text{ZOI Jetty A}} * 17_{\text{days}}) = 1,464.$$

Based on the density model suggested by NOAA (2015), the Corps has provided a very conservative maximum estimate of 1,464 harbor porpoise disturbance exposures over the 17 days of operation. However, this number of potential exposures does not accurately reflect the actual number of animals that would potentially be taken for the MCR jetty project. Rather, it is more likely that the same pod may be exposed more than once during the 17-day operating window. The highest estimated number of animals exposed on any single day based on the modeled proxy density (Barlow *et al.* 2009 at SERDP) and the jetty with the greatest ZOI is 193 animals (from South Jetty Channel). While the number of pods in the vicinity of the MCR is unknown, the size of the pods is usually assumed to be significantly smaller than 193 animals. According to OBIS-SEAMAP (2015 and Halpin *et al.* 2009), the normal range of group size generally consists of less than five or six individuals, though aggregations into large, loose groups of 50 to several hundred animals could occur for feeding or migration. Because the ZOI only extends for a maximum of 4.6 miles, it may also be assumed that due to competition and territorial circumstances only a limited number of pods would be feeding in the ZOI at any particular time. If the modeled density calculations are assumed, then this means anywhere from 32 small pods to 2 large, 100-animal pods might be feeding during every day of pile installation.

Given these values seem an unrealistic representation of use and pod densities within any one of the ZOIs, NMFS is proposing an alternative calculation.

NMFS conservatively assumed that a single, large feeding pod of 50 animals forms within the ZOI for Jetty A on each day of pile installation. Though this is likely much higher than actual use by multiple pods in the vicinity, it more realistically represents a worst-case scenario for the number of animals that could potentially be affected by the proposed work. This calculation also assumes that it is a new pod of individuals would be affected on each installation day, which is also unlikely given pod residency. NMFS is proposing this higher number in acknowledgement of the SERDP density estimates originally proposed by NOAA (2015). Therefore, Corps has provided an extreme estimate of disturbance exposures over the duration of the entire project, and is requesting Level B take for 850 animals.

*Pinnipeds - Stellar Sea Lion, California Sea Lion and Harbor Seal*

There are haulout sites on the South Jetty used by pinnipeds, especially Steller sea lions. It is likely that pinnipeds that use the haulout area in would be exposed to 120 dB threshold acoustic threshold during pile driving activities. The number of exposures would vary based on weather conditions, season, and daily fluctuations in abundance. Based on a survey by the Washington Department of Fish & Wildlife (WDFW) the number of affected Steller sea lions could be between 200-800 animals per month; California sea lion numbers could range from 1 to 500 per month and the number of harbor seals could be as low as 1 to as high as 57 per month. Exposure and take estimates below are based on past pinniped data from WDFW (2000-2014 data), which had a more robust monthly sampling frequency relative to ODFW counts. The exception to this was for harbor seal counts, for which ODFW (also 2000-2014 data) had more sampling data in certain months. Therefore, ODFW harbor seal data was used for the months of

May and July. Exposure estimates are much higher than take estimates. This is because unlike the exposure estimate which assumes all new individuals, the take estimate request assumes that some of the same individuals will remain in the area and be exposed multiple times during the short 17-day installation period to complete and remove each offloading facility (for a total of about 68 days). NMFS examined the estimated monthly average number of animals from 2000-2014 hauled on South Jetty during May and June, which are the most likely months for pile installation as is shown in Table 5. NMFS assumed that 50% of the three species may be in the water at any given time during pile installation. This is based on the best professional judgment of a ODFW biologist, who stated: “Assuming another 50% in the water above what is hauled out is probably on the high end, but it's probably best to be conservative (i.e., have more takes authorized than actually incurred). It's probably more like 10-20% but it's highly variable and dependent on a lot of unpredictable factors like weather conditions, recent disturbance events, etc.” (ODFW 2015). There are no anticipated airborne exposures since the main haul out sites are not in close proximity to Jetty A. Note that the formula used by NMFS is different than that employed by the Corps in their application as NMFS is only analyzing potential impacts associated with Jetty A.

To reiterate, these exposure estimates assume a new individual is exposed every day throughout each acoustic disturbance, for the entire duration of the project.

$$\text{Exposure Estimate}_{\text{Stellar}} = (N_{\text{est(May+June)}} * 50\% * 17_{\text{underwater/piles days}}) = 12,750 \text{ Steller sea lions}$$

$$\text{Exposure Estimate}_{\text{California}} = (N_{\text{est(May+June)}} * 50\% * 17_{\text{underwater/piles days}}) = 2,788 \text{ CA sea lions}$$

$$\text{Exposure Estimate}_{\text{Harbor}} = (N_{\text{est(May+June)}} * 50\% * 17_{\text{underwater/piles days}}) = 493 \text{ Harbor porpoises}$$

*where:*

$N_{est}$  = Estimated monthly average number of species hauled out at South Jetty based on WDFW data.

**Duration** = total days of pile installation or removal activity for underwater thresholds (68);

**Density** = the estimated percentage of individuals in the respective ZOI: underwater assumed to be 50% of WDFW haul-out average during 2 most likely months of pile installation (May or June);

**Table 5. Estimated Sound Exposures Events Experienced by Pinnipeds During Pile Installation at All MCR Jetties and Construction/Survey Seasons at the South Jetty**

Month	Steller Sea Lion		California Sea Lion		Harbor Seal	
	Avg <sup>1</sup> #	Underwater (# at 50% Density)	Avg <sup>1</sup> #	Underwater (# at 50% Density)	Avg <sup>1,2</sup> #	Underwater (# at 50% Density)
April	587	-	99	-	-	-
May	824	412	125	63	0	0
June	676	338	202	101	57	29
July	358	-	1	-	10	-
August	324	-	115	-	1	-
September	209	-	249	-	-	-
October	384	-	508	-	-	-
Preliminary Number of Individuals <sup>3</sup>	--	750	--	164	--	29
Total Exposures (over Duration <sup>4</sup> : 17 days)		12,750		2,788	--	493

<sup>1</sup> WDFW monthly average from 2000-2014.

<sup>2</sup> ODFW monthly averages for May and July 2000-2014 data due to additional available sampling data.

<sup>3</sup> Conservatively assumes each exposure is to new individual, all individuals are new arrivals each month, and no individual is exposed more than one time.

<sup>3</sup> Assumed 17 pile installation/removal days.

Note that NMFS is using data from the South Jetty since data exists for this pinniped population data exists for haulouts near this location. This represents a worst-case scenario since Jetty A is likely to have fewer pinniped exposures. Therefore, South Jetty will serve as a proxy for Jetty A as part of this analysis.

However, requesting take based on exposure calculations using the above density/duration would inaccurately suggest that the proposed action would take a disproportionately large number of pinnipeds on the West Coast. It also assumes that each exposure is affecting a new animal, when the reality is a single animal is likely to be exposed to underwater disturbance more than one time.

NMFS is proposing the following take estimate and assumptions which should provide more realistic take estimates. NMFS will assume pile installation occurs only in *either* May or June, which is the most likely construction scenario. Further, it is assumed that the number of animals taken by underwater acoustic disturbance is represented by the highest average number of animals present during the installation month (May or June), and that all animals are exposed to the underwater disturbance. Therefore, for Steller sea lions, 824 animals will represent the seasonal take; for California sea lions, seasonal take will be 202 animals; and for harbor seals seasonal take will be 57 animals. NMFS will assume one installation season of 17 days and that in-water work on Jetty A take would take only a single season. It is also assumed that every animal observed during a season would count as a take. Using these assumptions, the take calculations are estimated in Table 6 and result in 824 Stellar sea lion, 202 California sea lion and 57 harbor seal takes.

**Table 6. Estimated Sound Exposures Events Experienced by Pinnipeds during Pile Installation at the South Jetty during and Construction/Survey Seasons**

Month	Steller Sea Lion		California Sea Lion		Harbor Seal	
	Avg <sup>1</sup> #	Underwater <sup>3</sup> (# at 100% exposure)	Avg <sup>1</sup> #	Underwater (# at 100% exposure)	Avg <sup>1,2</sup> #	Underwater (# at 100% exposure)
April	587	-	99	-	-	-
May	824	<b>824</b>	125	125	0	0
June	676	676	202	<b>202</b>	57	<b>57</b>
July	358	-	1	-	10	-
August	324	-	115	-	1	-
September	209	-	249	-	-	-
October	384	-	508	-	-	-
Preliminary Number of Individuals per season (~17 days) <sup>4</sup>	--	<b>824</b>	--	<b>202</b>	--	<b>57</b>

<sup>1</sup> WDFW monthly average for daily populations counts from 2000-2014.

<sup>2</sup> ODFW monthly averages for May and July 2000-2014 data) for daily population count due to additional available sampling data.

<sup>3</sup> Conservatively assumes each exposure is to new individual, all individuals are new arrivals each month, and no individual is exposed more than one time.

<sup>4</sup> Assumed 17 pile installation/removal days.

## **Analysis and Preliminary Determinations**

### *Negligible Impact*

Negligible impact is “an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival” (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (i.e., population-level effects). An estimate of the number of Level B harassment takes, alone, is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be “taken” through behavioral harassment, NMFS must consider other factors, such as the likely nature of any responses (their intensity, duration, etc.), the context of any responses (critical reproductive time or location, migration, etc.), as well as the number and nature of estimated Level A harassment takes, the number of estimated mortalities, effects on habitat, and the status of the species.

To avoid repetition, the discussion of our analyses applies to all the species listed in Table 6, given that the anticipated effects of this pile driving project on marine mammals are expected to be relatively similar in nature. There is no information about the size, status, or structure of any species or stock that would lead to a different analysis for this activity, else species-specific factors would be identified and analyzed.

Pile driving activities associated with the rehabilitation of Jetty A at the mouth of the Columbia River, as outlined previously, have the potential to disturb or displace marine mammals. Specifically, the specified activities may result in take, in the form of Level B harassment (behavioral disturbance) only, from underwater sounds generated from pile driving.

Potential takes could occur if individuals of these species are present in the insonified zone when pile driving is happening.

No injury, serious injury, or mortality is anticipated given the nature of the activity and measures designed to minimize the possibility of injury to marine mammals. The potential for these outcomes is minimized through the construction method and the implementation of the planned mitigation measures. Specifically, vibratory hammers will be the only method of installation utilized. No impact driving is planned. Vibratory driving does not have significant potential to cause injury to marine mammals due to the relatively low source levels produced (site-specific acoustic monitoring data show no source level measurements above 180 dB rms) and the lack of potentially injurious source characteristics. The likelihood that marine mammal detection ability by trained observers is high under the environmental conditions described for the rehabilitation of Jetty A at MCR further enables the implementation of shutdowns to avoid injury, serious injury, or mortality.

The Corps' proposed activities are localized and of short duration. The entire project area is limited to the Jetty A area and its immediate surroundings. Actions covered under the Authorization would include installing a maximum of 24 piles for use as dolphins and a maximum of 93 sections of Z or H piles for retention of rock fill over 17 days. The piles would be a maximum diameter of 24 inches and would only be installed by vibratory driving method. The possibility exists that smaller diameter piles may be used but for this analysis it is assumed that 24 inch piles will be driven.

These localized and short-term noise exposures may cause brief startle reactions or short-term behavioral modification by the animals. These reactions and behavioral changes are expected to subside quickly when the exposures cease. Moreover, the proposed mitigation and



monitoring measures are expected to reduce potential exposures and behavioral modifications even further. Additionally, no important feeding and/or reproductive areas for marine mammals are known to be near the proposed action area. Therefore, the take resulting from the proposed project is not reasonably expected to and is not reasonably likely to adversely affect the marine mammal species or stocks through effects on annual rates of recruitment or survival.

