

## **1.0 INTRODUCTION**

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On October 10, 2008, LNG Development Company, LLC and Oregon Pipeline Company, LLC filed applications with the Federal Energy Regulatory Commission (FERC or Commission) under sections 3(a) and 7(c), respectively, of the Natural Gas Act (NGA). In Docket No. CP09-6-000 and pursuant to section 3(a) of the NGA, LNG Development Company, LLC seeks authorization to site, construct, and operate a liquefied natural gas (LNG) import terminal in Clatsop County, Oregon. Pursuant to section 7(c) of the NGA and as filed in Docket No. CP09-7-000, Oregon Pipeline Company, LLC seeks a certificate of Public Convenience and Necessity (Certificate) to construct and operate a 121-mile-long, 36-inch-diameter sendout pipeline from the proposed LNG import terminal in Warrenton, Clatsop County to Molalla Gate Station in Clackamas County, Oregon. For the purpose of this Biological Assessment (BA), the two applicants are collectively referred to as Oregon LNG. The project, including the LNG import terminal, natural gas pipeline (mainline and lateral), compressor station, and associated aboveground facilities, is referred to as the “Oregon LNG Project” or the “project.”

The FERC is the federal agency responsible for authorizing onshore LNG terminals and interstate natural gas transmission facilities, as specified in section 311(e)(1) of the Energy Policy Act of 2005 (EPAAct) and the NGA. For the Oregon LNG Project, in accordance with section 313(b)(1) of the EPAAct, the FERC is the lead federal agency for the coordination of all applicable federal authorizations, and is also the lead federal agency for preparation of an environmental impact statement (EIS) in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA). The U.S. Coast Guard (Coast Guard), the U.S. Army Corps of Engineers (COE), the U.S. Environmental Protection Agency (EPA), and the U.S. Fish and Wildlife Service (FWS) are cooperating agencies for the development of the EIS. A cooperating agency has jurisdiction by law or special expertise with respect to environmental impacts involved with the proposal, and is involved in the NEPA analysis.

The FERC has prepared this BA in fulfillment of the consultation requirements of section 7 of the Endangered Species Act (ESA) (16 United States Code [USC] 1536(a)(2)). Section 7 requires consultation with the National Marine Fisheries Service (NMFS) for marine and anadromous species, and the FWS for freshwater species and wildlife, if there is a proposed “action” that may affect listed species or their designated critical habitat. An “action” is defined broadly to include funding, permitting, and other regulatory actions (50 Code of Federal Regulations [CFR] 402.02).

If significant modifications to the project are proposed that could change our conclusions in this BA, we would reinitiate consultation with NMFS and FWS.

### **1.1 PROJECT FACILITIES AND ACTIVITIES**

The major components of the proposed project and associated activities of the project that are considered in this BA are:

#### **LNG Import Terminal Facilities**

- a marine terminal facility including an LNG carrier turning basin in the Columbia River;
- a pier with a ship berth for one LNG carrier;

- a marine cargo transfer system consisting of three LNG unloading arms, a single vapor return arm, and a single LNG transfer pipeline connected to the onshore facility via a piping trestle;
- three full-containment LNG storage tanks, each with a usable storage capacity of 160,000 cubic meters (m<sup>3</sup>);
- an LNG spill containment and collection system;
- vaporization, vapor handling, regasification, and sendout systems;
- interconnecting facilities including piping, electrical, and control systems;
- an electrical substation at the terminal;
- administrative offices, a control room, and warehouse, security, and other buildings and enclosures;
- utilities, telecommunications, and other supporting systems;
- marine transport to and from the terminal, including docking and un-docking;
- use of tugboats during docking and un-docking maneuvers; and
- dredging in the turning basin and disposal of dredged material.

