

**BEFORE THE  
ENERGY FACILITY SITING COUNCIL  
OF THE STATE OF OREGON**

In the Matter of the Request for Amendment No. 11  
of the Site Certificate for the Mist Underground  
Natural Gas Storage Facility

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) FINAL ORDER ON REQUEST FOR  
) CONTESTED CASE AND  
) AMENDMENT No. 11 OF THE SITE  
) CERTIFICATE

April 21, 2016

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- Attachment B: Public and Reviewing Agency Comment on the Request for Amendment Summary Table
- Attachment C: Draft Erosion and Sediment Control Plan
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**Acronyms and Abbreviations**

AADT	Annual average daily traffic
ACDP	Air Contaminant Discharge Permit
AIMP	Agricultural Impact Mitigation Plan
AIR	Amendment Information Request
BMP	Best Management Practice
Btu/hp-hr	British thermal units per horsepower-hour
CCCP	Columbia County Comprehensive Plan
CCZO	Columbia County Zoning Ordinance
CWTD	Columbian white-tailed deer
dBA	Decibel A-weighting
DEQ	Oregon Department of Environmental Quality
DLCD	Oregon Department of Land Conservation and Development
DOGAMI	Oregon Department of Geology and Mineral Industries
DSL	Oregon Department of State Lands
EFSC	Energy Facility Siting Council
ESCP	Erosion and Sediment Control Plan
ESU	Evolutionarily significant unit
FERC	Federal Energy Regulatory Commission
GIS	Geographic Information System
HMP	Habitat Mitigation Plan
HP	Horsepower
HRA	Historic Research Associates
HDD	Horizontal directional drilling
IBC	International Building Code
IRRP	Inadvertent Return Response Plan
ISO	International Organization for Standardization
I/W	Injection/withdrawal
JPA	Joint Permit Application
JBHR	Julia Butler Hansen National Wildlife Refuge
Hr/yr	Hours per year
lbs CO <sub>2</sub> /HP-hr	Pounds of carbon dioxide per horsepower-hour
Mist Facility	Mist Underground Natural Gas Storage Facility
MMBtu/yr	Million British thermal units per year
MMscfd	Million standard cubic feet per day
NMFS	National Marine Fisheries Service
NMCS	North Mist Compressor Station

**Acronyms and Abbreviations**

NMEP	North Mist Expansion Project
NMTP	North Mist Transmission Pipeline
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWN	Northwest Natural Gas Company
OAR	Oregon Administrative Rule
ODA	Oregon Department of Agriculture
ODFW	Oregon Department of Fish and Wildlife
ODF	Oregon Department of Forestry
ODOE	Oregon Department of Energy
ODOT	Oregon Department of Transportation
OHWM	Ordinary high water mark
ONG	Oregon Natural Gas Development Company
OR	Oregon Route
ORS	Oregon Revised Statute
OSSC	Oregon Structural Specialty Code
OWRD	Oregon Water Resources Department
PA-80	Primary agricultural use zone
PEM	Palustrine Emergent Wetland
PF-80	Primary forest zone
PGE	Portland General Electric
PWIP	Port Westward Industrial Park
RFA	Request for Amendment
RFPD	Rural Fire Protection Department
RIPD	Rural Industrial – Planned Development
SAG	Special Advisory Group
SHPO	Oregon State Historic Preservation Office
SPMP	Spill Prevention and Management Plan
USFWS	United States Fish and Wildlife Service
WPCF	Water Pollution Control Facilities

## **I. INTRODUCTION**

The Oregon Energy Facility Siting Council (Council or EFSC) issues this final order in accordance with Oregon Revised Statute (ORS) 469.405 and Oregon Administrative Rules (OAR) 345-027-0070 for the request by Northwest Natural Gas Company (NWN) for Amendment 11 of the Mist Underground Natural Gas Storage Facility (Mist Facility) Site Certificate.

NWN proposes to expand its Mist Facility site boundary from 2,828 acres to 5,472 acres and to develop one underground gas storage reservoir (the Adams reservoir).<sup>1</sup> NWN also proposes a new gas-driven compressor station (the North Mist Compressor Station, or NMCS), and related and supporting facilities including underground electrical and communication lines, and an underground high-pressure natural gas pipeline to transport natural gas from the proposed compressor station to Portland General Electric's (PGE's) Port Westward Industrial Park (PWIP). Collectively, the proposed site boundary expansion, development of the Adams reservoir, the NMCS, and the transmission pipeline and other related and supporting components are known as the North Mist Expansion Project (the NMEP, or the Project). NWN submitted its request for Amendment 11 (RFA) on April 30, 2015.

The Council issued the original Site Certificate for the Mist Facility in June 1981. The Council previously approved ten amendments to the Site Certificate. This final order represents the eleventh amendment.

Based upon review of the RFA, and the comments and recommendations received by state agencies, local government, and tribal organizations, review of the Oregon Department of Energy's (ODOE or the department) proposed order, and public comments received on that proposed order, EFSC approves the request and grants an amendment to the Site Certificate for the Mist Facility, subject to the conditions set forth in this final order.

### **I.A. Name and Address of Certificate Holder**

Certificate Holder:

Northwest Natural Gas Company  
220 NW Second Avenue  
Portland, Oregon 97209

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<sup>1</sup> The expanded site boundary would include the Adams reservoir, which NWN proposes to develop as part of this request for amendment, and four additional storage reservoirs. The additional reservoirs could be developed in the future provided NWN applied for and EFSC granted approval of a subsequent site certificate amendment.

Individuals Responsible for Submitting the Request:

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**I.B. Description of the Existing Facility**

The existing Mist Facility includes naturally occurring underground natural gas storage reservoirs, which NWN has retrofitted to allow pipeline quality natural gas injection and underground storage during off-peak periods and withdrawal when market demand exceeds available supplies from other sources. Related and supporting surface facilities currently include compressors, pipelines, control equipment, dehydration and auxiliary systems, most of which are located at NWN’s Miller Station. Other related surface facilities include gathering lines and facilities for NWN maintenance and operations staff.

The existing permitted facility encompasses approximately 2,828 acres and is located in Columbia County, within one-half mile from the unincorporated community of Mist. The existing Mist Facility is connected to NWN’s gas transmission network in Oregon by three separate pipelines, which have a combined maximum deliverability of 515 million standard cubic feet per day (MMscfd) of natural gas from the Mist Facility to its customers.