The project also is not expected to have significant adverse effects on affected marine mammals' habitat, as analyzed in detail in the “Anticipated Effects on Marine Mammal Habitat” section. The project activities would not modify existing marine mammal habitat. The activities may cause some fish to leave the area of disturbance, thus temporarily impacting marine mammals' foraging opportunities in a limited portion of the foraging range; but, because of the short duration of the activities and the relatively small area of the habitat that may be affected, the impacts to marine mammal habitat are not expected to cause significant or long-term negative consequences.

Effects on individuals that are taken by Level B harassment, on the basis of reports in the literature as well as monitoring from other similar activities, will likely be limited to reactions such as increased swimming speeds, increased surfacing time, or decreased foraging (if such activity were occurring) (e.g., Thorson and Reyff, 2006; Lerma, 2014). Most likely, individuals will simply move away from the sound source and be temporarily displaced from the areas of pile driving, although even this reaction has been observed primarily only in association with impact pile driving. In response to vibratory driving, pinnipeds (which may become somewhat habituated to human activity in industrial or urban waterways) have been observed to orient towards and sometimes move towards the sound. The pile driving activities analyzed here are similar to, or less impactful than, numerous construction activities conducted in other similar

locations, which have taken place with no reported injuries or mortality to marine mammals, and no known long-term adverse consequences from behavioral harassment. Repeated exposures of individuals to levels of sound that may cause Level B harassment are unlikely to result in hearing impairment or to significantly disrupt foraging behavior. Thus, even repeated Level B harassment of some small subset of the overall stock is unlikely to result in any significant realized decrease in fitness for the affected individuals, and thus would not result in any adverse impact to the stock as a whole. Level B harassment will be reduced to the level of least practicable impact through use of mitigation measures described herein and, if sound produced by project activities is sufficiently disturbing, animals are likely to simply avoid the project area while the activity is occurring.

In summary, this negligible impact analysis is founded on the following factors: (1) the possibility of injury, serious injury, or mortality may reasonably be considered discountable; (2) the anticipated incidents of Level B harassment consist of, at worst, temporary modifications in behavior and; (3) the presumed efficacy of the proposed mitigation measures in reducing the effects of the specified activity to the level of least practicable impact. In combination, we believe that these factors, as well as the available body of evidence from other similar activities, demonstrate that the potential effects of the specified activity will have only short-term effects on individuals. The specified activity is not expected to impact rates of recruitment or survival and will therefore not result in population-level impacts.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS preliminarily finds that the total marine

mammal take from the Corps' rehabilitation of Jetty A at MCR will have a negligible impact on the affected marine mammal species or stocks.

*Small Numbers Analysis*

Table 7 demonstrates the number of animals that could be exposed to received noise levels that could cause Level B behavioral harassment for the proposed work associated with the rehabilitation of Jetty A at MCR. The analyses provided above represents between <0.01% - 3.9% of the populations of these stocks that could be affected by Level B behavioral harassment. The numbers of animals authorized to be taken for all species would be considered small relative to the relevant stocks or populations even if each estimated taking occurred to a new individual – an extremely unlikely scenario. For pinnipeds occurring in the vicinity of Jetty A, there will almost certainly be some overlap in individuals present day-to-day, and these takes are likely to occur only within some small portion of the overall regional stock.

**Table 7. Estimated Numbers of Marine Mammals That May Be Exposed to Level B Harassment**

<b>Species</b>	<b>Total proposed authorized takes</b>	<b>Abundance</b>	<b>Percentage of total stock</b>
Killer whale (Western transient stock)	8	243	3.2%
Gray whale (Eastern North Pacific Stock)	4	18,017	<0.01%
Harbor porpoise	850	21,487	3.9%
Steller sea lion	824	63,160- 78,198	1.3-1.0%
California sea lion	202	296,750	0.01%
Harbor seal	57	24,732	0.2%

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the mitigation and monitoring measures, which are expected to reduce the number of marine mammals potentially affected by the proposed action, NMFS preliminarily finds that small numbers of marine mammals will be taken relative to the populations of the affected species or stocks.

#### **Impact on Availability of Affected Species for Taking for Subsistence Uses**

There are no relevant subsistence uses of marine mammals implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

#### **Endangered Species Act (ESA)**

There are two marine mammal species that are listed as endangered under the ESA with confirmed or possible occurrence in the study area: humpback whale and Southern resident killer whale. For the purposes of this IHA, NMFS determined that take of Southern resident killer whales was highly unlikely given the rare occurrence of these animals in the project area. A similar conclusion was reached for humpback whales. On March 18, 2011, NMFS signed a Biological Opinion concluding that the proposed action is not likely to jeopardize the continued existence of humpback whales and may affect, but is not likely to adversely affect Southern resident killer whales.

#### **National Environmental Policy Act (NEPA)**

The Corps issued the *Final Environmental Assessment Columbia River at the Mouth, Oregon and Washington Rehabilitation of the Jetty System at the Mouth of the Columbia River* and *Finding of No Significant Impact* in 2011. The environmental assessment (EA) and finding of no significant interest (FONSI) were revised in 2012 with a FONSI being signed on July 26, 2012. NMFS will seek to re-affirm the findings of the 2012 FONSI.

### **Proposed Incidental Harassment Authorization**

As a result of these preliminary determinations, we propose to issue an IHA to the USACE the rehabilitation of Jetty A of the Columbia River Jetty System provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. The proposed IHA language is provided next.

1. This Incidental Harassment Authorization (IHA) is valid from May 1, 2016 through April 30, 2017.
2. This Authorization is valid only for in-water construction work associated with the rehabilitation of Jetty A at MCR.
3. General Conditions
  - (a) A copy of this IHA must be in the possession of the Corps, its designees, and work crew personnel operating under the authority of this IHA.
  - (b) The species authorized for taking include killer whale (*Orcinus orca*), Steller sea lion (*Eumatopius jubatus*), gray whale (*Eschrichtius robustus*), harbor porpoise

(*Phocoena phocoena*), California sea lion (*Zalophus californianus*), and harbor seal (*Phoca vitulina richardii*)

- (c) The taking, by Level B harassment only, is limited to the species listed in condition 3(b).
- (d) The taking by injury (Level A harassment), serious injury, or death of any of the species listed in condition 3(b) of the Authorization or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this IHA.
- (e) The Corps shall conduct briefings between construction supervisors and crews, marine mammal monitoring team, and staff prior to the start of all in-water pile driving, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

#### 4. Mitigation Measures

The holder of this Authorization is required to implement the following mitigation measures:

- (a) Time Restriction: For all in-water pile driving activities, the Corps shall operate only during daylight hours when visual monitoring of marine mammals can be conducted.

- (b) Establishment of Level B Harassment (ZOI)
  - (i) Before the commencement of in-water pile driving activities, The Corps shall establish Level B behavioral harassment ZOI where received underwater sound pressure levels (SPLs) are higher than 120 dB (rms) re 1  $\mu$ Pa for and non-pulse sources (vibratory hammer). The ZOI delineates where Level B harassment would occur. For vibratory driving, the level B harassment area is between 10 m and 7.3 km.
- (c) The Corps is authorized to utilize only vibratory driving under this IHA.
- (d) Establishment of shutdown zone
  - (i) Implement a minimum shutdown zone of 10 m during vibratory driving activities. If a marine mammal comes within or approaches the shutdown zone, such operations shall cease.
- (e) Use of Soft-start
  - (i) The project will utilize soft start techniques for vibratory pile driving. We require the Corps to initiate sound from vibratory hammers for fifteen seconds at reduced energy followed by a thirty-second waiting period, with the procedure repeated two additional times. Soft start will be required at the beginning of each day's pile driving work and at any time following a cessation of pile driving of thirty minutes or longer.
  - (ii) Whenever there has been downtime of 20 minutes or more without vibratory driving, the contractor will initiate the driving with soft-start procedures described above.
- (f) Standard mitigation measures

- (i) Conduct briefings between construction supervisors and crews, marine mammal monitoring team, and Corps staff prior to the start of all pile driving activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.
- (ii) For in-water heavy machinery work other than pile driving (e.g., standard barges, tug boats, barge-mounted excavators, or clamshell equipment used to place or remove material), if a marine mammal comes within 10 meters, operations shall cease and vessels shall reduce speed to the minimum level required to maintain steerage and safe working conditions. This type of work could include the following activities: (1) movement of the barge to the pile location or (2) positioning of the pile on the substrate via a crane (i.e., stabbing the pile).
- (g) The Corps shall establish monitoring locations as described below.

## 5. Monitoring and Reporting

The holder of this Authorization is required to report all monitoring conducted under the IHA within 90 calendar days of the completion of the marine mammal monitoring

- (a) Visual Marine Mammal Monitoring and Observation
  - (i) At least one individual meeting the minimum qualifications identified in Section 13 of the application by the Corps will monitor the exclusion and Level B harassment zones during vibratory pile driving.



- (ii) During pile driving, the area within 10 meters of pile driving activity will be monitored and maintained as marine mammal buffer area in which pile installation will not commence or will be suspended temporarily if any marine mammals are observed within or approaching the area of potential disturbance. This area will be monitored by one qualified field monitor stationed either on the jetty pile or pile driving rig.
- (iii) The area within the Level B harassment threshold for pile driving will be monitored by one observer stationed to provide adequate view of the harassment zone, such as Jetty A or the barge. Marine mammal presence within this Level B harassment zone, if any, will be monitored. Pile driving activity will not be stopped if marine mammals are found to be present. Any marine mammal documented within the Level B harassment zone during impact driving would constitute a Level B take (harassment), and will be recorded and reported as such.
- (iv) The individuals will scan the waters within each monitoring zone activity using binoculars (Vector 10X42 or equivalent), spotting scopes (Swarovski 20-60 zoom or equivalent), and visual observation .
- (v) If waters exceed a sea-state which restricts the observers' ability to make observations within the marine mammal buffer zone (the 100 meter radius) (e.g. excessive wind or fog), impact pile installation will cease until conditions allow the resumption of monitoring.
- (vi) The waters will be scanned 15 minutes prior to commencing pile driving at the beginning of each day, and prior to commencing pile driving after

any stoppage of 20 minutes or greater. If marine mammals enter or are observed within the designated marine mammal buffer zone (the 10m radius) during or 15 minutes prior to impact pile driving, the monitors will notify the on-site construction manager to not begin until the animal has moved outside the designated radius.

(vii) The waters will continue to be scanned for at least 30 minutes after pile driving has completed each day, and after each stoppage of 20 minutes or greater.

(b) Data Collection

(i) Observers are required to use approved data forms. Among other pieces of information, the Corps will record detailed information about any implementation of shutdowns, including the distance of animals to the pile and description of specific actions that ensued and resulting behavior of the animal, if any. In addition, the Corps will attempt to distinguish between the number of individual animals taken and the number of incidents of take. At a minimum, the following information be collected on the sighting forms:

1. Date and time that monitored activity begins or ends;
2. Construction activities occurring during each observation period;
3. Weather parameters (e.g., percent cover, visibility);
4. Water conditions (e.g., sea state, tide state);
5. Species, numbers, and, if possible, sex and age class of marine mammals;

6. Description of any observable marine mammal behavior patterns, including bearing and direction of travel and distance from pile driving activity;
7. Distance from pile driving activities to marine mammals and distance from the marine mammals to the observation point;
8. Locations of all marine mammal observations; and
9. Other human activity in the area.

(c) Reporting Measures

- (i) In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the IHA, such as an injury (Level A harassment), serious injury or mortality (e.g., ship-strike, gear interaction, and/or entanglement), the Corps would immediately cease the specified activities and immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinators. The report would include the following information:

1. Time, date, and location (latitude/longitude) of the incident;
2. Name and type of vessel involved;
3. Vessel's speed during and leading up to the incident;
4. Description of the incident;
5. Status of all sound source use in the 24 hours preceding the incident;
6. Water depth;

7. Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility);
8. Description of all marine mammal observations in the 24 hours preceding the incident;
9. Species identification or description of the animal(s) involved;
10. Fate of the animal(s); and
11. Photographs or video footage of the animal(s) (if equipment is available).