#### **Pipeline Facilities**

- a 121-mile, 36-inch-diameter mainline pipeline (mainline) with a capacity of up to 1.5 billion standard cubic feet per day (Bscfd) of natural gas. The mainline would be routed through Clatsop, Tillamook, Columbia, Washington, Yamhill, Marion, and Clackamas Counties in Oregon (figure 1.1-1);
- a 9.5-mile, 24-inch-diameter lateral pipeline (lateral) with a capacity of up to 0.8 Bscfd of natural gas. The lateral would begin at MP 52.0 in Timber, Oregon and terminate at the NW Natural South Mist Pipeline Extension, in Washington County, Oregon (figure 1.1-1); and
- associated facilities, including metering and regulating facilities, corrosion protection systems, pigging facilities, and mainline valves.

#### **Compressor Station**

- a single 21-megawatt (MW), 28,000-horsepower (hp) electrically driven gas compressor station near milepost (MP) 52.0 along the mainline, located in Timber, Washington County, Oregon.

#### **Nonjurisdictional Facilities**

- a 1.7-mile-long, 115 kilovolt (kV) high-voltage power line from Pacific Power's existing Warrenton Substation to the terminal; and
- an electrical substation and transmission line that would connect Bonneville Power Administration (BPA) power lines to the compressor station.

The project would be constructed and operated in compliance with applicable federal, state, and local regulations. As required by 18 CFR 380.12, Oregon LNG has prepared Environmental Reports in support of its Application under section 3 of the NGA for authorization to site, own, and construct the terminal; and under section 7 of the NGA for a Certificate of Public Convenience and Necessity for the proposed pipeline and compressor station. Our analysis in this BA is based on the most current proposed pipeline route, including the route variations filed by Oregon LNG in July 2009 and August 2010.



## 1.2 AGENCY CONSULTATION AND COLLABORATION

To comply with section 7 of the ESA we<sup>1</sup> have conducted informal consultations with the FWS and NMFS regarding the presence of federally listed species in the vicinity of the project. In addition, Oregon LNG, as a non-federal party and in accordance with 18 CFR Part 380.13(b), has been assisting the Commission staff in meeting section 7 requirements by conducting informal consultations with the FWS, NMFS, and other resource agencies (federal and state), since the project pre-filing phase in 2007. Oregon LNG conducted a range of interagency and subgroup meetings to address project issues affecting threatened and endangered species, including aquatic species and terrestrial species (federal and state listed), as well as species of special concern such as migratory bird species. These meetings were focused on specific issues and concerns such as: waterbody crossings, riparian areas, wetlands, habitat categorization, dredging, cooling and ballast water withdrawal and discharge, construction methods, construction timing (e.g., relative to in-water work windows), best management practices (BMPs), conservation measures, and mitigation measures. FERC staff and HDR Engineering Inc. (FERC's third party contractor) participated in these meetings, which are listed in table 1.2-1. In addition, Oregon LNG reviewed survey protocol with the FWS and Oregon Department of Forestry (ODF) prior to conducting field surveys. State and federal agencies reviewed scope and assumptions used in hydrodynamic modeling and assumptions used for modeling potential entrainment (lethal take) of listed salmonids in ballast and cooling water prior to the modeling done by Oregon LNG.

Oregon LNG engaged in this collaborative effort to identify regulatory drivers, data needs and protocols for data collection, and due diligence discussions about avoidance and minimization of potential project effects. In the process, Oregon LNG developed several technical documents and memoranda, which are included as appendices to this BA. The BA references other technical memoranda and reports prepared by Oregon LNG that are not presented in the appendices but are available on the FERC's eLibrary; accession numbers for these reports are included in section 7.0.

Date	Interagency/Sub Group	Topics Discussed
7/8/2008	Stream Crossing Subgroup	<ul style="list-style-type: none"> <li>• macro-siting of proposed HDD crossings</li> <li>• future restoration activities</li> <li>• waterbody crossing methods</li> <li>• scour potential scales</li> <li>• in-water work timing and fish salvage plans</li> </ul>
8/14/2008	Stream Crossing Subgroup	<ul style="list-style-type: none"> <li>• waterbody crossing methods</li> <li>• potential frac-out impacts on listed fish and spawning areas</li> <li>• county permits needed for waterbody crossings</li> <li>• timing of HDD crossings during in-water work windows</li> <li>• late construction technique changes requiring reinitiation of consultation</li> <li>• in-water work timing and fish salvage plans</li> <li>• mitigation measures</li> </ul>

<sup>1</sup> The pronouns "we," "us," and "our" refer to the environmental staff of the FERC's Office of Energy Projects.