The existing Mist Facility includes the Bruer/Flora underground gas storage reservoirs and the Calvin Creek underground gas storage area. The Bruer/Flora reservoirs and Miller Station are located north of the Nehalem River. The Calvin Creek underground gas storage area is located south of the Nehalem River, approximately two and one-half miles south of Miller Station. Twin 16-inch pipelines cross under the Nehalem River and connect the Calvin Creek area with Miller Station.

EFSC issued the original Site Certificate for the Mist Facility in June 1981. The Council previously approved ten amendments to the Site Certificate. This order represents the eleventh amendment.

**I.C. Mist Facility Site Certificate History**

The Mist Facility requires a site certificate issued by EFSC because it is an “energy facility” as that term is defined at ORS 469.300(11). As explained by NWN in the RFA, when EFSC approved

the underground natural gas storage facility at the Mist Site in 1981, EFSC's jurisdiction included both the surface and underground components of the facility. In 1993, the siting law was amended such that EFSC now has jurisdiction only over the "surface facility related to an underground gas storage reservoir that, at design injection or withdrawal rates, will receive or deliver more than 50 million cubic feet of natural or synthetic gas per day, or require more than 4,000 horsepower of natural gas compression to operate..."<sup>2</sup> The surface facility at Mist exceeds this 50-million-cubic-foot threshold and is therefore subject to EFSC jurisdiction. The current definition expressly excludes "the underground storage reservoir" and "the injection, withdrawal or monitoring wells and individual wellhead equipment." Therefore, the reservoirs themselves and the wells and wellhead equipment are not under EFSC's jurisdiction and are not included in and governed by the site certificate. Subsurface elements (other than pipelines) are within the exclusive jurisdiction of the Department of Geology and Mineral Industries.

NWN describes in its RFA the history of the Mist Facility and the associated site certificate. As noted above, the original Mist Facility received its original site certificate in 1981, and the site certificate has been previously amended ten times. The original Site Certificate authorized Oregon Natural Gas Development Company (ONG), a subsidiary of NWN, to construct and operate two naturally existing underground gas reservoirs (the Flora and Bruer pools) and Miller Station with attendant equipment, including, but not limited to: compressors, gathering lines, access roads, existing natural gas wells, monitoring wells, and proposed I/W wells; all located in rural Columbia County.

Amendment Nos. 1, 2, and 3: In 1990, ONG assigned the Site Certificate to its parent company, NWN. EFSC approved amendments to the Site Certificate in 1987 (Amendment No. 1), 1988 (Amendment No. 2), and 1990 (Amendment No. 3). The amendments modified several terms of the Site Certificate and authorized the construction and replacement of wells.

Amendment No. 4: In 1997, EFSC approved Amendment No. 4. That amendment approved an expansion of the Mist Site that increased the combined total Mist storage peak-day delivery capability from 100 million standard cubic feet per day (MMscfd) to 145 MMscfd. The expansion included: (1) improvements to the Miller Station gas processing facility, including the replacement of two older 550-horsepower compressor units with one larger, more efficient unit; (2) total available compression of 6,650 brake horsepower (BHP); (3) construction of a building for the new compressor and updates to related equipment; (4) natural gas storage in one additional naturally occurring underground pool, Al's Pool, in the Calvin Creek storage area; (5) up to four new sites for I/W wells, including one to four wells at each site; (6) approximately 1 mile of buried 8-inch and 6-inch gathering pipeline; and (7) approximately 2.5 miles of buried twin 16-inch transmission pipelines.

Amendment No. 5: In 1998, EFSC approved Amendment No. 5, which replaced the amendment provisions in the Site Certificate with a requirement that future Site Certificate amendments be governed by EFSC's amendment rules.

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<sup>2</sup> ORS 469.300(11)(a)(I).



Amendment No. 6: In 1999, EFSC approved Amendment No. 6, increasing the capacity of the Mist storage facility. The gas storage portion of that project included: (1) upgrades to the dehydration and metering systems at Miller Station; (2) natural gas storage in one additional naturally occurring underground pool, the Reichhold Pool, within the existing Site Boundary; (3) up to four new sites for I/W wells, including one to four wells at each site; (4) approximately 6,500 feet of buried gathering pipeline no greater than 12 inches in diameter; and (5) the removal of the 6,650 compressor horsepower limitation then in place for the Miller Station facility. Approval of Amendment No. 6 allowed Miller Station to operate at rates of up to 190 MMscfd without any restriction on the use of the three existing compressor units, which have a total rating of 8,200 BHP.

Amendment No. 7: On May 17, 2001, the Federal Energy Regulatory Commission (FERC) granted NWN a limited jurisdiction blanket certificate under section 284.224 of FERC's regulations. Under that certificate, NWN is authorized to use existing and expanded facilities at the Mist site to provide FERC jurisdictional bundled firm and interruptible storage and related transportation services in interstate commerce. See Northwest Natural Gas Company, 95 FERC ¶ 61,242 (2001). However, FERC's jurisdiction extends only to the interstate services themselves. NWN provides the interstate storage services using existing and expanded facilities at the Mist site that are not needed to serve its "core" utility customer needs. NWN also has agreements in place with state utility regulators regarding this use. Anticipating the FERC certificate, and to make increased capacity available to the interstate market, NWN amended its Site Certificate (Amendment No. 7) by increasing the permitted throughput of the Mist Site to 245 MMscfd. Amendment No. 7 was approved by the Council on November 27, 2000.

Amendment No. 8: In Amendment No. 8, approved in 2001, EFSC authorized an increase of the permitted daily throughput from 245 MMscfd to 317 MMscfd. This involved the installation of new metering facilities, new interconnect piping to the South Mist and North Mist pipelines, and a new gas-turbine-driven compressor. The new compressor added 7,800 horsepower, bringing the total compression capability to 16,000 horsepower.

Amendment No. 9: In Amendment No. 9, approved in 2003, EFSC authorized an increase of the permitted daily throughput from 317 MMscfd to 515 MMscfd. EFSC also authorized the construction of improvements at Miller Station, including the installation of new dehydration facilities and gas quality and monitoring equipment. EFSC also authorized NWN to develop related and supporting facilities associated with new underground gas storage reservoirs in the Calvin Creek storage area, the Busch and Schlicker pools. Approval of Amendment No. 9 also allowed NWN to terminate the vibration monitoring program created in Amendment No. 1.