(ii) Activities would not resume until NMFS is able to review the circumstances of the prohibited take. NMFS would work with the Corps to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The Corps would not be able to resume their activities until notified by NMFS via letter, email, or telephone.

(iii) In the event that the Corps discovers an injured or dead marine mammal, and the lead MMO determines that the cause of the injury or death is unknown and the death is relatively recent (i.e., in less than a moderate state of decomposition as described in the next paragraph), the Corps would immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the NMFS West Coast Stranding Hotline and/or by email to the West Coast Regional Stranding Coordinators. The report would include the same information identified in the paragraph above. Activities would be able to

continue while NMFS reviews the circumstances of the incident. NMFS would work with the Corps to determine whether modifications in the activities are appropriate.

- (iv) In the event that the Corps discovers an injured or dead marine mammal, and the lead MMO determines that the injury or death is not associated with or related to the activities authorized in the IHA (e.g., previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), the Corps would report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the NMFS West Coast Stranding Hotline and/or by email to the West Coast Regional Stranding Coordinators, within 24 hours of the discovery. The Corps would provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network.

- 6. This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein, or if NMFS determines the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.

### **Request for Public Comments**

NMFS requests comment on our analysis, the draft authorization, and any other aspect of the Notice of Proposed IHA for the Corps' rehabilitation of Jetty A at MCR. Please include with

your comments any supporting data or literature citations to help inform our final decision on the Corps' request for an MMPA authorization.

Dated: July 17, 2015

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Perry Gayaldo,  
Deputy Director,  
Office of Protected Resources,  
National Marine Fisheries Service

DRAFT

Date: \_\_\_\_\_

PROJECT: \_\_\_\_\_

Qualified (per IHA/LOA & Requirements in Specifications) Marine Mammal Observer(s): \_\_\_\_\_

Equipment List, and Date(s) of Calibration/Maintenance, As Applicable: \_\_\_\_\_

Total Number of Piles Installed/Removed per Day:

Day: 1) \_\_\_ 2) \_\_\_ 3) \_\_\_ 4) \_\_\_ 5) \_\_\_ 6) \_\_\_ 7) \_\_\_ 8) \_\_\_ 9) \_\_\_ 10) \_\_\_ 11) \_\_\_ 12) \_\_\_ 13) \_\_\_ 14) \_\_\_ 15) \_\_\_ 16) \_\_\_ 17) \_\_\_

Total Duration of Installation/Removal per Day (hours):

Day: 1) \_\_\_ 2) \_\_\_ 3) \_\_\_ 4) \_\_\_ 5) \_\_\_ 6) \_\_\_ 7) \_\_\_ 8) \_\_\_ 9) \_\_\_ 10) \_\_\_ 11) \_\_\_ 12) \_\_\_ 13) \_\_\_ 14) \_\_\_ 15) \_\_\_ 16) \_\_\_ 17) \_\_\_

Event Code/ Activity Type	Time/Duration of Event; (Start/End Time if Continuous)	Construction Type During Sighting	Event /Work Activity Location	Species Type	Sighting Number (1 or 1.1.X if Re-sight)	Time/Duration Watching Sighting; (Start/End Time if Continuous)	# of Animals/Group Size (min/max/best); # of calves	Gender (if Observable)	Age Class (if Observable)	Sighting Cue/ Behavior Code	Location of Species & Bearing/Direction of Travel Relative to Construction:	Location of Observer	Distance/ Direction to Animal (from Observer)	Distance/Direction to Pile (Between Animal and Pile)	Mitigation Used During Sighting	Mitigation Type	Visibility	% Glare	Weather Condition	Sea State & Wave Height	Tidal State	Swell Direction	Behavior Change/Response to Activity/Comments
[EON; EOF; PRE; POST; SSV; WC; S; MDE; MSD]	_____ _____	[SSV; V; VR; NONC; DP; PLO; OTH]	Jetty Station/ GPS Location	[GASL; HSEA; STSL; HPOR; DPOR; GRCA; HUMP; GRAY; UNLW; OTHR; UNKW]	_____ _____	_____ _____	_____ _____	____ M ____ F	____ Adult ____ Juvenile ____ Calves	See Behavior/ Sighting Cue Code Key		Jetty Station, Barge, Shore/ GPS, STA Location	(m) or (km) -	(m) or (km) -	Y N	DE SD	[B; P; M; G; E]		[S; PC; L; R; F; OC]	[L; M; H]	EM/FL S/L/H	[N; S; E; W]	
	_____ _____				_____ _____	_____ _____	_____ _____	____ M ____ F	____ Adult ____ Juvenile ____ Calves				(m) or (km) -	(m) or (km) -	Y N	DE SD							
	_____ _____				_____ _____	_____ _____	_____ _____	____ M ____ F	____ Adult ____ Juvenile ____ Calves				(m) or (km) -	(m) or (km) -	Y N	DE SD							
	_____ _____				_____ _____	_____ _____	_____ _____	____ M ____ F	____ Adult ____ Juvenile ____ Calves				(m) or (km) -	(m) or (km) -	Y N	DE SD							
	_____ _____				_____ _____	_____ _____	_____ _____	____ M ____ F	____ Adult ____ Juvenile ____ Calves				(m) or (km) -	(m) or (km) -	Y N	DE SD							
	_____ _____				_____ _____	_____ _____	_____ _____	____ M ____ F	____ Adult ____ Juvenile ____ Calves				(m) or (km) -	(m) or (km) -	Y N	DE SD							
	_____ _____				_____ _____	_____ _____	_____ _____	____ M ____ F	____ Adult ____ Juvenile ____ Calves				(m) or (km) -	(m) or (km) -	Y N	DE SD							
	_____ _____				_____ _____	_____ _____	_____ _____	____ M ____ F	____ Adult ____ Juvenile ____ Calves				(m) or (km) -	(m) or (km) -	Y N	DE SD							
	_____ _____				_____ _____	_____ _____	_____ _____	____ M ____ F	____ Adult ____ Juvenile ____ Calves				(m) or (km) -	(m) or (km) -	Y N	DE SD							
	_____ _____				_____ _____	_____ _____	_____ _____	____ M ____ F	____ Adult ____ Juvenile ____ Calves				(m) or (km) -	(m) or (km) -	Y N	DE SD							
	_____ _____				_____ _____	_____ _____	_____ _____	____ M ____ F	____ Adult ____ Juvenile ____ Calves				(m) or (km) -	(m) or (km) -	Y N	DE SD							
	_____ _____				_____ _____	_____ _____	_____ _____	____ M ____ F	____ Adult ____ Juvenile ____ Calves				(m) or (km) -	(m) or (km) -	Y N	DE SD							
	_____ _____				_____ _____	_____ _____	_____ _____	____ M ____ F	____ Adult ____ Juvenile ____ Calves				(m) or (km) -	(m) or (km) -	Y N	DE SD							
	_____ _____				_____ _____	_____ _____	_____ _____	____ M ____ F	____ Adult ____ Juvenile ____ Calves				(m) or (km) -	(m) or (km) -	Y N	DE SD							

Sighting #-chronological number of sightings; if resight of same animal, then 1.1, 1.2, etc

See Key for Codes and Definitions

See IHA/LOA for specific permit conditions

Contact Corps Immediately if Take Occurs of Marine Mammal Species Not Included in the IHA/LOA Permit, if Take Exceeds Permit Numbers, or if Other Species Have Been Take

if Dead or Dying Marine Mammal Species is Observed, Record Species Type, Date, Time, and Location of Observation; Photograph Species, and Immediately Notify Corps and NMF

Sighting Cue & Behavior Codes		
BR	Breaching	Leaps clear of water
CD	Change Direction	Suddenly changes direction of travel
CH	Chuff	Makes loud, forceful exhalation of air at surface
DI	Dive	Forward dives below surface
DE	Dead	Shows decomposition or is confirmed as dead by investigation
DS	Disorientation	An individual displaying multiple behaviors that have no clear direction or purpose
FI	Fight	Antagonistic interactions between two or more individuals
FO	Foraging	Confirmed by food seen in mouth
MI	Milling	Moving slowly at surface, changing direction often, not moving in any particular direction
PL	Play	Behavior that does not seem to be directed towards a particular goal; may involve one, two or more individuals
PO	Porpoising	Moving rapidly with body breaking surface of water
SL	Slap	Vigorously slaps surface of water with body, flippers, tail etc.
SP	Spyhopping	Rises vertically in the water to "look" above the water
SW	Swimming	General progress in a direction. Note general direction of travel when last seen [Example: "SW (N)" for swimming north]
TR	Traveling	Traveling in an obvious direction. Note direction of travel when last seen [Example: "TR (N)" for traveling north]
UN	Unknown	Behavior of animal undetermined, does not fit into another behavior
Pinniped only		
EW	Enter Water (from haul out )	Enters water from a haul-out for no obvious reason
FL	Flush (from haul out )	Enters water in response to disturbance
HO	Haul out (from water)	Hauls out on land
RE	Resting	Resting onshore or on surface of water
LO	Look	Is upright in water "looking" in several directions or at a single focus
SI	Sink	Sinks out of sight below surface without obvious effort (usually from an upright position)
VO	Vocalizing	Animal emits barks, squeals, etc.
Cetacean only		
LG	Logging	Resting on surface of water with no obvious signs of movement

Marine Mammal Species Codes	
CASL	California Sea Lion
HSEA	Harbor Seal
STSL	Steller Sea Lion
HPOR	Harbor Porpoise
DPOR	Dall's Porpoise
ORCA	Killer Whale
HUMP	Humpback Whale
GRAY	Gray Whale
UNLW	Unknown Large Whale
OTHR	Other
UNKW	Unknown

Event Codes	
E ON	Effort On
E OFF	Effort Off
PRE	Pre Watch
POST	Post Watch
SSV	Soft start-vibratory
WC	Weather Condition/Change
S	Sighting
M-DE	Mitigation Delay
M-SD	Mitigation Shutdown

Mitigation Codes	
DE	Delay onset of Pile Driving
SD	Shut down Pile Driving

Construction Type Codes	
SSV	Soft Start (Vibratory)
VI	Vibratory Pile Driving (Installation)
VR	Vibratory Pile Driving (Removal)
NONE	No Pile Driving
PLO	Rock Placement Only
OTH	Other

Visibility Codes	
B	Bad (<0.5km)
P	Poor (0.5 – 1.5km)
M	Moderate (1.5 – 10km)
G	Good (10 - 15km)
E	Excellent (>15km)

Weather Condition Codes	
S	Sunny
PC	Partly Cloudy
L	Light Rain
R	Steady Rain
F	Fog
OC	Overcast

