

<b>WORK ORDER</b> <b>STATE OF WASHINGTON</b> <b>(AGENCY)</b> 	<b>Work Order #</b>	<b>Contract #</b>
	20380	#32206

This Work Order is issued under the provisions of a CUSTOMER contract. The services authorized are within the scope of services set forth in the Purpose of the contract. All rights and obligations of the parties shall be subject to and governed by the terms of the contract including any subsequent modifications, which are hereby incorporated by reference.

**Purpose**

The purpose of the Ebey Island Restoration Feasibility Study is to determine the technical and social feasibility of restoring Chinook salmon habitat to WDFW-owned land on Ebey Island, to quantify the benefits and impacts of feasible restoration alternatives, and to recommend a preferred alternative.

**Statement of Work**

The work to be completed by AMEC and its subcontractors on this project comprises six elements:

1. Public Engagement and Facilitation
2. Ecological Effects Analysis
3. Social, Cultural, Recreation, and Economic Effects Analysis
4. Geotechnical Survey and Analysis
5. Hydrodynamic Modeling and Geomorphology Analysis
6. Engineering Evaluation and Design

The tasks, deliverables and due dates associated with each element are listed in Attachment A.

**Deliverables are subject to review and approval by AGENCY prior to payment.**  
*(Attach additional sheets if necessary)*

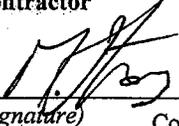
<b>Start Date</b>	March 15, 2010	<b>End Date</b>	May 1, 2011
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<b>Budget</b>				
Description / Task	Quantity	Unit (Hrs.)	Unit Cost	Total
1. Public Engagement and Facilitation			\$	\$27,050
2. Ecological Effects Analysis			\$	\$15,375
3. Social, Cultural, Recreation, and Economic Effects Analysis			\$	\$33,825
4. Geotechnical Survey and Analysis			\$	\$20,500
5. Hydrodynamic Modeling and Geomorphology Analysis			\$	\$56,375
6. Engineering Evaluation and Design			\$	\$76,875
Business Objective Supported:			AGENCY shall pay an amount not to exceed	\$230,000

<b>Cost Codes</b>						
Prog Index	Org Code	Fund	Appn Index	Object	Sub-Object	Dollars

*Both the Agency and the Contractor are responsible for ensuring work performed is within the scope of this Work Order. The Agency must monitor proper compliance with the terms of this Work Order and RCW 39.29. Any changes or amendments to this Work Order must be in writing and acknowledged by the GA Coordinator.* **IN WITNESS WHEREOF, the parties have executed this Work Order.**

**Contractor**

  
 AMEC Bothell Bus. Mgn. 3/11/10  
 (Signature) Contractor Authorized Representative (Date)

**W/O Manager** Margaret Strong (Print Name)

**Telephone No.** 425-864-2096

**AGENCY Approval**

  
 (Signature) AGENCY W/O Manager (Date)

**W/O Manager** Lee Rolle

**Telephone No.** 360-902-2424

Email:	<i>meg.strong@amec.com</i>	Email:	<i>Lee.Rolle@dfw.wa.gov</i>
<b>GA Acknowledgement</b>			
Signature:		Date:	
GA Coordinator:		Email:	Phone:



## **Attachment A: Scope of Work Ebey Island Restoration Feasibility Study**

The work to be completed by AMEC and its subcontractors on this project comprises six elements:

- 1. Public Engagement and Facilitation**
- 2. Ecological Effects Analysis**
- 3. Social, Cultural, Recreation, and Economic Effects Analysis**
- 4. Geotechnical Survey and Analysis**
- 5. Hydrodynamic Modeling and Geomorphology Analysis**
- 6. Engineering Evaluation and Design**

The tasks, deliverables and due dates associated with each element are listed below. All work will be performed on a time and materials basis. Costs associated with each task are estimates only and may be moved between tasks by agreement between both AMEC and WDFW.

### **Element # 1: Public Engagement and Facilitation**

#### Tasks

1. Develop public engagement strategy
2. Convene Ebey Island Restoration Project Advisory Council (EIRPAC) and facilitate their involvement in the alternatives development, selection and evaluation process
3. Conduct outreach and facilitate involvement of local landowners and general public in the alternatives development, selection and evaluation process (up to six meetings)
4. Write "Public Outreach and Stakeholder Engagement" section of the Ebey Island Restoration Feasibility and Design Report

#### Deliverables and Due Dates

- Database of ecological indicators, criteria, and evaluation results – due February 1, 2011
- Memorandum re public engagement strategy – due April 15, 2010
- Meeting agendas, presentation materials, minutes (due within 5 days of each meeting)
- Letters and email (for WDFW signature) responding to public comments – as needed
- Public Outreach and Stakeholder Engagement section to be incorporated into Project Report – due March 1, 2011

### **Element #2: Ecological Effects Analysis**

#### Tasks

1. Compile existing information
2. Identify indicators and evaluation criteria and methods for evaluating ecological effects, including impacts to Chinook and other species
3. Assist in the process of identifying and evaluating conceptual restoration alternatives