Amendment No. 10: In Amendment No. 10, approved in 2008, EFSC approved a Consolidated, Restated, and Amended Site Certificate. In its Request for Amendment No. 10, NWN sought no substantive changes to the Site Certificate other than clarification of conditions where the applicable law had changed since the Site Certificate was initially approved. The approved Consolidated, Restated, and Amended Site Certificate consolidated the original Site Certificate and Amendment Nos. 1-9 to the Site Certificate, updated the Site Certificate to reflect the

current statutory and regulatory regime, deleted outdated and superseded conditions, added language describing the surface facilities related to the underground gas storage reservoir, updated the site maps, and eliminated inconsistencies between the various documents.

Council's 2013 Declaratory Order; Matters Decided: In April 2013, NWN filed with EFSC a Petition seeking a Declaratory Order (DO Petition) to guide this current amendment to the Site Certificate. The DO Petition requested EFSC's formal determinations that (1) the transmission pipeline proposed in this RFA would be considered a "related or supporting facility" of the Mist Facility, and (2) the expansion proposed in this request would be considered an amendment to the Site Certificate, rather than requiring a new Application for Site Certificate. On June 21, 2013, following public notification and hearing, EFSC concurred with NWN's propositions of law and issued its Final Declaratory Order accordingly. NWN states that it based this request on EFSC's Conclusions of Law as set forth in the Final Declaratory Order. The facility as described in NWN's 11<sup>th</sup> amendment request is substantially the same as that described in NWN's DO Petition.

## **II. AMENDMENT REQUEST DESCRIPTION**

### **II.A. Proposed Facility Modifications**

As described in the RFA, NWN proposes to amend the Mist Facility Site Certificate in order to add multiple components to the facility. The Project would include the following components:

- Expansion of the facility site boundary to include the Adams reservoir, along with four additional future storage reservoirs;
- Development of the Adams reservoir in order to expand the underground natural gas storage facility capacity;<sup>3</sup>
- Installation of injection and withdrawal (I/W) pipelines to connect the underground storage reservoir in the Adams storage area to a new compressor facility, called the North Mist Compressor Station (NMCS). The NMCS is proposed to be located approximately 2.2 miles northwest of the Mist Facility's existing Miller Station (approximately 5 miles by road). The NMCS would have total installed compression of approximately 3,600 horsepower (HP), provided by two natural gas-fired engine-driven compressors;
- Underground utility services including electricity and communication cables to connect the NMCS to Miller Station. The utility conduit would be approximately four miles in length, and approximately 1.5 of these four miles are preexisting conduit. The utility conduit is a related and supporting facility to the Mist Facility.
- Construction of an approximately 12-mile, up to 24-inch high-pressure natural gas transmission pipeline between the new compressor station and PWIP. The pipeline is known as the North Mist Transmission Pipeline (NMTP). The pipeline is a related and supporting facility to the Mist Facility.

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<sup>3</sup> This request does not include development of any of the other four future storage reservoirs.

The Project would increase the combined total storage peak-day delivery capability of the Mist Facility from 515 to 635 MMscfd. As described in the RFA, *Project Description and OAR Division 27 Compliance*, the Project would provide PGE's PWIP firm, on-demand service withdrawal (of natural gas) from the Mist field, in order to meet PGE's long-term and future customer needs, and would potentially serve other large industrial, electrical generation, or manufacturing customers that choose to connect along the pipeline corridor or request interstate service through the FERC-regulated Kelso-Beaver pipeline.

## **II.B. Location of Area Proposed to be Added to Site Boundary**

The existing site boundary includes 2,828 acres, and encompasses existing surface facilities of various underground gas storage reservoirs and related and supporting facilities. The area proposed to be added to the site boundary includes the storage expansion area and NMTP. As explained in the RFA, the underground gas storage expansion area (which includes the NMCS, the Adams storage area, future expansion area, and I/W well sites)<sup>4</sup> is located north of the Nehalem River in Columbia County.<sup>5</sup> Figure II-1 presents the location of the Project.

## **III. AMENDMENT PROCESS**

### **III.A. Division 27 Rules**

The Council has adopted administrative rules to determine when a Site Certificate amendment is necessary (OAR 345-027-0030 and -0050) and rules establishing the procedure for amending a Site Certificate (OAR 345-027-0060, -0070, and -0100). The Council's amendment rules, OAR Chapter 345, Division 27, apply to this RFA.

#### **OAR 345-027-0050 When an Amendment is Required**

Under OAR 345-027-0050, an amendment is necessary when the certificate holder proposes to design, construct, or operate a facility in a manner different from the description in the site certificate when the proposed change could:

- (a) Result in a significant adverse impact that the Council has not addressed in an earlier order and the impact affects a resource protected by Council standards;*
- (b) Impair the certificate holder's ability to comply with a site certificate condition; or*
- (c) Require a new condition or a change to a condition in the site certificate.*