Sea State and Wave Height Codes	
Light	0 – 3 ft
Moderate	4 – 6 ft
Heavy	>6 ft

<b>Glare</b>	Indicate total glare of observers' area of responsibility. Determine if observer coverage is covering 90 degrees or 180 degrees and document daily. Then assess total glare for that area. This will provide needed information on percentage of field of view that was poor due to glare.
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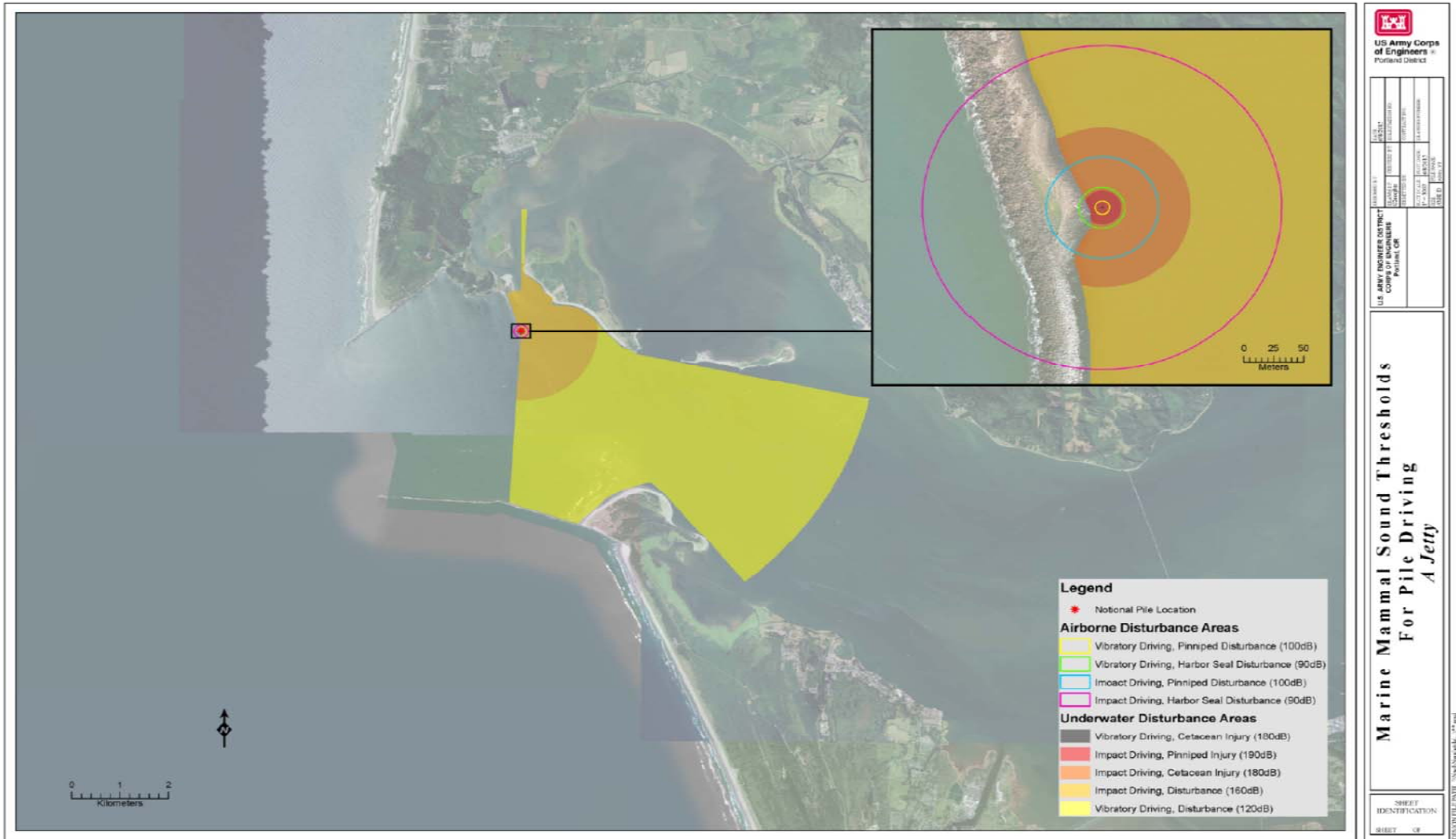
<b>Swell</b>	Indicate direction the swell is coming from (S for coming from the south). If possible, record direction relative to fixed location (Jetty A). Choose this location at beginning of monitoring project
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<b>Tide</b>	Indicate Ebb, Flood, Slack/Low/High Tide
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- Qualified marine mammal observer(s) must monitor shutdown and disturbance zone during all pile installation, removal, and maintenance activities.
- Monitoring will take place from 15 minutes prior to initiation through 30 minutes post-completion of pile driving.
- The shutdown zone will include all areas encompassed within 10m radius from pile installation. The shutdown zone will always be a minimum of 10 meters (33 feet) to prevent injury from physical interaction of marine mammals with construction equipment.
- Monitor the entirety of the underwater disturbance zone reasonably observable by binoculars.
- Visual monitoring will be conducted by qualified, trained marine mammal observers (hereafter "observer"). Visual monitoring will be implemented during all pile installation activities at all jetties. An observer has prior training and experience conducting marine mammal monitoring or surveys, and who has the ability to identify marine mammal species and describe relevant behaviors that may occur in proximity to in-water construction activities.
- Trained observers will be placed at the best vantage points practicable (from the construction barges, on shore, or jetty-side) to monitor for marine mammals and implement shutdown/delay procedures when applicable by calling for the shutdown to the hammer operator.
- If the shutdown zone is obscured by fog or poor lighting conditions, pile driving will not be initiated until the entire shutdown zone is visible.
- Prior to the start of pile driving, the shutdown zone will be monitored for 15 minutes to ensure that the shutdown zone is clear of marine mammals. Pile driving will only commence once observers have declared the shutdown zone clear of marine mammals.
- If a marine mammal approaches or enters the shutdown zone during pile driving, work will be halted and delayed until either the animal has voluntarily left and visually confirmed beyond the disturbance zone, or 15 minutes have passed without re-detection of the animal.
- If a marine mammal is observed in the acoustic disturbance zone, but not approaching or entering the shutdown zone, a "take" will be recorded and the work will be allowed to proceed without cessation. Marine mammal behavior will be monitored and documented.
- Monitor the area of potential sound effects for injury to marine mammals during pile driving. The observer position(s) will either be from the top of jetty or adjacent barge.
- Use a hand-held or boat-mounted GPS device or rangefinder to verify the required monitoring distance from the project site.
- Scan the waters within the area of potential sound effects using binoculars (10x42 or similar) or spotting scopes (20-60 zoom or equivalent), and by making visual observations.
- If weather or sea conditions restrict the observer's ability to observe, or become unsafe for the monitoring vessel(s) to operate, cease pile installation until conditions allow for monitoring to resume.
- Scan the waters for 15 minutes before and during all pile driving. If any species for which take is not authorized are observed within the area of potential sound effects during or 15 minutes before pile driving, the observer(s) will immediately notify the on-site supervisor or inspector, and require that pile driving either not initiate or temporarily cease until the animals have moved outside of the area of potential sound effects.
- Conduct pile driving only during daylight hours from sunrise to sunset when it is possible to visually monitor marine mammals.
- Use a marine mammal observation sheet to record the species, date, and time of any marine mammal sightings. Record marine mammal behavior and any communication between the observer and the contractor during pile driving.
- If the Corps observes any dead or dying marine mammal species in the action area, regardless of known cause:
  - o Record the species type (if known), date, time, and location of the observation
  - o Take a photograph of the specimen
  - o Immediately notify NOAA Fisheries.
- During land-based rock placement, vehicles and personnel will avoid as much as possible direct approach towards pinnipeds that are hauled out. If it is absolutely necessary to make movements towards pinnipeds, approach in a slow and steady manner to reduce the behavioral harassment to the animals as much as possible.



Figure 19. ZOI Map, Marine Mammal Sound Thresholds from Pile Driving, Jetty A





Steller Sea Lion



Steller Sea Lions

NAME



Steller Sea Lion (large male)



California Sea Lion (male)



California Sea Lion (male)



Harbor Seals

Characteristic	Steller Sea Lion	California Sea Lion	Harbor Seal
Forehead	Tends to be flatter Rounder in larger males	Tends to be rounded	Rounded
Color	Light brown (dark brown when wet)	Dark brown (black when wet)	Gray (often w/ spots)
Presence on S. Jetty	Adults and juveniles	Adult males only	Adults and juveniles
Abundance on S. Jetty	Very Common	Common	Very rare
Length	To 12 feet	To 8 feet	To 5 feet
Voice	Growl, roar	Varied, barking common	Generally silent

TABLE OF CONTENTS

	NOTICE FOR RECORD
NWPR 385-1-93	DIVE OPERATIONS BY CONTRACT
APPENDIX A	CONDUCT OF A DIVE/ROV OPERATION
APPENDIX B	DESCRIPTIONS OF DUTIES/QUALIFICATIONS
APPENDIX C	DIVE PLAN PACKAGE
APPENDIX D	USACE PORTLAND DISTRICT OFFICE OF DIVE SAFETY REQUIREMENTS EXCEEDING EM 385-1-1 MINIMUMS
APPENDIX E	PROCEDURE FOR CORRECTIVE ACTION



**U.S. Army Corps of Engineers**  
**Portland District: Office of Dive Safety**  
P.O. Box 2946, Portland, Oregon 97208-2946



## **NOTICE for RECORD**

Effective 1 May 2008, the U.S. Army Corps of Engineers Portland District will no longer utilize its Dive Pre-Qualification Program.

As a result, any domestic commercial dive contractor meeting the minimum standards set forth in the most recent edition of the USACE Safety and Health Requirements Manual, EM-385-1-1, and in the Portland District's Dive Safety Regulation, NWPR-385-1-93, will be eligible to compete for routine diving work.

Prospective prime and sub-contractor diving contractors should be aware that in addition to requiring compliance with the minimum standards set forth in the latest revisions of EM-385-1-1 and NWPR-385-1-93, beginning May 1, 2008, all solicitations and contracts for diving work will require that the following minimum criteria be met:

1. Submission of current company Safe Practices Manual or equivalent. It is preferred that companies have a copy of their Safe Practices Manual on file with the USACE Portland District Office of Dive Safety. However, if the Contracting Officer determines that sufficient time is available to allow post-solicitation evaluation, the Safe Practices Manual may be submitted with the bid or offer.
  - PLEASE NOTE: Portland District must sometimes schedule dive jobs on very short notice because of emergencies or other extenuating circumstances. In order to be eligible to bid on such jobs, dive contractors must have previously provided a copy of the current version of their Safe Practices Manual to the Portland District Office of Dive Safety for review.
2. Recent, documented experience specific to the type of facility and site-specific dive work being solicited and contracted for.
3. Compliance with all applicable OSHA regulations (29 CFR 1910, subpart T) and the U.S. Navy Diving Manual (current edition).
4. No Serious, Willful, or Repeat State or Federal dive-related OSHA safety violations within the 12 months preceding the due date of the bid or proposal.

Once awarded, contract performance is contingent upon the contractor's submission of an acceptable Dive Plan, Activity Hazard Analysis, and Emergency Management Plan for the specific diving operation to be conducted. It is the contractor's responsibility to ensure that all diver credentials and equipment certifications meet the standards outlined in the most recent editions of EM-385-1-1 and NWPR-385-1-93. EM 385-1-1 and NWPR 385-1-93, as applied by the USACE Portland District Office of Dive Safety, or supplemental waiver or applicable Memorandum of Agreement (MOA) shall be the controlling authority(s) for evaluation of dive-related credentials and certifications.

**Richard A Benoit: District Diving Coordinator: (503) 808-4312**  
**<https://www.nwp.usace.army.mil/op/diving>**  
**Fax: (503) 808-4329**

**Department of the Army**  
**Portland District: Army Corp of Engineers**  
**P.O. Box 2946**  
**Portland, Oregon 97208-2946**

**CENPP-CO**  
**Regulation, No. 385-1-93 (revised)**

**FINAL/OFFICIAL**  
**01 May 2009**

**Dive Operations by Contract**

**HISTORY:** This issue replaces NPPR 385-1-93 (97) / NWPR 385-1-93 (2008)

**SUMMARY:** This regulation establishing policy and procedures for underwater diving performed by USACE and / or U.S. military dive teams and / or private commercial dive companies in the USACE Portland District is revised to condense the material which was contained in the previous edition(s).

1. **PURPOSE:** This regulation defines policies and responsibilities for underwater diving operations performed by USACE, military and contract personnel for the U.S. Army Corps of Engineers, Portland (Oregon) District.

2. **APPLICABILITY:** This regulation is applicable to all activities under the control of the Portland District.