4. Assist in the process selecting and evaluating top 3 restoration alternatives
5. Assist in the process of selecting, evaluating and refining a preferred restoration alternative
6. Write “Ecological Effects Analysis” section of the Ebey Island Restoration Feasibility and Design Report

#### Deliverables and Due Dates

- Database of ecological indicators, criteria, and evaluation results – due February 1, 2011
- Ecological Effects Analysis section to be incorporated into Project Report – due February 1, 2011

### **Element # 3: Social, Cultural, Recreation, and Economic Effects Analysis**

#### Tasks

1. Compile information on existing social, cultural, recreational, and economic (RCRE) conditions
2. Identify indicators and evaluation criteria and methods for evaluating RCRE effects
3. Describe existing conditions
4. Assist in the process of identifying and evaluating conceptual restoration alternatives
5. Assist in the process selecting and evaluating top 3 restoration alternatives
6. Assist in the process of selecting and evaluating a preferred restoration alternative
7. Assist in the process of selecting, evaluating and refining a preferred restoration alternative
8. Write “Social and Economic Effects Analysis” section of the Ebey Island Restoration Feasibility and Design Report

#### Deliverables and Due Dates

- Database of social and economic indicators, criteria, and evaluation results – due February 1, 2011
- GIS maps displaying social and economic impacts for different alternatives – due February 1, 2011
- “Social, Cultural, Recreation, and Economic Effects Analysis” section to be incorporated into Project Report – due February 1, 2011

### **Element # 4: Geotechnical Survey and Analysis**

#### Tasks

1. Compile geotechnical information on existing surface, subsurface, and groundwater conditions
2. Develop criteria and methods for evaluating the geotechnical feasibility of different restoration alternatives
3. Identify data needs and develop geotechnical survey strategy
4. Conduct geotechnical survey
5. Describe existing conditions
6. Assist in the process of identifying and evaluating conceptual restoration

- alternatives
7. Assist in the process selecting and evaluating top 3 restoration alternatives
  8. Assist in the process of selecting, evaluating and refining a preferred restoration alternative
  9. Write “Geotechnical Report” section of the Ebey Island Restoration Feasibility and Design Report

#### Deliverables and Due Dates

- “Geotechnical Report” (technical memorandum) to be incorporated into Project Report – due June 1, 2010

### **Element # 5: Hydrodynamic Modeling and Geomorphology Analysis**

#### Tasks

1. Compile available information on topographic, hydrologic and geomorphological conditions
2. Develop criteria and methods for evaluating the hydrodynamic and geomorphological impacts of different restoration alternatives
3. Describe existing conditions
4. Develop an integrated hydrodynamic model/ applied geomorphology strategy for predicting the impacts of different alternatives (e.g., dike system modifications) on water elevations and scour on site and adjacent properties over a range of simulated flow conditions.
5. Assist in the process of identifying and evaluating conceptual restoration alternatives
6. Assist in the process selecting and evaluating top 3 restoration alternatives
7. Assist in the process of selecting, evaluating and refining a preferred restoration alternative
8. Write “Hydrodynamic and Geomorphologic Assessment Report”

#### Deliverables and Due Dates

- Technical memorandum: “Existing Hydrodynamic and Morphologic Conditions” – due July 1, 2010
- “Hydrodynamic and Geomorphologic Assessment Report” to be incorporated into Project Report – due February 1, 2011

### **Element # 6: Engineering Evaluation and Design**

#### Tasks

1. Compile available information on existing conditions
2. Develop criteria and methods for evaluating the technical feasibility, opportunities, and constraints of different restoration alternatives
3. Describe existing conditions
4. Identify, describe and evaluate conceptual restoration alternatives
5. Select, describe and evaluate top 3 restoration alternatives
6. Select, describe, evaluate and refine a preferred restoration alternative



7. Write “Engineering Evaluation and Design Report” and Ebey Island Restoration Feasibility and Design Report

Deliverables and Due Dates

- “Engineering Evaluation and Design Report” to be incorporated into Project Report – due February 1, 2011
- Draft Project Report: “Ebey Island Restoration Feasibility and Design Report” – due March 1, 2011
- Final Project Report: “Ebey Island Restoration Feasibility and Design Report” – due May 1, 2011

**Project Schedule**

The project schedule indicates the timing and duration of the major tasks shared by all elements in the preceding Scope of Work.

<b>Project Phases and Milestones</b>	<b>Task start date</b>	<b>Task end date</b>
1. Compile existing information	Mar 15, 2010	May 1, 2010
2. Describe existing conditions	Apr 15, 2010	Jun 1, 2010
3. Develop procedures and criteria to identify and evaluate restoration alternatives	Apr 15, 2010	Jul 1, 2010
4. Identify 10-12 candidate alternatives; select three alternatives for further study	May 1, 2010	Aug 1, 2010
5. Evaluate 3 alternatives; select a preferred alternative	Aug 1, 2010	Nov 1, 2010
6. Evaluate, refine, and describe a preferred alternative	Nov 1, 2010	Feb 1, 2011
7. Draft project report	Feb 1, 2011	Mar 1, 2011
8. Finalize project report	Mar 1, 2011	May 1, 2011