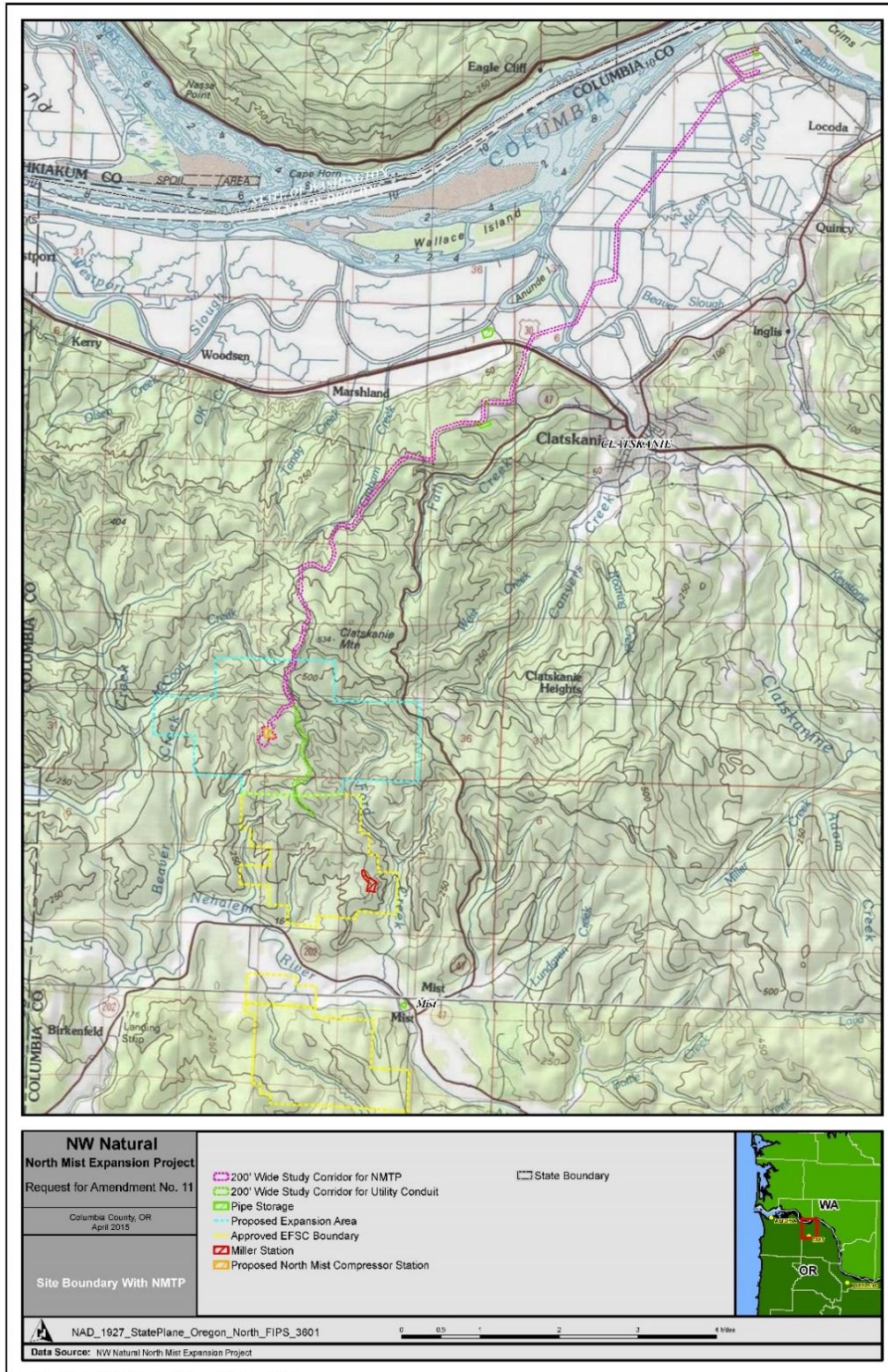
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<sup>4</sup> RFA, Project Description and Division 27 Compliance.

<sup>5</sup> Specifically, the project is located in parts of Sections 3 and 4 of Township 6 North, Range 5 West, and parts of Sections 28, 27, 32, 34, and 35 of Township 7 North, Range 5 West, Willamette Meridian, Oregon. The NMTP corridor is located in parts of Section 3 of Township 6 North, Range 5 West; parts of Section 34, 27, 22, 15, 14, 11, 12 and 1 of Township 7 North, Range 5 West; in parts of Section 6 and 7 of Township 7 North, Range 4 West; and in parts of Section 31, 32, 29, 28, 21, 22, 15 and 16 of Township 8 North, Range 4 West, Willamette Meridian, Oregon.

**Figure II-1 Project Map**



An amendment to the Mist Facility Site Certificate is necessary under OAR 345-027-0050(1)(a), (b), and (c) because NWN, the Site Certificate holder, proposes to “operate [the] facility in a manner different from the description in the site certificate,” and the proposed amendment requires “a new condition or change to a condition in the site certificate.” NWN requests to expand the site boundary to include an additional underground gas storage reservoir, construct and operate a gas-driven compressor station, and construct related and supporting facilities including a natural gas pipeline to transport natural gas from the Mist Facility to the PWIP. In order to accommodate the requested change, new conditions or changes of existing conditions under Section VII.D.4 of the Site Certificate are required to address significant adverse impacts not previously evaluated. Therefore, an amendment is required under OAR 345-027-0050(1)(a), (b), and (c).

### OAR 345-027-0070 Review of a Request for Amendment

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*(10) In making a decision to grant or deny issuance of an amended site certificate, the Council shall apply the applicable substantive criteria, as described in OAR 345-022-0030, in effect on the date the certificate holder submitted the request for amendment and all other state statutes, administrative rules, and local government ordinances in effect on the date the Council makes its decision. The Council shall consider the following:*

*(a) For an amendment that would change the site boundary or the legal description of the site, the Council shall consider, for the area added to the site by the amendment, whether the facility complies with all Council standards;*

The applicable EFSC standards are established in OAR Chapter 345 divisions 22, 23 and 24, as further described in this order. The Council applied these standards to this amendment request. The Council must also find compliance with the applicable permitting requirements of other state agencies, other than permits delegated to another agency by the federal government.

### **III.B. Procedural History**

On April 30, 2015 NWN submitted to the department its Request for Amendment No. 11 for the Mist Facility Site Certificate. The department distributed a notice of the receipt of RFA to reviewing agencies, Tribal Governments,<sup>6</sup> the Mist Facility Special Advisory Group (Columbia County Board of Commissioners), the EFSC general mailing list, the special list maintained for the Mist Facility, and the adjacent property owners as listed by NWN in the amendment request. The amendment request was also posted to the ODOE website.

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<sup>6</sup> MSTAMD11Doc10 Ross Curtis, SHPO. In a comment letter received from SHPO, consultation of the Project with appropriate Indian Tribes was recommended. On May 7, 2015, the department provided the RFA and requested review and comment on the RFA from the Confederated Tribes of Grande Ronde, Confederated Tribes of Siletz Indians, and Confederated Tribes of Warm Springs.

The department requested receipt of comments from all interested parties by June 8, 2015. Public and agency comments are summarized in the following sections and, as applicable to Council standards, discussed in Section IV.