3. **REFERENCES:**

- a. EM 385-1-1, U.S. Army Corps of Engineers *Safety and Health Requirements Manual*, Section 30, CONTRACT DIVING OPERATIONS, Appendix O, and as applicable;
- b. NAVSEA 0994-LP001-0910 and NAVSEA 0994-LP001-0920, U.S. Navy Diving Manual, 6<sup>th</sup> Edition;
- c. Occupational Safety & Health Standards, 29 CFR 1910, Subpart T;
- d. ER 385-1-86, Government Diving Operations;
- e. NOAA Diving Manual Diving for Science and Technology, 5<sup>th</sup> Edition;
- f. United States Coast Guard, 1 CFR 197, Subpart B;

4. **POLICY:** It is the policy of the Portland District that all diving and / or other underwater operations are conducted in a prudent manner which will provide for maximum efficiency of operation and minimum potential hazard to personnel, property, equipment and environment. Further, it is the policy of the Portland District that diving operations be conducted only when the task to be performed cannot effectively be accomplished by alternatives to manned diving.

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\* This regulation replaces NPPR 385-1-93 (1997) / NWPR 385-1-93 (2008)

**5. GENERAL:**

- a. Diving operations in the Portland District will be conducted in accordance with the provisions of this regulation and the referenced documents listed above. Contracts issued for work or services within the District will reference this regulation or its most recent revision whenever diving services may be required as part of the contracted work. Wherever conflicting requirements exist, the more conservative requirement will be invoked. Diving is an inherently hazardous activity. Each dive will be carefully planned and executed according to the submitted dive plan. Each dive will be properly supported with adequate contractor and USACE personnel. Requirements of interfacing schedules and budgets, while a consideration when planning a dive operation, are not justification to waive dive safety measures or deviate from this or any referenced source. Requirements of these regulations may be waived only in immediate life threatening situations or by specific authority of the District Dive Coordinator or appointee.
- b. Unless exempted by a Memorandum of Agreement (MOA) with the USACE Portland District Office of Dive Safety, Military Dive Units must comply with all references and regulations contained herein.
- c. Surface Supply Air (SSA) is the preferred method of facilitating dive operations on USACE projects. Self Contained Underwater Breathing Apparatus (SCUBA) may be employed in instances where it is mutually determined by the dive team supervisor and District Dive Coordinator to be an effective alternative to SAS without an increased liability to diver safety. Unless waived by the District Dive Coordinator, SCUBA divers shall wear a harness, be line tethered, and maintain voice communication with surface personnel. SCUBA diving operations shall not be conducted on USACE projects without the specific, prior approval of the District Dive Coordinator or designate.
- d. NITROX (Enhanced Air) is a preferred gas for USACE Portland District dive operations. All NITROX and Mixed Gas Diving will comply and be performed in accordance with EM-385-1-1 and the U.S. Navy Dive Manual, 6<sup>th</sup> Edition.
- e. Snorkeling dives shall occur only with specific prior approval of the District Dive Coordinator and shall be conducted in accordance with EM-385-1-1. In no instance shall free diving (breath hold) techniques be allowed.

- f. USACE dive teams, Military dive units and Commercial dive companies and their employees must be determined to be legally capable and competently skilled prior to commencing any dive operation for the USACE Portland District. Any USACE, federal and / or state OSHA dive-related safety violation(s) is cause for exclusion from working in the USACE Portland District for a period to be determined by the DDC.
- g. Where conflicts between military standards and USACE regulations exist, a Memorandum of Agreement (MOA) or Memorandum of Understanding (MOU) must be obtained. Requirements for USACE, military, contractor, and dive personnel can be acquired by request from the USACE Portland District Office of Dive Safety.
- h. Verification of dive team qualifications, experience, and medical clearances shall be submitted for all dive station personnel including divers, dive supervisors, dive tenders, timekeepers, and recompression chamber operators to the USACE Portland District Office of Dive Safety for review and work eligibility determination by the District Dive Coordinator prior to the commencement of dive operations. Dive team qualification criteria will be established by the Office of Dive Safety.
- i. The District Dive Coordinator may elect to implement and enforce district-specific diving requirements. However, under no circumstance will operational requirements be less than specified in this regulation except during a declared emergency or with the expressed authorization of the District Diving Coordinator by direction of the District Commander.
- j. Dive teams under contract to the USACE Portland District are required upon direction of the District Dive Coordinator to participate and / or facilitate a simulated work-site specific dive accident, diver causality management exercise as coordinated by the Office of Dive Safety.
- k. **DIVE PLANS MUST INCLUDE THE FOLLOWING STATEMENT:**  
  
**“This Dive/Work plan and related dive and/or other underwater operations will strictly conform to all regulations set forth in NWPR 385-1-93, May 2009 Revision and EM 385-1-1 March 2008 revision or the most current revision. Failure to do so may result in the immediate termination of the dive operation, cancellation of the dive contract and / or loss of work eligibility status by the USACE Portland District Office of Dive Safety and / or other sanctions as deemed appropriate by the USACE Portland District.**

6. **RESPONSIBILITIES:**

A. **US Army Corps of Engineers (USACE):** The USACE is responsible to determine the need and scope of contract diving operations. The USACE is also responsible to define diving policy and the requirements to which USACE, military and contract divers will strictly adhere. In addition, the USACE will provide sufficient administrative and field support to ensure that diving operations are conducted safely and in accordance with applicable regulations. This task is accomplished by the personnel described below utilizing the activity sequence defined in Appendix A.

(1) **Office of Dive Safety:**

**District Dive Coordinator (DDC):**

**Deputy District Dive Coordinator (DDDC):**

The Portland District Commander will designate an Office of Dive Safety and appoint to it a District Dive Coordinator and Deputy who are responsible to the Commander for the proper management and administration of the Portland District Dive Safety Program. The specific duties of the District Diving Coordinator and Deputy District Dive Coordinator are listed in Appendix B.

(2) **Dive Safety Inspector (DSI):**

The District Commander shall appoint a sufficient number of staff DSI's to ensure that a DSI is present at all dives conducted by the USACE Portland District. In the event of a USACE Portland District staff DSI is unavailable; the Office of Dive Safety shall appoint a qualified DSI. The DSI will serve as the USACE Portland District's representative at each dive site where present. The DSI's responsibility is to ensure that the dive operation is adequately planned, equipped, staffed, and facilitated according to the submitted dive plan. The DSI is also responsible to ensure that dive conditions specified in the dive plan have been established by the USACE Portland District and the contractor. The DSI, in consultation with the Office of Dive Safety, has the on-site authority to delay or stop a dive any time concerns of dive plan implementation, environmental conditions, or safety exist. The DSI's sole responsibility is the safe facilitation of the dive operation. The DSI may serve as Project Clearance Holder. However, the DSI shall not, except in an emergency, assume other duties concurrent to the dive operation. The specific duties of the DSI are listed in Appendix B. Selection and scheduling of DSI's is the sole jurisdiction of the Office of Dive Safety, the District Dive Coordinator or appointee.



- (3) Dive-Mission Point of Contact:**  
Each USACE Portland District Operations Project Manager (OPM) will designate an on-site Dive-Project Point of Contact. The DMPC will act as a liaison between the Office of Dive Safety and on-site USACE project personnel to ensure all safety considerations are recognized and maintained throughout dive mission's duration. On-site Dive-Mission Point of Contact is responsible for assisting in the coordination of all lock-out / tag-out (LOTO) procedures. The Dive-Mission Point of Contact may also serve as Project Clearance Holder and DS I with DDC approval.
- (4) Project Clearance Holder:**  
Each USACE Portland District Project Operations Manager will designate an on-site staff member as Project Clearance Holder. The Project Clearance Holder is responsible for researching and assigning all lock-outs and tag-outs with either a direct or indirect impact on the dive operation. The Project Clearance Holder will facilitate the pre-dive lock-out/tag-out review, insure all required red card signatures are obtained, and authorize release of all lock-out/tag-outs upon conclusion of dive operation. The Project Clearance Holder may also serve as the District Project Point of Contact (DPPC) and DSI.
- (5) District Safety Office Representative:**  
The District Commander shall appoint a Dive Safety Representative from the District Safety Office to provide collateral support, exclusive of operational dive plan, specific to non-diving project safety concerns such as Emergency Management Plans and Activity Hazard Analysis.
- B. USACE, Military Dive Units and/or Commercial Dive Contractors:**  
Military Dive Units or Commercial Dive Contractors have the primary responsibility to accomplish dive objectives efficiently and safely as well as to adhere to all applicable regulations. Any USACE, federal and / or state OSHA violation is cause for exclusion from working in the USACE Portland District for a period of one year from the violation citation date.
- (1) Safe Practice Manual:**  
USACE and Military dive units and Commercial dive contractors shall develop and maintain a Safe Practice Manual. This manual shall encompass all aspects of their dive program and be available at all times at the dive location to each diver team member and the Dive Safety Inspector. This manual must be submitted annually to the USACE Portland District Office of Dive Safety for review and approval or upon

any significant changes in unit or company procedures, organizational structure, or staffing.

**NWPR 385-1-93  
FINAL/OFFICIAL  
01 May 2009**

**(2) Dive Plans:**

A site and job-specific dive plan, corresponding emergency management plan (EMP), activity hazard analysis (AHA), accident prevention plan (AAP), and Spill Plan conforming to the requirements of Appendix C shall be prepared and submitted for review and acceptance to the Office of Dive Safety for each dive operation. These documents shall be submitted at least 10 working days prior to the start of dive operations and be available for review at the dive site.

**NOTE: ALL DIVE PLANS MUST INCLUDE THIS STATEMENT:**

**“This Dive/Work plan and related dive and/or other underwater operations will strictly conform to all regulations set forth in NWPR 385-1-93, May 2009 Revision and EM 385-1-1 March 2008 revision or the most current revision. Failure to do so may result in the immediate termination of the dive operation, cancellation of the dive contract and / or loss of work eligibility status by the USACE Portland District Office of Dive Safety and / or other sanctions as deemed appropriate by the USACE Portland District.**

**(3) Diving Activity Coordination:**

USACE and Military dive units and commercial dive contractors shall participate in the following meetings for each dive as described in Appendix A.

- a. Joint Review (If deemed necessary by DDC);
- b. Lock-out/Tag-out Review;
- c. Pre-Dive Work / Safety Conference;
- d. Post-Dive Debriefing.

**(4) Diving Personnel:**

USACE and Military dive units and commercial dive contractors shall provide sufficient qualified personnel for each dive as defined in NWPR 385-1-93 (2009) and / or EM-385-1-1 Appendix O (2008) revisions..

**(5) Dive and Dive-Support Equipment:**

USACE and Military dive units and dive contractors dive-support and diving equipment shall comply with the requirements of NWPR 385-1-93, 01 May 2009 Revision, EM 385-1-1, Section 30 E March 2008 revision and other referenced documents as determined by the USACE Portland District Office of Dive Safety. Equipment certifications shall be submitted

to the Office of Dive Safety for review at least three (3) working days prior to commencement of dive operations.

**NWPR 385-1-93**  
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**01 May 2009**

**(6) Diving Operations:**

USACE and Military dive units and commercial dive contractors shall comply with the requirements of NWPR 385-1-93, May 2009 Revision, EM 385-1-1, Section 30, B. for SCUBA operations, Section 30, C for SSA applications and Appendix O March 2008 revision, and / or applicable Memoranda of Agreement (MOA) or by determination by the USACE Portland District Office of Dive Safety.