TABLE 1.2-1 (continued)

## Meetings Organized by Oregon LNG for the Oregon LNG Project

Date	Interagency/Sub Group	Topics Discussed
11/21/2008	Habitat Categorization Subgroup	<ul style="list-style-type: none"> <li>• habitat types</li> <li>• project approach to ephemeral and intermittent waterbodies</li> <li>• overview of the draft conceptual plan for Oregon LNG habitat mitigation</li> <li>• ratios for compensatory mitigation for various habitat types</li> <li>• in-kind and out-of-kind mitigation</li> </ul>
12/2/2008	Mitigation Subgroup	<ul style="list-style-type: none"> <li>• project approach to wetlands and impacts</li> <li>• wetland crossing review</li> <li>• wetland mitigation</li> </ul>
12/2/2008	Interagency Group	<ul style="list-style-type: none"> <li>• activities of other project subgroups</li> <li>• project timeline and milestones</li> <li>• potential pipeline alignment changes based on the subgroup deliberations and agency field reviews</li> </ul>
12/8/2008	Fish Terminal Subgroup	<ul style="list-style-type: none"> <li>• ballast water screening approaches and challenges</li> </ul>
12/9/2008	Fish Terminal Subgroup	<ul style="list-style-type: none"> <li>• dredging impacts</li> <li>• issues associated with the terminal structures</li> <li>• whale strikes</li> <li>• hydrodynamic modeling and dredged material characterization</li> <li>• approach to mitigation</li> </ul>
12/17/2008	Stream Crossing Subgroup	<ul style="list-style-type: none"> <li>• approach for providing drawings of waterbody crossings</li> <li>• direction for future waterbody crossing subgroup meetings</li> </ul>
1/6/2009	Interagency Group	<ul style="list-style-type: none"> <li>• activities of other project subgroups</li> <li>• update on agency review of the application</li> </ul>
1/16/2009	Washington Agency	<ul style="list-style-type: none"> <li>• project overview</li> <li>• permit application timing</li> <li>• Washington Department of Ecology's (WA Ecology) spill prevention program</li> <li>• dredged material placement issues</li> </ul>
1/22/2009	Stream Crossing Subgroup	<ul style="list-style-type: none"> <li>• waterbody crossing principles</li> <li>• HDD feasibility assessment</li> <li>• fish passage issues</li> <li>• waterbody crossing field trips</li> </ul>
2/3/2009	Interagency Group	<ul style="list-style-type: none"> <li>• activities of other project subgroups</li> <li>• schedule update</li> <li>• FERC data requests</li> </ul>
2/3/2009	Fish Terminal Subgroup	<ul style="list-style-type: none"> <li>• terminal design cross sections</li> <li>• approach to terminal stormwater treatment</li> <li>• removal of dikes as a potential mitigation action</li> <li>• whale strike issues</li> <li>• underwater noise impacts on cetaceans and pinnipeds</li> </ul>
2/3/2009	Dredging Subgroup	<ul style="list-style-type: none"> <li>• dredged material characterization</li> </ul>
2/11/2009	Fish Terminal Subgroup	<ul style="list-style-type: none"> <li>• ballast and cooling water screening</li> <li>• terminal fire suppression system</li> </ul>

TABLE 1.2-1 (continued)