The department issued an Amendment Information Request (AIR) to the certificate holder on June 10, 2015 and received a response from NWN on July 10, 2015. Subsequent AIRs were issued to NWN on July 20, 2015; AIR responses and additional information was received from NWN on July 22, 2015, August 27, 2015, and September 30, 2015. Based on comments from ODFW, NWN submitted a revised proposed habitat mitigation plan (HMP) to ODFW in August 2015; and based on additional comments from ODFW, NWN revised its HMP in December 2015 and again in February 2016. The February 2016 HMP is included as Attachment E to this order.

On February 5, 2016, the department issued a proposed order, recommending approval of the amendment with conditions. The department issued notice of the proposed order to the persons, agencies, tribes and local governments who received notice of the amendment. The notice stated that the department must receive any written comments on the proposed order, including any request for contested case, by 5 p.m. March 7, 2016. The department also posted notice on the ODOE website. ODOE received responses from three individuals; one of these responses requested a contested case. No comments were received on the proposed order from reviewing agencies or Tribal Governments.

### **III.B.1. Reviewing Agency Comments on the RFA**

During the comment period on the RFA, from May 7, 2015 to June 8, 2015, the department received comments from the following reviewing agencies:

- City of Clatskanie
- Oregon State Historic Preservation Office – Archeology
- Oregon State Historic Preservation Office – Historic Buildings
- Oregon Department of Fish and Wildlife
- Oregon Department of Aviation<sup>7</sup>
- Oregon Department of Geology and Mineral Industries
- Oregon Department of Forestry<sup>8</sup>
- Oregon Department of Environmental Quality
- Oregon Department of State Lands
- Oregon Department of Water Resources
- Columbia County

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<sup>7</sup> MSTAMD11Doc4 Jeff Caines, ODA. The Oregon Department of Aviation submitted a comment letter on May 21, 2015, which identified requirements for any new structures with height exceeding 100 feet above ground level. The Project does not include structures exceeding 100 feet in height and therefore comments raised are not applicable to this order and have not been further addressed.

<sup>8</sup> MSTAMD11Doc6 John Tokarczyk, ODF. The Oregon Department of Forestry submitted a comment letter on June 8, 2015, which identified requirements for activities on private forest land pursuant to ORS 527 and OAR Chapter 629, divisions 605-665 including: submittal of project notification to the state forester and county; compliance with the Forest Practices Act; and, obtaining a power driven machinery permit from the state forester. These statutory requirements apply to the site independent of this amendment.

Issues raised by reviewing agencies regarding compliance with an applicable EFSC standard are addressed in Section IV of this final order.

### **III.B.2. Public Comments on the RFA**

Issues raised by members of the public during the May 7, 2015 to June 8, 2015 amendment request comment period, which address compliance with an applicable EFSC standard, are addressed in Section IV of this order. Comments are summarized in Attachment B to this order.

### **III.B.3 Public Comments and Request for Contested Case on the Proposed Order**

ODOE-EFSC received public comment from three individuals during the proposed order public comment period.

1. On February 5, 2016, Barbara Green submitted a brief comment email stating general opposition to the facility. The comment did not raise any specific or substantive issues, did not introduce any evidence or facts, and did not request a contested case. This comment is not further addressed in this order.
2. On February 18, 2016, Tracy Farwell submitted an email stating his intention to submit a formal comment at a later date; however, the email contained information that could be considered a comment by itself. On February 29, 2016, Tracy Farwell submitted a comment letter generally concerning safety and greenhouse gas emissions from the Mist Facility.<sup>9</sup> The February 29 comment letter includes the same issues and questions as was included in the February 18 email from Mr. Farwell.

Mr. Farwell's February 18 email references a leak from a natural gas storage field in southern California and expresses concern that the natural gas industry generally and NWN specifically does not "accurately report the amount of escaped uncontained methane per unit of natural gas delivered." Mr. Farwell's February 29 letter further discusses this topic, and claims that EFSC cannot accurately evaluate RFA #11 because it has neither the "national average per unit GHG leakage for gas delivered" nor the comparable number for NWN. Mr. Farwell also states that this information does not exist. The comment letter further states that EFSC must review the NMEP design plans, including information regarding well infrastructure, over-pressure or pressure-loss response features, pressure testing procedures, and other information. Finally, the letter states that EFSC does not have enough information regarding "threats to infrastructure posed by unconventional drilling (hydraulic fracturing) within the permitted area, and referencing geologic structures and faults that have a bearing on

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<sup>9</sup> Tracy Farwell also submitted an additional comment letter, stating it was a revision of the Feb. 29 comment letter; however, this comment was received by ODOE-EFSC after the public comment period deadline and was therefore not accepted.

infrastructure integrity and longevity.” Mr. Farwell’s comment letters do not request a contested case.

Mr. Farwell’s request for methane and GHG leakage information per unit of gas delivered is not a metric that ODOE-EFSC track. A review of the NMEP compliance with the carbon dioxide emission rules are contained in this order, Section IV.C.2. In that section, the Council finds that with inclusion of the stated conditions, the NMEP complies with the carbon dioxide standard.

The comment letter has a number of points related to the wells and the underground storage facility itself; these components are not under EFSC’s jurisdiction but rather are subject to DOGAMI regulation and review as well as county-level permitting. These issues are not further discussed in this order.

The comment letter requests information related to the project description and safety procedures. In its RFA, NWN submitted a project description that includes a discussion of safety and monitoring procedures of the facility. Additionally, the Council finds in this order that NWN meets the Organizational Expertise Standard, and that NWN has provided reasonable assurance that it can successfully construct, operate and retire all Project components associated with the requested amendment in a manner that protects public health and safety. Furthermore, the Council finds in this order that NWN has successfully and safely built and operated the Mist Facility for decades, and as stated in this order, the department on behalf of the Council has not identified any compliance issues or violations of site certificate conditions at the Mist Facility.

Finally, the comment letter stated that there is not enough information for EFSC to make a decision regarding “unconventional drilling (hydraulic fracturing)” and geologic structures and faults that may affect the facility. EFSC does not have jurisdiction over well drilling, whether using conventional drilling techniques or unconventional techniques such as hydraulic fracturing. Regardless, the Mist Facility utilizes depleted underground storage reservoirs, and reinjects gas to be stored for future use. NWN included a discussion of the geologic structure including seismic fault risk in its RFA, and the Council finds that the NMEP, with the provided conditions, meets the Structural Standard.