**(7) Insurance Requirements:**

Dive contractors will, at their own expense, provide and maintain during the entire performance of the dive contract, a minimum of the following kinds of insurance:

- a.** Workmen's Compensation and Employer's Liability Insurance including Federal Longshoreman and Harbor Workers and/or Jones Act Insurance: if they apply, in the amount specified by the applicable Federal and/or State authorities.
- b.** Comprehensive, Bodily Injury, and Property Damage Liability: minimum limits of \$1,000,000 for injury to or death of any person; and \$1,000,000 for each accident or occurrence for bodily injury liability; and \$300,000 for each accident or occurrence for property damage liability.
- c.** Automobile bodily injury and property damage liabilities: minimum limits of \$1,000,000 for injury or death of any one person and \$1,000,000 for each accident or occurrence for bodily injury liability; and \$300,000 for each accident or occurrence for property damage liability.
- d.** Single General Aggregate Limits or Combined Single Unit Coverage: If single general aggregate limits or combined single unit coverage is obtained for general liability and/or automobile liability coverage, minimum amounts will be in the sum of the personal injury and property damage coverage required above. Umbrella Form Excess Liability insurance coverage will be added to general liability and automotive liability coverage to determine if minimum insurance limits are met.

**NWPR 385-1-93  
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01 May 2009**

**(8) Resolution of Conflicting Agency Regulations:**

Whenever possible, conflicting intra or inter government agency regulations will be resolved with the use of Memorandums of Agreement (MOA's). When MOA's are not available, resolution will be by joint verbal and / or written agreement between the USACE Portland District Office of Dive Safety and the dive unit supervisor of the agency being utilized. In all instances of regulatory conflict, the Portland District's District Dive Coordinator will be the final authority.

**FOR THE COMMANDER:**

**Richard A. Benoit  
District Dive Coordinator  
USACE Portland District  
01 May 2009**

**ENCLOSURES:**

**Appendix A,  
Appendix C, D, E:**

**Appendix B with Addendum 1**

**USACE / NWP DISTRIBUTION:**

**All Supervisors  
Office of Counsel  
Dive Safety Inspectors  
Military Dive Units**

**Operations Project Managers  
Office of Dive Safety  
Safety Office  
Commercial Dive Contractors**

## APPENDIX A

### CONDUCT OF A DIVE / ROV OPERATION

The following is a brief description of events which constitute the planning and execution of a typical USACE Portland District project dive or ROV operation. It may be modified, with the concurrence of the District Dive Coordinator, to suit the particular requirements of a specific mission. Each aspect of the sequence should, however, be considered.

#### Dive Planning Sequence:

1. A condition is identified by project personnel where an underwater operation may be required. This may be, but not limited to, inspection / maintenance / construction, dredge fleet support, or fisheries mission.
2. The need for an underwater operation is determined by the Project Manager and / or Resident Engineer or Biologist in conjunction with the District Dive Coordinator. A written dive request is submitted to the Office of Dive Safety. Excluding emergencies, this request should be made approximately 20 working days prior to the anticipated dive dates.
3. If required by the District Dive Coordinator, a joint review to address technical and safety concerns is held with members of the operational / technical team staff and the Office of Dive Safety. Excluding emergencies, this review should be held 10 working days prior to commencement of a dive operation.
4. Operational mode is selected; Diver or Remotely Operated Vehicle (ROV).
5. Mission dates are selected.
6. A qualified on-site USACE Dive-Project Point of Contact and / or Clearance Holder are selected by the Project Operations Manager or their designee. If available, a qualified USACE Dive Safety Inspector is selected by the Office of Dive Safety from project personnel.
7. Appropriate departmental funding requests are made at least 20 working days prior to mission.
8. Once the operation has been defined, a request for underwater operation and corresponding specification (SOW) is written by the Project Point of Contact specifying dive objectives, type of dive, equipment and personnel requirements.

- 8. (Continued)** Project Manager, Dive-Project Point of Contract, and Office of Dive Safety collaborate to determine required clearances.
- 9.** The Office of Dive Safety prepares a review of and edits the Scope of Work (SOW) document.
- 10.** Scope of Work, Dive Specifications, and request for a USACE dive team, military dive unit, or commercial dive contractor and, if needed, qualified contract Dive Safety Inspector is submitted to the appropriate District Division by the Office of Dive Safety for funding.
- 11.** Project Manager, Dive-Project Point of Contract, and Office of Dive Safety determine required clearances, permits and permissions.
- 12.** A USACE Dive Team, Military Dive Unit, or Commercial Dive Contractor is selected by appropriate District Division.
- 13.** A USACE Dive Team, Military Dive Unit, or Commercial Dive Contractor prepares and submits to the Office of Dive Safety for review and acceptance by the DDC, a job-specific Dive Plan Package consisting of Dive Plan including dive-team personnel and required certifications, site-specific Emergency Management Plan and Activity Hazard Analysis, Accident Prevention Plan, Spill Plan, MOA's, requests for support equipment and funding if applicable.
- 14.** Immediately prior to dive operations commencing, a pre-dive conference is conducted by the Dive Safety Inspector with Project Personnel, Dive Team members and others as deemed appropriate by the Office of Dive Safety. At a minimum, the pre-dive conference will cover:
  - a.** Objectives and scope of dive operation;
  - b.** Dive site conditions, hazards, environmental, and site-specific considerations;
  - c.** Simulated job-site specific dive accident, dive causality management exercise plan if directed by the USACE Portland Office of Dive Safety and District Dive Coordinator or assignee;
  - d.** Review techniques and equipment to be used;
  - e.** Review dive team and dive station equipment certifications;
  - f.** Determine dive-support equipment placement;
  - g.** Placement of Government and Dive-Team personnel;
  - h.** Detailed review of dive plan, safety protocols, emergency management plan, activity hazard analysis, and accident prevention plan;
  - i.** Review site-specific clearances, permits, and permissions.

- j. Questions;
- k. Final acceptance from Dive Team Dive Supervisor of dive plan package by Dive Safety Inspector.

**NOTE: Once accepted, no changes shall be made to the dive plan, including change of personnel, without the specific and expressed permission of the Office of Dive Safety.**

**NOTE: ALL DIVE PLANS SHALL INCLUDE THE FOLLOWING STATEMENTS:**

1) "This Dive/Work plan and related dive and/or other underwater operations will strictly conform to all regulations set forth in NWPR 385-1-93, May 2009 Revision and EM 385-1-1 March 2008 revision or the most current revision. Failure to do so may result in the immediate termination of the dive operation, cancellation of the dive contract and / or loss of work eligibility status by the USACE Portland District Office of Dive Safety and / or other sanctions as deemed appropriate by the USACE Portland District.

2) "If for any reason the dive plan is altered in mission, depth, personnel, or equipment, the DDC shall be contacted in order to review and accept the alteration prior to actual operation."

15. Physical walk-through inspections of all clearances is made and lock-out / tag-out (LOTO) cards are signed by each member of the inspection party once prior to commencing any dive operation or upon any changes to lock-outs / tag-outs. Lock-outs/tag-outs will be review as requested by the Office of Dive Safety, the Project Clearance Holder, the Dive Safety Inspector and/or Dive Team Supervisor.

**NOTE: A dive operation shall not commence unless clearances are inspected and signed by the Dive Safety Inspector, Project Clearance Holder, Dive Team Dive Supervisor and other personnel as deemed necessary.**

16. Final review of diver and dive-support equipment by dive team and Dive Safety Inspector. A check of all required surface communications is performed.

17. Perform dive operation.

**NOTE: Except during an emergency, diver in-water shifts shall not exceed four (4) hours per calendar day. No member of the dive team shall work in excess of 12 hours per calendar day.**

- 18.** A post-dive review shall be facilitated at the conclusion of each dive day by the Dive Safety Inspector and the Dive-Team Dive Supervisor. Divers are advised of the nearest recompression chamber's location and on limitations to their post-dive activities.

**NOTE: Any post-dive adjustments to the dive plan must have the specific and expressed approval of the Office of Dive Safety.**



## APPENDIX B

### DESCRIPTIONS OF DUTIES / QUALIFICATIONS

#### **USACE: Portland District: Office of Dive Safety**

##### **District Dive Coordinator:**

##### **Deputy District Dive Coordinator:**

1. Manages USACE Portland District Dive Safety Program, serves as Portland District subject-matter expert(s) for all underwater activities that involve diving and diving alternatives.
2. Maintains and enforces USACE and Portland District dive policies.
3. Reviews requests for dive operations and sanctions the necessity of proposed dives in the Portland District.
4. Consults with Operations Division Chief or designate to determine emergency dive circumstances.
5. Maintains records and other documentation for USACE, Military, and contract dive organizations and dive personnel. Standardizes processes and procedures for supporting documentation evaluation.
6. Establishes minimum eligibility and qualification requirements and standards for dive companies, military dive units, and all dive team personnel. Reviews submittals and eligibility documentation.
7. Coordinates dive-related training programs.
8. Serves as an on-site Dive Safety Inspector as needed.
9. Serves as USACE Portland District Engineer's (Commander's) representative and liaison to the government, military, and commercial dive communities.
10. Resolves conflicts in field interpretations of regulations and requirements. Propose and submits for acceptance Memorandums of Agreements (MOA's).

- 11.** Reviews for acceptance Dive Plans, Emergency Management Plans, Safe Practices Manuals and Activity Hazard Analysis.
- 12.** Coordinates dive teams under contract to the USACE Portland District in an annual simulated work-site specific dive accident, dive causality management exercise.
- 13.** Deputy District Dive Coordinator serves as District Dive Coordinator as determined by DDC and/or Operations Chief.
- 14.** Qualifications of District Dive Coordinator:
  - a.** Must be a certified dive master possessing 5-10 years of commercial and/or military dive experience. Instructor level preferred;
  - b.** Must successfully complete a HQUSACE approved or equivalent, Diving Coordinator / Dive Safety Administrator / Dive Supervisor Training Course and Working Diver Course;
  - c.** Must successfully complete specialized hyperbaric chamber training;
  - d.** Must successfully complete NITROX and / or mixed gas dive training;
  - e.** Must possess valid CPR, 1<sup>st</sup> Aid, and Dive Emergency Oxygen Administration training. Instructor level preferred. EMT, with dive accident management (DMT and / or Emergency Dive Accident Manager (EDAM)) certification desired;
  - f.** Must be HazMat certified;
  - g.** Must be OSHA 30 Certified.
- 15.** Qualifications of Deputy District Dive Coordinator:
  - a.** Must be a certified diver possessing 3-5 years of dive experience. Dive master level preferred;
  - b.** Must successfully complete a HQUSACE approved or equivalent, Diving Coordinator / Dive Safety Administrator / Dive Supervisor Training Course and Working Diver Course;
  - c.** Must successfully complete specialized hyperbaric chamber training;
  - d.** Must successfully complete NITROX and / or mixed gas dive training;
  - e.** Must possess valid CPR, 1<sup>st</sup> Aid, and Dive Emergency Oxygen Administration training. EMT with dive accident management (DMT and/or EDAM) certification preferred;
  - f.** Must be HazMat certified;
  - g.** Must be OSHA 30 Certified.

**Contract / Military Dive Safety Inspector:  
USACE Staff Dive Safety Inspector; DSI's:**

1. Serves as the Office of Dive Safety on-site representative and liaison between Office of Dive Safety and all dive operation and project personnel;
2. Facilitates the on-site conduct of all diving operations as assigned by the District Diving Coordinator occurring within the USACE Portland District;
3. Insures that all diving comply with pertinent OSHA and USACE regulations and policies governing dive operations;
4. Reports all safety concerns to the Office of Dive Safety. On authority of the Office of Dive Safety, will halt diving operations if necessary;
5. With the aid and assistance of the commercial contractor or military Dive Supervisor shall participate in a lock-out/tag-out review and inspection and facilitate a pre-dive safety briefing before onset of any diving operations;
6. Participate annually in a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety;
7. Acts as the dive-site point of contact with Project Control Room Operators or Ship's Master. Informs Control Room and / or Ship's Bridge of diver in-water/out-of-water status. Acts as primary point of contact in case of emergency;
8. Reports to the Office of Dive Safety at the start and conclusion of all diving operations. Evaluates in writing performance of dive contractors and their personnel. Secures video recording and dive logs to be forwarded to the Office of Dive Safety. Makes recommendations to improve performance of dive operation and affiliated personnel;
9. Participate annually in a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety.