## Meetings Organized by Oregon LNG for the Oregon LNG Project

Date	Interagency/Sub Group	Topics Discussed
2/26/09	Stream Crossing Subgroup	<ul style="list-style-type: none"> <li>• waterbody crossings – approach/response to proposed changes</li> <li>• fish passage issues</li> <li>• waterbody crossing effects analysis</li> <li>• conceptual mitigation plan</li> <li>• compensatory mitigation ratios</li> </ul>
3/4/2009	Interagency Group	<ul style="list-style-type: none"> <li>• activities of other project subgroups</li> <li>• updated applicant schedule</li> </ul>
3/20/2009	Stream Crossing Subgroup	<ul style="list-style-type: none"> <li>• waterbody crossing plans and types</li> <li>• waterbody crossing changes</li> <li>• scour analysis</li> <li>• waterbody temperature modeling</li> <li>• effects analysis</li> </ul>
3/23/2009	Dredging Subgroup	<ul style="list-style-type: none"> <li>• hydrodynamic modeling results – berth/turning basin</li> <li>• hydrodynamic modeling results – dredge placement</li> </ul>
4/1/2009	Fish Terminal Subgroup	<ul style="list-style-type: none"> <li>• ballast and cooling water screening</li> <li>• fish entrainment study assumptions</li> </ul>
4/1/2009	Interagency Group	<ul style="list-style-type: none"> <li>• activities of other project subgroups</li> <li>• BA submittal schedule</li> <li>• mitigation plan update</li> <li>• HDD geotechnical investigation update</li> </ul>
5/5/2009	Fish Terminal Subgroup	<ul style="list-style-type: none"> <li>• review of applicable authorities and organizations for approval of fish screen design</li> <li>• assessment of the potential size of fish entrainment</li> <li>• fire suppression system</li> </ul>
5/7/2009	Stream Crossing Subgroup	<ul style="list-style-type: none"> <li>• waterbody crossing drawings/plans</li> <li>• conceptual plan for riparian restoration</li> <li>• streambank and streambed restoration methods</li> <li>• mitigation</li> </ul>
6/3/2009	Interagency Group	<ul style="list-style-type: none"> <li>• activities of other project subgroups</li> </ul>
7/1/2009	Interagency Group	<ul style="list-style-type: none"> <li>• activities of other project subgroups</li> <li>• environmental issues list</li> </ul>
8/12/2009	Mitigation Subgroup	<ul style="list-style-type: none"> <li>• compensatory mitigation for fish and terrestrial habitat impacts</li> </ul>
9/9/2009	Fish Terminal Subgroup	<ul style="list-style-type: none"> <li>• dredged material disposal plan</li> <li>• dredging effects on green sturgeon and eulachon</li> <li>• mitigation options for effects</li> <li>• verifying modeling of fish entrainment</li> </ul>
10/7/2009	Mitigation Subgroup	<ul style="list-style-type: none"> <li>• conceptual mitigation plan and agency feedback</li> <li>• addressing uncertainties</li> <li>• legacy projects</li> </ul>
12/9/2009	Interagency Group	<ul style="list-style-type: none"> <li>• overview of activities since last meeting</li> <li>• FERC pipeline site review</li> <li>• update on COE section 404/10 permit process</li> </ul>