As discussed above, Mr. Farwell’s comment letter does not raise any new issue or facts concerning compliance with an applicable Council standard. The Council finds that issues raised that are within Council jurisdiction have been adequately addressed in the proposed order and does not require any changes to the analysis, findings or conclusions in this final order based on Mr. Farwell’s comments.

3. On March 7, 2016, before the 5 PM comment deadline, a letter was submitted by Meriel Darzen, attorney for Jim Hoffman and Hopville Farms. The letter requests that the Council hold a contested case on the Mist Facility amendment request. The letter listed



a number of Council standards that it believes should be subject of the contested case; however, the letter includes no assessment of the standards or evaluation of the department's assessment of the standards, does not contain specific or substantive information regarding the standards it believes are at issue, and does not introduce any evidence or facts into the record to support its request for a contested case. The Council's assessment of the contested case request is discussed below. To the extent the letter constitutes a comment on the proposed order, the Council finds that the letter does not raise any issues that require any changes to the analysis, findings or conclusions in this final order.

### **III.B.4 Analysis of the Request for Contested Case**

The Jim Hoffman-Hopville Farms request listed multiple Council standards that it states to be at issue. However, the request does not directly claim the proposed amended facility fails to satisfy the Council, but instead poses questions about whether the identified standards are satisfied. Furthermore, the request does not provide new evidence or facts, nor does it provide a substantive evaluation of facts in the record or the applicable standards to support the request for a contested case on any of the identified standards. The request identifies the following questions:

1. Demonstration of Organizational Expertise. The request questions: "Whether the applicant has adequately shown that it has the organizational expertise to construct, operate, and retire the proposed facility in compliance with Council standards and conditions of the site certificate and in a manner that protects public health and safety and has demonstrated the ability to restore the site to a useful, non-hazardous condition."

The request did not include any facts, or provide evaluation to support a finding that a contested case is justified. The request simply reiterated the Council's Organizational Expertise Standard with no evaluation or explanation of how the requested amendment has allegedly failed to satisfy this standard.

The Council's assessment of the NMEP project's compliance with the Organizational Expertise Standard (OAR 345-022-0010) is included in Section IV.A.2 of this order. The Council finds the Project meets the Organizational Expertise Standard. The Council denies the request for a contested case on the Organizational Expertise Standard and finds that Jim Hoffman-Hopville Farms has not raised a significant issue of law or fact that may affect the Council's determination that NW Natural meets the Organizational Expertise Standard.

2. Structural Standard. The request questions: "Whether the applicant can design, engineer, and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from maximum probable ground motion events." The request also questions: "Whether the imposition of

conditions that allow geotechnical investigations to be conducted *after* [emphasis included in comment] the amendment is finalized will adequately reduce potential danger to human safety presented by seismic hazards (Structural Standard Condition 3).”

Regarding the first question, the request did not include any facts or provide evaluation to support a finding that a contested case is justified. The request simply reiterated section (1)(b) of the Council’s Structural Standard. The Council assesses the Project’s compliance with the Structural Standard (OAR 345-022-0020) in Section IV.A.3 of this order. The Council finds the Project, with conditions, meets the entirety of the Structural Standard.

Regarding the second question, the Council’s rules specifically allow for site-specific geotechnical investigations to be performed before construction and after approval of a site certificate. OAR 345-021-0010(1)(h)(B) requests that an applicant submit in its application “a description and schedule of site-specific geotechnical work that will be performed before construction for inclusion in the site certificate as conditions.” NW Natural has done exactly this in Exhibit H of its RFA, and the Council have included the proposed geotechnical investigation as Structural Standard Condition 3. The condition requires NW Natural to conduct the geotechnical investigations prior to construction of Amendment 11 components. The Structural Standard requires the Council to find that an applicant, through appropriate site-specific study, has adequately characterized the site as to the Maximum Considered Earthquake Ground Motion, and then for the Council to find that the applicant can design, engineer, and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from such a maximum probable ground motion event. NW Natural has conducted site-specific study and included the results in Exhibit H of its RFA, including technical appendices to Exhibit H. During its review of the RFA, ODOE, on behalf of the Council, consulted with DOGAMI, and the Council concludes that the Project meets all sections of the Council’s Structural Standard. The request did not provide any evidence or facts to support a claim that the condition is not adequate to satisfy the Structural Standard.

The request did not provide any facts or evaluation to support its request for a contested case related to the Structural Standard. The Council denies the request for a contested case on the Structural Standard and finds that Jim Hoffman-Hopville Farms has not raised a significant issue of law or fact that may affect the Council’s determination that the facility, with recommended conditions, meets the Structural Standard.

3. Land Use. The request identifies a number of land use code provisions it claims are at issue. The request does not provide any facts or evaluation to support a finding that a contested case is justified; rather, the request simply lists the land use code provisions claimed to be at issue. The Council’s assessment of the Project’s compliance with the

Land Use standard (OAR 345-022-0030) is included in Section IV.A.5 of this order. The Council finds that the Project, with site certificate conditions, meets the Land Use Standard. As noted, the Columbia County Planning Department provided a comment letter to ODOE-EFSC stating that the RFA accurately and adequately examines the Columbia County Zoning Ordinance, and that the proposed project is compatible with the Columbia County Zoning Ordinance applicable land use criteria.

The specific land use provisions noted by the request are as follows:

*Whether the project is “locationally dependent” under the CCZO and ORS 215.275.*

The request did not include any facts or evaluation to support a finding that a contested case is justified.

The Council addressed the identified provisions in the Land Use section of this order, and the Council finds that the Project is locationally dependent.

*Whether the project requires consent from impacted landowners.*

The request did not include any facts or evaluation to support a finding that a contested case is justified, or even to clarify the specific question or concern.

The Council is uncertain how or the context in which this statement applies. The Council speculates that it may relate to a provision in the CCZO Section 304.10 that permits certain uses in the PA-80 zone, including “utility facility service lines...located on...land immediately adjacent to a public right-of-way, provided the written consent of all adjacent property owners has been obtained...” However, as discussed in the Land Use section of this order, CCZO Section 304.10 does not apply to the proposed NMEP and has not been identified by NWN, the Council or Columbia County as an applicable substantive criteria. The Project includes the North Mist Transmission Pipeline, which is a utility facility necessary for public service under ORS 215.283(1)(c) and therefore, the NMTP is not subject to review criteria beyond those provided by CCZO 306.10, which directly implement ORS 215.275 and OAR 660-033-0130(16).