**NOTE: Except with the expressed authority of the District Dive Coordinator, the Dive Safety Inspector will not approve nor accept modification(s) to the Dive Plan or Scope of Work by the dive team.**

**10. Qualifications of USACE Dive Safety Inspector:**

- a. Should be a certified diver possessing 1-3 years of dive-related experience. Advanced certification preferred;
- b. Must successfully complete a HQUSACE approved or equivalent, Diving Coordinator / Dive Safety Administrator / Dive Supervisor Training Course. Working Diver certification desired;
- c. Must successfully complete specialized hyperbaric chamber training if inspecting a dive operation where a hyperbaric chamber is utilized;

- d.** Must successfully complete NITROX and / or mixed gas dive training if inspecting NITROX or Mixed Gas dive operation;
- e.** Must possess valid CPR, 1<sup>st</sup> Aid, and Dive Emergency Oxygen Administration training. BLS or EMT with dive accident management endorsements (DMT and/or EDAM) preferred;
- f.** HazMat certification preferred;
- g.** Shall have, at a minimum, completed the 30-hour OSHA / USACE Construction Safety Class or an equivalent course applicable to the work to be performed and given by qualified instructors. Such training shall have been within the last three (3) years;
- h.** USACE DSI staff must assist a senior Dive Safety Inspector with three (3) dive operations after initial HQUSACE training. Contract DSI shall be observed working as a DSI at a USACE dive operation by a senior USACE DSI at least once as part of their qualification process;
- i.** Serve as a Dive Safety Inspector for a minimum of three (3) USACE dive operations during each calendar year.

**NOTE: In addition, Contract / Military Dive Safety Inspectors shall comply with all items listed in Addendum 1 to Appendix B, Contract Specifications for Contract Dive Safety Inspectors.**

**District Safety Office Representative:**

- 1.** The District Commander shall appoint a Dive Safety Representative from the District Safety Office to provide collateral support, exclusive of operational dive plan, specific to non-diving project safety concerns such as Emergency Management Plans and Activity Hazard Analysis.

**Contract / Military Dive Team Personnel:**

**1. Dive Supervisor:**

- a.** Must meet or exceed all qualifications listed in the most recent revision of EM 385-1-1, Section 30 and NWPR 385-1-93. All training documentation shall be in compliance with 29 CFR 1910.410;
- b.** Must be sponsored by an eligible Commercial Dive Company, Military Dive Unit, or USACE Dive Team;
- c.** Must have five (5) years experience and/or 500 hours accumulated bottom time as a commercial and/or military diver contiguous with application for dive supervisor;

**FINAL/OFFICIAL**

- d.** Must have supervised a diversity of dive operations, minimum of three (3) USACE and/or other commercial projects within the previous 12 months;
- e.** As a dive-team member, must have at least two (2) years experience working USACE Portland District or similar USACE projects; minimum of three (3) per year or an aggregate of six (6);
- f.** Must have documented training in and experience supervising specialty dive operations. Examples include but are not limited to: NITROX/Mixed Gas, Surface Decompression with Oxygen (Sur-D-O2); Altitude Diving, Deep Diving, etc.;
- g.** Must have documented training and current certification in the operation of and experience as primary operator of required (dual-lock, multi-place) recompression chamber(s) and associated equipment;
- h.** Must possess valid and current CPR, 1<sup>st</sup> Aid, and Dive Emergency Oxygen Administration provider training, BLS or EMT with dive accident management endorsements. DMT and/or EDAM preferred;
- i.** Shall be familiar with the current edition of the U.S. Army Corps of Engineers Safety & Occupational Health Manual: EM 385-1-1 March 2008, and NWPR 385-1-93 May 2009 or most recent revision;
- j.** Shall have knowledge of USACE Portland District document submittal requirements and procedures for diving operations; including but not limited to Dive Plans, Emergency Management Plans, and Activity Hazard Analysis;
- k.** Participate annually in a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety;
- l.** Must have a Letter of Recommendation from current employer affirming and requesting designation as a Dive Supervisor;
- m.** Shall not have any USACE, NWP Office of Dive Safety citations and / or supervised dive site issued a Federal and / or State OSHA violation within the previous 36 months prior to application;
- n.** Qualification as a Dive Supervisor and acceptance to supervise a USACE Portland District dive project is at the sole discretion of the Office of Dive Safety.

**NWPR 385-1-93  
01 May 2009  
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**2. Diver:**

- a. Must meet or exceed all qualifications listed in EM 385-1-1, Section 30 March 2008, and NWPR 385-1-93 May 2009 or most recent revision. All training documentation shall be in compliance with 29 CFR 1910.410;
- b. Must be sponsored by an eligible Commercial Dive Company, Military Dive Unit, or USACE Dive Team;
- c. Must have completed an accredited college, commercial, US military or other government-sponsored dive school;
- d. With less than five (5) years of documented dive-team experience, must submit an official sealed school transcript with pre-qualification request;
- e. Must have at least one (1) year experience working as a tender on USACE Portland District dive operations working a minimum of three (3) projects; or must have at least one (1) year experience working as a diver and/or tender on other USACE or commercial dive operations working a minimum of six (6) projects;
- f. Must possess valid CPR, 1<sup>st</sup> Aid, and Dive Emergency Oxygen Administration training, BLS or EMT with dive accident management endorsements. DMT and/or EDAM preferred;
- g. Must have documented training in and a minimum of one (1) year experience diving according to protocols required by a specialty dive operation. Examples include but are not limited to: Mixed Gas, Surface Decompression with Oxygen (Sur-D-O2); Altitude Diving, Deep Diving, etc.;
- h. Should participate annually in a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety.
- i. Must have a Letter of Recommendation from current employer affirming and requesting designation as a Diver;
- j. Must not have any documented USACE, NWP Office of Dive Safety citations and / or been a subject of Federal and / or State OSHA violations, or drug and / or alcohol related convictions within the previous 36 months prior to application;
- k. Qualification as a Diver and acceptance to work on a USACE Portland District dive project is at the sole discretion of the Office of Dive Safety.

**NWPR 385-1-93  
01 May 2009  
FINAL/OFFICIAL**

### **3. Tender:**

- a. Must meet or exceed all qualifications listed in EM 385-1-1, Section 30 March 2008 and NWPR 385-1-93 May 2009 or most recent revision. All training documentation shall be in compliance with 29 CFR 1910.410;

- b. Must be sponsored by a Commercial Dive Company, Military Dive Unit, or USACE Dive Team;
- c. Must have attended an accredited college, commercial, US military or other government-sponsored dive school;
- d. With less than five (5) years of documented diving-team experience, must submit an official school transcript with qualification request;
- e. Must possess valid CPR, 1<sup>st</sup> Aid, and Dive Emergency Oxygen Administration training, BLS or EMT with dive accident management endorsements. DMT and / or EDAM preferred;
- f. Should participate annually in a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety.
- g. Must have a Letter of Recommendation from current employer affirming And requesting designation as a Tender;
- h. Must not have any documented USACE, NWP Office of Dive Safety citations and / or been a party to any Federal and / or State OSHA violations, or drug and / or alcohol related convictions within the previous 36 months prior to application;
- i. Qualification as a Tender and acceptance to work on a USACE Portland District dive project is at the sole discretion of the Office of Dive Safety.

**NOTE:** As per EM 385-1-1, Section 1, 01.A.17 – “The contractor shall employ a competent person at each project (is) to function at the Site Safety and Health Officer (SSHO)” ... who, as a minimum, “must have completed the 30-hour OSHA Construction Safety Class within the previous three years to beginning the dive project.” This assignment may be collateral to duties previously listed above exclusive of the in-water diver or standby diver.

**NOTE:**

1. **CPR certification training, with AED endorsement, must be successfully completed annually and comply with the most current Emergency Cardiac Care Conference (ECCC) guidelines;**

**NWPR 385-1-93  
01 May 2009  
FINAL/OFFICIAL**

2. **Dive-Accident Oxygen 1<sup>st</sup> Aid certification training must be successfully completed bi-annually. Curriculum must include demand inhalator, non-rebreather, and pocket mark application;**
3. **First Aid certification training may be successfully completed every two or three years depending on training agency requirements. First Aid curriculum must include in-line**

**stabilization, back-boarding, neck collaring, five (5)-minute field neurological examination, and drowning intervention.**

- 4. All Dive Team members shall be Basic Life Support (BLS) certified from a nationally accredited certification agency.**



## APPENDIX C

### DIVE PLAN PACKAGE

**1. Dive Plans:** An operational Dive Plan shall be developed by the contractor for each diving operation. A separate Dive Plan will be developed for all separate dive operations even if performed by the same dive team on the same day. Project-specific information needed to write the Dive Plan may be obtained from the USACE Portland District Office of Dive Safety. This Dive Plan must be accepted by the Office of Dive Safety prior to the commencement of any dive operations. A copy of the accepted Dive Plan Package must be at the dive site at all times and be available to the government representative upon request. The Dive Plan will be reviewed in detail at the pre-dive conference. No part of the Dive Plan shall be altered, revised or changed in any part without the expressed consent of the District Dive Coordinator or Deputy. All Dive Plans become a part of the contract file.

At a minimum, the Dive Plan shall meet all elements required by the most current edition of EM 385-1-1 March 2008 and NWPR 385 1-93 May 2009 and will include:

- a. Purpose of dive;
- b. Nature of work to be performed;
- c. Names of all dive team members with each dive team member's assignment clearly defined;
- d. Updated and / or amended diver or dive-team credentials;
- e. Date, time, and location of dive;
- f. Diving method to be utilized, SCUBA, SSA, Mix Gas, or NITROX;
- g. Type of dive; No-decompression, Decompression, High Altitude, etc.;
- h. Recompression schedule and method if required. Planned safety stops;
- i. Diving platform: boat, man basket, land;
- j. Anticipated dive environment, to include but no be limited to, expected surface and bottom conditions, visibility, temperature, currents, etc.;
- k. Planned rotation of divers and dive-team members;
- l. Type of hand tools being utilized if any;
- m. Post-dive procedures, including dive log completion and diver observation.

**n. NOTE: ALL DIVE PLANS MUST INCLUDE THE FOLLOWING STATEMENT:**

**“This Dive/Work plan and related dive and/or other underwater operations will strictly conform to all regulations set forth in NWPR 385-1-93, May 2009 Revision and EM 385-1-1 March 2008 revision or the most current revision. Failure to do so may result in the immediate termination of the dive operation, cancellation of the dive contract and / or loss of work eligibility status by the USACE Portland District Office of Dive Safety and / or other sanctions as deemed appropriate by the USACE Portland District.**

**2. Emergency Management Plan:** A site-specific Emergency Management Plan shall be prepared in accordance to EM 385-1-1, Section 30.A.19 by the contractor for each dive and submitted to the Office of Dive Safety for acceptance with the Dive Plan. At a minimum, content of the Emergency Management Plan shall include, but not be limited to:

- a.** Location, distance from dive site, and telephone number of nearest operational (dual-lock, multi-place, recompression chamber in compliance with EM 385-1-1 if not located at the dive site;
- b.** Location and telephone number(s) of nearest hospital(s);
- c.** Method of transportation (air or land), including distance from dive site, approximate time to dive site, telephone numbers;
- d.** Emergency access to dive site;
- e.** Procedures, including telephone numbers or alternate methods of communications, to activate emergency management services at facility where dive operation is being performed;
- f.** Site-specific protocols for extricating an entrapped or fouled diver;
- g.** Actions to overcome loss of life-support or mission-support equipment
- h.** Actions to overcome interruption of life-support or mission-support equipment;
- i.** Actions to locate / recover a lost-diver;
- j.** Actions to extricate an injured diver or dive support personnel;
- k.** Actions to extinguish a fire.