TABLE 1.2-1 (continued)		
Meetings Organized by Oregon LNG for the Oregon LNG Project		
Date	Interagency/Sub Group	Topics Discussed
1/6/2010	Interagency Group	<ul style="list-style-type: none"> <li>• Migratory Bird Treaty Act (MBTA) compliance</li> <li>• revised Agricultural Mitigation Plan</li> <li>• terminal access road</li> </ul>
2/3/2010	Interagency Group	<ul style="list-style-type: none"> <li>• MBTA technical memorandum</li> <li>• terminal access road</li> <li>• updates for BA and draft EIS</li> <li>• agency contacts</li> </ul>
2/9/2010	Mitigation Subgroup	<ul style="list-style-type: none"> <li>• Conceptual Mitigation Plan</li> <li>• establishing process to complete effects analysis for mitigation</li> <li>• providing certainty that compensatory mitigation would be completed</li> </ul>
3/3/2010	Interagency Group	<ul style="list-style-type: none"> <li>• Mitigation Subgroup meeting</li> <li>• MBTA technical memorandum and memorandum of understanding</li> <li>• eulachon study</li> <li>• local permits/approvals</li> </ul>
6/2/2010	Interagency Group	<ul style="list-style-type: none"> <li>• Washington State applications</li> <li>• local permits/approvals</li> <li>• mitigation site status</li> </ul>
7/7/2010	Interagency Group	<ul style="list-style-type: none"> <li>• Port of Astoria Lease</li> <li>• local permits/approvals</li> <li>• BA update</li> </ul>
8/4/2010	Interagency Group	<ul style="list-style-type: none"> <li>• local permits/approvals</li> <li>• minor modifications to terminal layout and pipeline alignment</li> <li>• status of property proposed as mitigation site</li> <li>• meeting with FWS regarding waterbody crossing information</li> </ul>
9/1/2010	Interagency Group	<ul style="list-style-type: none"> <li>• local permits/approvals</li> <li>• FERC data request and supplemental filings</li> <li>• mitigation site update</li> <li>• section 401 and 408 applications</li> </ul>

The coordination that has taken place to date has helped guide and develop the information presented in this BA. FERC staff independently reviewed the information filed by Oregon LNG, and information gathered through interagency and focused group meetings and used it to develop the effect determinations presented in later sections.

In accordance with section 7 of the ESA, through informal consultation with the FWS and NMFS, Oregon LNG identified 42 federally listed threatened, endangered, or candidate species as potentially occurring in the project area. Table 1.2-2 lists these species, their federal and state status, and survey status (i.e., surveys remaining). These species include 8 marine mammals (7 whales and 1 pinniped), 4 sea turtles, 16 fish species (not including bull trout), 5 bird species, 3 invertebrates (butterflies), and 6 plant species. In addition, the Columbia River has been proposed as critical habitat for bull trout; however, this species is not known to occur in the project area. Oregon LNG conducted project specific surveys for rare plants, marbled murrelet, and northern spotted owl. Information on the distribution of other species came from state and federal agency sources, the Federal Registry, and the Oregon Natural Heritage Information Center database.

TABLE 1.2-2

## Federally Listed Species Potentially Occurring in the Vicinity of the Oregon LNG Project

Species	Status <sup>a</sup>		Portion of Action Area			Survey Status
	Federal	State	Marine	Columbia River <sup>b</sup>	Pipeline	
<b>Marine Mammals</b>						
Blue whale ( <i>Balaenoptera musculus</i> )	E	OR – E WA – E	X			Not required
Fin whale ( <i>Balaenoptera physalus</i> )	E	OR – E WA – E	X			Not required
Humpback whale ( <i>Megaptera novaeangliae</i> )	E	OR – E WA – E	X			Not required
Killer whale ( <i>Orcinus orca</i> )	E	OR – NL WA – E	X			Not required
North Pacific right whale ( <i>Eubalaena japonica</i> )	E <sup>c</sup>	OR – E WA – NL	X			Not required
Sei whale ( <i>Balaenoptera borealis</i> )	E	OR – E WA – E	X			Not required
Sperm whale ( <i>Physeter macrocephalus</i> )	E	OR – E WA – E	X			Not required
Steller sea lion ( <i>Eumetopias jubatus</i> )	T <sup>c</sup>	OR – NL WA – T	X	X		Not required
<b>Birds</b>						
Marbled Murrelet ( <i>Brachyramphus marmoratus</i> )	T	OR – T WA – T	X	X	X	Survey between May 1 - August 5 for areas where data is lacking
Northern spotted owl ( <i>Strix occidentalis</i> )	T	OR – T WA – E			X	Prior to construction, survey for spotted owls in all suitable habitats within the action area
Short-tailed albatross ( <i>Phoebastria albatrus</i> )	E	OR – E WA – C	X			Not required
Western snowy plover ( <i>Charadrius alexandrinus nivosus</i> )	T	OR – T WA – E	X	X		Not required
Streaked horned lark ( <i>Eremophila alpestris strigata</i> )	C	OR – NL WA – E			X	Not required
<b>Amphibians and Reptiles</b>						
Green sea turtle ( <i>Chelonia mydas</i> )	T <sup>c</sup>	OR – E WA – T	X			Not required
Leatherback sea turtle ( <i>Dermochelys coriacea</i> )	E <sup>d</sup>	OR – E WA – T	X			Not required
Loggerhead sea turtle ( <i>Carretta carretta</i> )	T <sup>e</sup>	OR – T WA – T	X			Not required
Olive (Pacific) ridley sea turtle ( <i>Lepidochelys olivacea</i> )	T	OR – T WA – NL	X			Not required
<b>Fish</b>						
Chinook Salmon ( <i>Oncorhynchus tshawytscha</i> ) Lower Columbia River ESU	T <sup>c</sup>	OR – C WA – C	X	X	X	Not required