*Whether it was possible to avoid impacts to EFU-zoned land.*

The request did not include any facts or evaluation to support a finding that a contested case is justified, nor does it include a reference to the applicable substantive criteria from Columbia County Zoning Ordinance to which this statement refers.

The Council addresses why the Project must be sited in the Primary Agriculture Zone in the Land Use section of this order.

*Whether clear and objective conditions have been imposed to prevent a significant change in accepted farming practices or a significant increase in costs of farming practices on surrounding farmlands.*

The request did not include any facts or evaluation to support a finding that a contested case is justified, nor has it proposed any additional conditions or edits to the conditions that were included in the proposed order.

The Council addresses the identified provision in the Land Use section of this order. The Council has included a number of clear and objective conditions to mitigate and minimize the impacts of the NMEP, including the implementation of an Agriculture Impact Mitigation Plan.<sup>10</sup>

*Whether the proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs, or precludes the use of surrounding properties for the primary uses listed in the underlying district.*

The request did not include any facts or evaluation to support a finding that a contested case is justified.

The Council addresses the identified provision in the Land Use section of this order.

*Whether the proposal will not create hazardous conditions.*

The request did not include any facts or evaluation to support a finding that a contested case is justified.

The Council addresses the identified provision in the Land Use section of this order.

*Whether the proposal will protect agricultural lands from non-farm encroachments.*

The request did not include any facts or evaluation to support a finding that a contested case is justified.

The Council addresses the identified provision in the Land Use section of this order.

*Whether the proposal will prevent land uses that interfere with or impair agricultural management from occurring on designated agricultural lands.*

The request did not include any facts or evaluation to support a finding that a contested case is justified.

The Council addresses the identified provision in the Land Use section of this order.

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<sup>10</sup> The Agriculture Impact Mitigation Plan is included as Attachment D of the order.

*Whether the proposed amendment will result in non-farm uses only when not in conflict with agricultural activities.*

The request did not include any facts or evaluation to support a finding that a contested case is justified.

The Council addresses the identified provision in the Land Use section of this order.

*Whether the proposed use complies with ORS 215.275.*

The request did not include any facts or evaluation to support a finding that a contested case is justified.

The Council addresses compliance with ORS 215.275 and its corollary in the Columbia County Zoning Ordinance and applicable substantive criteria throughout the Land Use Standard section of this order.

The request does not include any evaluation or facts to support the request for a contested case related to compliance with the Council's Land use Standard and Columbia County applicable substantive criteria. The Council denies the request for a contested case on the Land Use Standard and finds that Jim Hoffman-Hopville Farms has not raised a significant issue of law or fact that may affect the Council's determination that the facility, with conditions, meets the Land Use Standard.

4. Fish and Wildlife Habitat. The request points to three questions it considers under the "Fish and Wildlife Habitat" standard. However, all three questions are actually provisions in the Columbia County Comprehensive Plan, Part XVI. As with all subjects identified in the request, the request did not provide any facts or evidence to support a finding that a contested case is justified; rather it simply lists the three plan provisions.

The Council assesses the NMEP project's compliance with the Land Use standard (OAR 345-022-0030) in this order, including the applicable sections of the Columbia County Comprehensive Plan. The Council finds that the NMEP project, with conditions, meets the Land Use Standard. The Council assesses the NMEP project's compliance with the Fish and Wildlife Habitat standard (OAR 345-022-0060) in Section IV.A.8 of this order. The Council finds that the NMEP project, with conditions, meets the Fish and Wildlife Habitat standard. The department on behalf of the Council consulted with ODFW in assessing the project's compliance with the Fish and Wildlife Habitat Standard.

The request identifies the following specific Columbia County Comprehensive Plan provisions:

*Whether the project protects and maintains important habitat areas for fish and wildlife.*

The request did not include any facts or evaluation to support a finding that a contested case is justified.

The Council addresses the identified provision in the Land Use Standard section of this order, and in the Fish and Wildlife Habitat section.

*Whether the project was planned and designed to avoid the probability of accelerated erosion, pollution, contamination or siltation of lakes, rivers, and streams.*

The request did not include any facts or evaluation to support a finding that a contested case is justified.

The Council addresses the identified provision in the Land Use Standard section of this order, and in the Fish and Wildlife Habitat Standard section, as well as in relevant sections of the Structural standard, the Soil Protection Standard, Public Services Standard, Waste Minimization Standard, Removal-Fill Law, and Water Rights.

*Whether the project protects marshes, swamps, and other wetlands from filling, draining, or other alternations which would destroy or reduce their biological value.*

The request did not include any facts or evaluation to support a finding that a contested case is justified.

The Council addresses the identified provision in the Land Use standard section of this order, and in the Fish and Wildlife Habitat Standard section, as well as in the Removal-Fill Law section. The Council finds that a removal-fill permit should be issued by DSL, subject to the conditions contained in Attachment H of this order.

As the request did not provide any evaluation or facts to support the request for a contested case related to compliance with the Council's Fish and Wildlife Habitat Standard, the Land Use Standard and Columbia County applicable substantive criteria, the Council denies the request for a contested case on the Fish and Wildlife Standard and the Land Use Standard and finds that Jim Hoffman-Hopville Farms has not raised a significant issue of law or fact that may affect the Council's determination that the facility, with conditions, meets the Fish and Wildlife Habitat Standard and Land Use Standard.

5. ORS 469.503/Demonstrated Need. The request seemingly questions the demonstrated need for the project and whether the applicant has demonstrated that the public benefits outweigh adverse effects on resources and interests. The letter did not provide any facts or evaluation to support a finding that a contested case is justified; rather it simply lists the statutory provisions it claims are at issue. Neither of the two provisions identified here are actually at issue in the NMEP project, as discussed below.

*Whether the applicant has demonstrated a need for the project.*

The request did not include any facts or evaluation to support a finding that a contested case is justified.