**NOTE: All dive teams under contract to the USACE Portland District are required upon request of the District Dive Coordinator to annually participate and / or facilitate a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety.**

**3. Activity Hazard Analysis:** The AHA shall define the activities being performed and identify the sequences of work, the specific hazards anticipated, site conditions, equipment, materials, and control measures to be implemented to best eliminate and/or reduce each hazard. An Activity Hazard Analysis (AHA) represents the dive team's best effort to anticipate and mitigate or prevent the adverse effects of equipment failure, weather, or other unexpected events. Each AHA will be job and site specific. The AHA will be reviewed in detail at the pre-dive safety conference. Copies of applicable tag-out/lock-out clearances obtained from the dive site will be attached to the AHA. The AHA shall be prepared in accordance with the US Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, paragraph 01, A.09.

**4. Required Supporting Documentations**

- **Accident Prevention Plan;**
- **Spill Prevention Plan;**
- **Dive Team Certifications and qualification documents:**
  1. **Recent Dive Logs (previous six (6) months);**
  2. **Company Endorsement and Letter of Instatement;**
  3. **Current BLS, CPR, First Aid, O2;**
  4. **Current "Physician-signed" Medical Approval to Dive;**
  5. **Other Specialty Endorsements, including but not limited to:**
    - **OSHA 30 Hour Safety Course;**
    - **OSHA 40-hour Hazardous Materials Course;**
    - **NITROX, Mix Gas; Saturation;**
    - **DMT / EDAM (for Recompression Chamber Operators)**
    - **Dive School Diploma and Course Transcripts;**
- **Dive Station Equipment Certifications:**
  1. **Certificates of Air Quality;**
  2. **Gauge Calibrations (Pneumatic and or Pressure);**
  3. **Dive Hose / Umbilical Hydrostatic Test Results;**
  4. **Recompression Chamber;**

**APPENDIX D**

**USACE PORTLAND DISTRICT OFFICE OF DIVE SAFETY  
REQUIREMENTS EXCEEDING EM 385-1-1 MINIMUMS**

Due to local dive environments and site-specific hazards, the following list exceeding minimum standards published by the USACE Safety and Health Requirements Manual, EM 385-1-1 March 2008 Revision has been established by the Portland District Office of Dive Safety and incorporated in NWPR 385-1-93 Revision May 2009. Adherence to these enhanced standards is mandatory for all USACE Portland District dive operations unless waived by agreement or governed by a Memorandum of Agreement (MOA) on file in the USACE Portland District Office of Dive Safety. This Appendix D may be amended without notice to include additional requirements as determined by the Office of Dive Safety.

**Diver Equipment:**

1. When utilizing Surface Supplied Air, bailout bottles must be pressurized to a minimum of 3,000 PSI plus or minus 10-percent and hold at least 50 cubic feet of air.
2. All bailout systems must utilize a diver worn standard submersible pressure gauge (SPG) viewable in-water by the diver and attached to the first stage by a minimum 36-inch high pressure hose.
3. Diving in water 38-degrees-F or less, or when diving in contaminated water, first stage regulators attached to bailout bottles as part of a bailout system shall be environmentally sealed and / or cold-water rated by USN list of approved equipment.
4. All diver dive helmets must be worn, utilized, and maintained according to manufacture standards.
5. Divers diving in water less than 46-degree-F for accumulated bottom times exceeding 45 minutes or less than 36 degrees-F for accumulated bottom times exceeding 20 minutes shall require hot water diving systems. Unless waived by the Portland District of Dive Safety, variable-volume dry suits with appropriate thermal protection shall be utilized by divers working in waters 60 degrees or less. Utilizing a quick-disconnect inflator hose is mandatory for all dry suit diving.

Appropriate thermal protection (undergarment made of polartec, thinsulate, or equivalent material) shall be worn by the diver(s) when utilizing a dry suit system in water colder than 60-degrees-F. Exposure shall be limited to 180 minutes (2 hours) without a minimum of one (1) hour surface rest in a dive-site's sheltered and heated environment.

6. A sheltered and heated environment must be provided to the standby diver at the dive site in weather where the air temperature with or without wind chill is 50-degrees-F or less.
7. Hot water suit systems shall have at least a non-adjustable high temperature limit switch (125-degree maximum), in combination with at least one of the following safety devices to prevent diver scalding; expansion tank, boiler shutdown water flow switch, pressure relief valve on volume tank and/or boiler, locking control box.
8. Diver umbilical lines shall be secured at two (2) separate attachment points on the diver's harness. Lines are required to be secured at a minimum of one (1) attachment point.

**Diver-Support Equipment:**

1. A minimum of 60 minutes of portable oxygen (Jumbo-D or M-9 type cylinder) with appropriate delivery system (demand inhalator, demand resuscitator, non-re-breather or pocket mask with O2 inlet) shall be immediately available at all dive sites.
2. A backboard, Miller Board or Stokes litter with floatation, head & neck immobilizer, and a minimum of four color-coded straps with quick-release buckles shall be immediately available at all dive sites.

**Dive-Team Qualifications:**

1. All on-site dive team surface-support members shall be certified in Basic Life Support (BLS) with emergency dive accident management endorsements. At least one non-diving member of the dive team shall be certified as a Diving Medical Technician (DMT / EDAM); Emergency Medical Technician (EMT-B) with emergency dive-accident management endorsements preferred. Certifications must be documented, current and on file with the USACE Portland District's Office of Dive Safety.

2. CPR certification training, with AED endorsement, must be successfully completed annually and comply with the most current Emergency Cardiac Care Conference (ECCC) guidelines;
3. Dive-Accident Oxygen 1<sup>st</sup> Aid certification training must be successfully completed bi-annually. Curriculum must include demand inhalator, non-rebreather, and pocket mark application;
4. First Aid certification training shall be successfully completed every two or three years depending on training agency requirements. First Aid curriculum must include in-line stabilization (back-boarding, collaring, head immobilization), five (5)-minute field neurological examination, and drowning intervention.
5. Diver-team members with less than five (5) years experience must submit an official dive-school transcript as part of their application package.
6. To maintain USACE work eligibility, divers, dive team members, and dive contractors are required to have worked on an Army Corps of Engineers dive operation (preferably on a Portland District project) within the previous 12 months.
7. Dive physicals should be performed and / or supervised by a physician familiar with hyperbaric medicine. All dive physicals must utilize a standardized industry dive medical form and be signed and stamped by the examining physician and should have the physician's DEA number affixed. Dive physicals given by a physician assistant, nurse, or other medical practitioner will not be accepted.
8. Each diver shall undergo a re-examination to receive medical clearance to dive after experiencing any pressure-related diving injury requiring medical attention including but not limited to ruptured tympanic membrane, pneumothorax, decompression sickness, etc., or other non-diving illness or injury requiring emergency intervention or hospitalization.

**Miscellaneous:**

1. A prime dive contractor or diving sub-contractor or any company subsidiary shall not have received a Serious, Willful, or Repeat State or Federal dive-related OSHA safety violations within the 12 months preceding the contract scheduled start date.
2. Video recordings of dive operations shall be in DVD format.
3. All vessels utilized to facilitate a dive operation in a BRZ shall have an appropriate secondary, independent means of motorized power.
4. Subcontractors of a dive operation shall provide a "Certificate of Insurance" to owner(s) of any vessel jointly utilized during said dive operation.
5. Subcontractors of a dive operation shall name owner(s) of any vessel jointly utilized as an "Additionally Insured" for the duration of said dive operation
6. All dive teams under contract to the USACE Portland District are required upon request of the District Dive Coordinator to annually participate and / or facilitate a simulated work-site specific dive accident, dive causality management exercise as coordinated by the Office of Dive Safety.
7. The maximum allowable daily in-water work period for divers is four (4) hours per calendar day. The maximum allowable daily work shift for all dive-team members is 12 hours per calendar day.
8. Upon written application to the USACE District Dive Coordinator, waivers to the listed requirements in NWPR 1-93 may be granted by the Office of Dive Safety for cause.
9. **ALL DIVE PLANS SHALL INCLUDE THIS STATEMENT:**  
  
**"This Dive/Work plan and related dive and/or other underwater operations will strictly conform to all regulations set forth in NWPR 385-1-93, May 2009 Revision and EM 385-1-1 March 2008 revision or the most current revision. Failure to do so may result in the immediate termination of the dive operation, cancellation of the dive contract and / or loss of work eligibility status by the USACE Portland District Office of Dive Safety and / or other sanctions as deemed appropriate by the USACE Portland District."**

## APPENDIX E

### PROCEDURE FOR CORRECTIVE ACTION

**1. Policy Statement:** The United States Army Corps of Engineers Portland District's Office of Dive Safety provides a progressive system of Corrective Action to notify dive contractors, divers, and other dive team members, and contract dive safety inspectors when unsatisfactory and / or unsafe conduct, communication, or performance occurs at or during an USACE annual re-qualification audit or dive operation as determined by the Office of Dive Safety. Although this policy outlines a three-step process, it is within the discretion of the Office of Dive Safety to elect any step within the policy up to and including immediate withdrawal of work eligibility status and removal from the dive site.

**NOTE:** Corrective action taken against a dive contractor, dive-team member, or contract dive safety inspector by the Portland District Office of Dive Safety may be grounds for disqualification to work at other USACE dive projects in other USACE Districts.

**2. Purpose:** The purpose of this policy as applied by the Portland District Office of Dive Safety and Office of Council is to establish and outline the process for identifying, documenting, analyzing, and implementing corrective and preventative actions. The intent of this policy is to provide remediation and guidance to correct violations of EM 385 1-1, NWPR 385-1-93, and / or other referenced material applicable to dive operations in the USACE's Portland District as well as punitive sanctions if necessary.

**3. Process:** Dependent on the seriousness of deficiency and / or number of violations, a Notice of Deficiency, a Notice of Unsatisfactory Performance, or a Notice of Action will be written by the Office of Dive Safety and delivered to the offending party by registered mail within five (5) working days of infraction(s).

**NOTE:** Any federal and / or state OSHA dive-related safety violation is cause for immediate exclusion from working in the USACE Portland District for a period of one year from the initial violation citation date, exclusive of the policy procedures contained within NWPR-1-93, 01 May 2009 Revision.



**STEP ONE:**

**Notice of Deficiency:** This is a proactive process intended to prevent reoccurrences of safety concerns and / or regulatory violations as observed and interpreted by the Office of Dive Safety or its representative. A written response outlining corrective action addressing the infraction(s) and / or cause of the Notice of Deficiency as well as long-term preventative solutions are required to be submitted to the Office of Dive Safety within 10 working days of receipt.

**STEP TWO:**

**Notice of Unsatisfactory Performance:** This is a reactive process initiated when a response and / or corrections required by the Notice of Deficiency are not initiated. A Notice of Unsatisfactory Performance may also be written for concerns, including but not limited to, inability to perform according to contract or multiple and/or egregious violations of safety and regulatory policy as observed and interpreted by the Office of Dive Safety or its representative. A written response outlining corrective action addressing the infraction(s) and/or cause of the Notice of Unsatisfactory Performance as well as long-term preventative solutions are required to be submitted to the Office of Dive Safety within five (5) working days of receipt.

**STEP THREE:**

**Notice of Action:** This is the penalty phase when corrective actions and penalties are proposed by the Office of Dive Safety. This action may include, but not be limited to, contracting charge backs, work eligibility status audit, sanction, and / or permanent disqualification from working on USACE Portland District projects.

**INTERNAL RIGHT OF APPEAL:** Recipients of a Notice of Deficiency or Notice of Unsatisfactory Performance shall appeal to the Office of Dive Safety. If a consensual corrective agreement cannot be reached between contractor and the Office of Dive Safety, a final appeal may be made to the USACE Portland District's Office of Council. Recipients of a Notice of Action shall appeal directly to the USACE Portland District's Office of Council.