TABLE 1.2-2 (continued)

## Federally Listed Species Potentially Occurring in the Vicinity of the Oregon LNG Project

Species	Status <sup>a</sup>		Portion of Action Area			Survey Status
	Federal	State	Marine	Columbia River <sup>b</sup>	Pipeline	
Snake River Fall-run ESU	T <sup>b</sup>	OR – T WA – C	X	X		Not required
Snake River Spring/Summer-run ESU	T <sup>c</sup>	OR – T WA – C	X	X		Not required
Upper Willamette River ESU	T <sup>c</sup>	OR – C WA – NL	X	X		Not required
Upper Columbia River Spring-run ESU	E <sup>c</sup>	OR – NL WA – NL	X	X	X	Not required
Chum Salmon ( <i>O. keta</i> )						
Columbia River ESU	T <sup>c</sup>	OR – C WA – C	X	X	X	Not required
Coho Salmon ( <i>O. kisutch</i> )						
Lower Columbia River ESU	T	OR – E WA – NL	X	X	X	Not required
Oregon Coastal ESU	T <sup>c</sup>	OR – NL WA – C			X	Not required
Eulachon ( <i>Thaleichthys pacificus</i> )	T	OR – NL WA – NL	X	X		Not required
Bull trout <sup>d,f</sup> ( <i>Salvelinus confluentus</i> )						
Columbia River DPS	T	OR – NL WA – C		X		Not required
North American Green Sturgeon ( <i>Acipenser medirostris</i> )						
Southern DPS	T <sup>c</sup>	OR – NL WA – NL	X	X		Not required
Sockeye Salmon ( <i>O. nerka</i> )						
Snake River ESU	E <sup>c</sup>	OR – NL WA – C	X	X	X	Not required
Steelhead ( <i>O. mykiss</i> )						
Lower Columbia River DPS	T <sup>c</sup>	OR – C WA – C	X	X	X	Not required
Middle Columbia River DPS	T <sup>c</sup>	OR – C WA – C	X	X		Not required
Upper Columbia River DPS	T <sup>c</sup>	OR – NL WA – C	X	X		Not required
Upper Willamette River DPS	T <sup>c</sup>	OR – NL WA – NL	X	X		Not required
Snake River Basin DPS	T <sup>c</sup>	OR – NL WA – C	X	X		Not required

TABLE 1.2-2 (continued)

## Federally Listed Species Potentially Occurring in the Vicinity of the Oregon LNG Project

Species	Status <sup>a</sup>		Portion of Action Area			Survey Status
	Federal	State	Marine	Columbia River <sup>b</sup>	Pipeline	
<b>Invertebrates</b>						
Fender's blue butterfly ( <i>Icaricia icarioides fenderi</i> )	E <sup>c</sup>	OR – NL			X	Prior to construction, survey suitable habitat where access was denied
Oregon silverspot butterfly ( <i>Speyeria zerene hippolyta</i> )	T <sup>c</sup>	OR – NL			X	Prior to construction, survey suitable habitat where access was denied
Taylor's checkerspot butterfly ( <i>Euphydryas editha taylori</i> )	C	OR – NL			X	Prior to construction, survey suitable habitat where access was denied
<b>Plants</b>						
Bradshaw's lomatium ( <i>Lomatium bradshawii</i> )	E	OR – E			X	Prior to construction, survey during flowering season
Golden paintbrush ( <i>Castilleja levisecta</i> )	T	OR – E			X	Not required
Kincaid's lupine ( <i>Lupinus sulphureus</i> ssp. <i>Kincaidii</i> )	T <sup>c</sup>	OR – T			X	Prior to construction, survey during flowering season
Nelson's checkermallow ( <i>Sidalcea nelsoniana</i> )	T	OR – T			X	Prior to construction, survey during flowering season
Water howellia ( <i>Howellia aquatilis</i> )	T	OR – NL			X	Prior to construction, survey during flowering season
Willamette daisy ( <i>Erigeron decumbens</i> var. <i>decumbens</i> )	E <sup>c</sup>	OR – E			X	Prior to construction, survey during flowering season
<sup>a</sup> T = threatened, E = endangered, C = candidate, NL = not listed <sup>b</sup> Includes LNG carrier waterway, terminal area, and dredged material disposal sites. <sup>c</sup> Critical habitat designated for species. <sup>d</sup> Critical habitat proposed for species. <sup>e</sup> On March 17, 2010, NMFS proposed changing loggerhead sea turtle status from threatened to endangered (50 CFR Parts 223 and 224). <sup>f</sup> The Columbia River has been proposed as critical habitat but bull trout is not known to occur in the project area. DPS = Distinct Population Segment; ESU = Evolutionary Significant Unit Source: FWS Species List, Clatsop County, 2005; Oregon Natural Heritage Information Center; and ODFW Oregon List of Threatened and Endangered Wildlife.						

Oregon LNG developed information regarding fisheries habitats crossed by the proposed pipeline route through field surveys, supplemented by secondary data sources. In the absence of site-specific data confirming the presence of native migratory fish, Oregon LNG assumed that those fish species would be present in all perennial waterbodies and in intermittent waterbodies that contain water during pipeline crossing construction. Wildlife habitat information is based on a combination of field surveys conducted by Oregon LNG and available documentation. Habitat types and land use were mapped in the field on aerial photographs. Where access was not granted, habitat and land use were interpreted from aerial photographs. Information on special

status wildlife and vegetation was obtained from the Oregon Natural Heritage Information Center, Oregon Department of Fish and Wildlife (ODFW), ODF, and FWS.

Oregon LNG conducted wetland and wildlife field investigations at the proposed terminal site in 2005 and for the proposed pipeline in 2007. Rare plant surveys were conducted for the terminal in the summer of 2007 and for the pipeline in the spring and summer of 2008. Rare plants were assumed to be present in areas not accessible for surveying. Wetlands delineated at the proposed terminal in 2005 were field-verified in 2007 and additional wildlife surveys were conducted at the terminal in 2007. The study area for the proposed terminal included all areas within the proposed property boundary, as well as adjacent in-water areas affected by project construction and operation. The study area for the proposed pipeline was a 300-foot-wide corridor centered over the proposed alignment, with the exception that potential habitat for the northern spotted owl and marbled murrelet was evaluated within 3 miles of the proposed pipeline alignment.

### **1.3 FEDERAL ACTION AND LEGAL AUTHORITY**

The FERC is responsible for authorizing applications to construct and operate LNG import terminals and associated pipeline facilities under sections 3(a) and 7(c) of the NGA. In addition, the COE has the authority to issue permits for work or structures in navigable waters under section 10 of the Rivers and Harbors Act (RHA) and discharge of dredge or fill material into waters of the United States under section 404 of the Clean Water Act (CWA). The COE would regulate the dredging of the marine basin, the construction of the piers, and filling and grading activities in wetlands and waterbodies crossed by the proposed pipeline. The EPA has the authority to review and veto COE decisions on section 404 permits. The Coast Guard has the primary responsibility for reviewing and approving the navigational and security aspects of the project in accordance with 33 CFR and 66. The Oregon LNG proposal must also comply with the federal Coastal Zone Management Act (CZMA) of 1972, which would require the Oregon Department of Land Conservation and Development to determine that the project is consistent with the Oregon Coastal Management Program. These federal actions would be enacted under legal authority granted under 18 CFR Parts 153, 157, and 380, as further described below.

#### **1.3.1 Endangered Species Act**

Section 7 of the ESA requires federal agencies to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of a federally listed endangered or threatened species, or result in the destruction or adverse modification of the designated critical habitat of a federally listed or proposed species. Under section 7, the FERC, as the lead federal agency, is required to consult with the FWS and NMFS to determine whether any federally listed or proposed endangered or threatened species, or their designated critical habitat, occur in the vicinity of a proposed project subject to FERC jurisdiction.

In the event that a federally listed or proposed endangered or threatened species or its designated critical habitat occurs in the vicinity of a “major construction activity,” the FERC must prepare a BA to determine whether the proposed action would affect the listed species. If the BA determines that the proposed action would affect a federally listed or proposed species, then the FERC must enter into formal consultation with from the FWS and/or NMFS before taking final agency action.

As the lead federal agency, the FERC is responsible for compliance with the section 7 consultation process with the NMFS and FWS. However, as the FERC’s non-federal

representative per 18 CFR Part 380.13(b), Oregon LNG has informally consulted with the FWS and NMFS to:

- clarify and identify if listed, proposed, and candidate species or designated or proposed critical habitats may be in the action area;
- consider what effect the action may have on these species or critical habitats; and
- explore ways to modify the action to reduce or remove adverse effects on the species or critical habitats.

*FERC staff intends on recommending certain measures in the draft EIS, which are italicized where discussed in the BA. Also, note that based on comments received from FWS/NMFS on the BA, and/or comments received on the draft EIS, these measures may be further revised.*

### **1.3.2 Magnuson-Stevens Fishery Conservation and Management Act**

The Magnuson-Stevens Fishery Conservation and Management Act of 1996 (MSA) and subsequent reauthorizations require that federal agencies consult with NMFS about any activity that may adversely affect Essential Fish Habitat (EFH) (16 USC 1851). EFH is waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. Waters include those aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish. Substrate includes sediment, hard bottom, structures underlying the waters, and associated biological communities. Necessary is defined as the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem (16 USC 1801 et seq.).

The MSA also established guidelines for the Regional Fishery Management Councils to use in identifying and describing EFH in Fisheries Management Plans (FMPs). The Pacific Fishery Management Council (PFMC) has created several FMPs that relate to waters potentially impacted by the project. These include plans for West Coast groundfish, salmon (Chinook and coho), and coastal pelagic species (PFMC, 2008, 1999, and 1998).

The MSA requires consultation for all actions that may adversely affect EFH, and it does not distinguish between actions in EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside EFH, such as upstream and upslope activities that may have an adverse effect on EFH. Therefore, EFH consultation with NMFS is required by federal agencies undertaking, permitting, or funding activities that may adversely affect EFH, regardless of its location.

The consultation requirements of section 305(b) of the MSA (16 USC 1855(b)) include:

- federal agencies, in this instance the FERC, must consult with NMFS on all actions or proposed actions authorized, funded, or undertaken by the agency that may adversely affect EFH; and
- NMFS must provide conservation recommendations for any federal or state activity that may adversely affect EFH.

Within 30 days after receiving conservation recommendations from NMFS, the FERC would provide a detailed response in writing to NMFS regarding the conservation recommendations. The response would include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the effect of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations of NMFS, the lead federal agency would explain its reasons for not following the recommendations.