The Council's Need Standard is addressed in Section IV.B.1 of this order. As described in this order, the Council has not adopted a need standard for surface facilities related to an underground natural gas storage reservoir. Furthermore, nongenerating facilities that are related or supporting facilities, such as the North Mist Transmission Pipeline, are expressly exempt from the Need Standard. As such, the Council finds that the Division 23 Need standard does not apply to the NMEP project.

*Whether the applicant has demonstrated that the public benefits outweigh adverse effects on resources and interests.*

The request did not include any facts or evaluation to support a finding that a contested case is justified.

ORS 469.503(1) requires that, in order to issue a site certificate, EFSC shall determine that the preponderance of the evidence on the record supports a conclusion that "the facility complies with the applicable standards adopted by the council pursuant to ORS 469.501 or the overall public benefits of the facility outweigh any adverse effects on resources or interests protected by the applicable standards the facility does not meet." (Emphasis added.) The request seemingly misinterprets this provision of the statute. The public benefits and adverse effects evaluation is required only if the Council does not find that the facility complies with applicable standards. In this case, the Council finds that the NMEP project, with recommended conditions, complies with all the applicable standards adopted by the Council. As such, the Council does not need to find that the overall public benefit of the facility outweigh any adverse effects on resources or interests protected by applicable standards the facility does not meet, because the Council affirmatively finds that the NMEP complies with all applicable standards.

The request did not provide any facts or evaluation to support the request for a contested case related to compliance with ORS 469.503 and the Need Standard, and the Council denies the request for a contested case on this issue and finds that Jim Hoffman-Hopville Farms has not raised a significant issue of law or fact that may affect the Council's determination that the facility, with conditions, meets the Need Standard and all other applicable standards.

### **III.B.5. Council Decision on Request for Contested Case Proceeding**

Based on the above analysis, the Council finds that no issue raised in the contested case request presents a significant issue of fact or law that may affect the Council's determination that the NMEP meets an applicable standard. Therefore, the Council denies the request for a contested case proceeding as to all of the issues raised in the request.

## **IV. Applicable Standards**

Compliance with the applicable EFSC standards in OAR Divisions 22, 23 and 24 are evaluated in the following subsections.

### **IV.A. Division 22 Standards**

#### **IV.A.1. General Standard of Review: OAR 345-022-0000**

- (1) *To issue a site certificate for a proposed facility or to amend a site certificate, the Council shall determine that the preponderance of evidence on the record supports the following conclusions:*
- (a) *The facility complies with the requirements of the Oregon Energy Facility Siting statutes, ORS 469.300 to ORS 469.570 and 469.590 to 469.619, and the standards adopted by the Council pursuant to ORS 469.501 or the overall public benefits of the facility outweigh the damage to the resources protected by the standards the facility does not meet as described in section (2);*
  - (b) *Except as provided in OAR 345-022-0030 for land use compliance and except for those statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council, the facility complies with all other Oregon statutes and administrative rules identified in the project order, as amended, as applicable to the issuance of a site certificate for the proposed facility. If the Council finds that applicable Oregon statutes and rules, other than those involving federally delegated programs, would impose conflicting requirements, the Council shall resolve the conflict consistent with the public interest. In resolving the conflict, the Council cannot waive any applicable state statute.*

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### **Findings of Fact**

The requirements of OAR 345-022-0000 are discussed in the sections that follow. Applicable statutes and rules of agencies are discussed below, in Section IV.D, *Division 24 Standards* of this order. The department, as staff to the Council, consulted with other state agencies and Columbia County during the RFA review processes to aid in the evaluation of the Project's compliance with statutes, rules and ordinances otherwise administered by other agencies. In many circumstances the Council relies upon these reviewing agencies' special expertise in evaluating compliance with the requirements of Council standards. The Council includes conditions in the amended Site Certificate which, based on department and Council evaluation of the requested amendment, are necessary to ensure or maintain compliance with all statutes, administrative rules and ordinances under Council jurisdiction as applicable to the Project.



### Certificate Expiration (OAR 345-027-0000)

Under OAR 345-015-0085(9), the site certificate is effective upon execution by the Council Chair and the site certificate holder. ORS 469.370(12) requires the Council to “specify in the certificate the date by which construction of the facility must begin.” ORS 469.401(2) requires that the site certificate contain a condition “for the time for completion of construction.” Under OAR 345-027-0000, the certificate holder must begin construction on the Project no later than the construction beginning date specified by Council in the site certificate, unless an amendment is requested and granted. “Construction” is defined in ORS 469.300(6) to mean “work performed on a site, excluding surveying, exploration or other activities to define or characterize the site, the cost of which exceeds \$250,000.” OAR 345-001-0010(12) adopts the statutory definition.

As provided in the RFA, NWN estimates a construction duration of 18-24 months. Therefore, the Council establishes a requirement that NWN initiate construction within two years of EFSC approval of the amended site certificate, and that NWN complete construction of the Project within four years of the approval of the amended site certificate. In the event that a certificate holder is not able to begin and/or complete construction by the specified dates, OAR 345-027-0030 allows a certificate holder to apply for an amendment to extend the deadlines for beginning or completing construction. In evaluating such an amendment request, the Council must consider, pursuant to OAR 345-027-0070(10)(b) whether the Council has previously granted an extension, whether there has been any change of circumstance that affects a previous Council finding and whether the facility complies with all Council standards.

Accordingly, and in compliance with OAR 345-027-0000 and OAR 345-027-0020(4), the Council adopts the following conditions to the site certificate:

**General Standard Condition 1:** The certificate holder shall begin construction of the components authorized by Amendment 11 within two years after the effective date of the amended site certificate. Under OAR 345-015-0085(8), the site certificate is effective upon execution by the Council chair and the certificate holder.

**General Standard Condition 2:** The certificate holder shall complete construction of the components authorized by Amendment 11 within four years of the effective date of the amended site certificate.

### Mandatory Conditions in Site Certificate (OAR 345-027-0020)

OAR 345-027-0020 lists certain conditions the Council must adopt in every site certificate. Some mandatory conditions directly implement a Council standard, and are therefore applied in this order within the discussion of the relevant standard. However, mandatory conditions that are not otherwise addressed in the evaluation of compliance with specific standards are discussed below, in the context of the Council’s General Standard of Review. In addition, pursuant to OAR 345-027-0020(10), the Council must include as conditions in the site certificate all

representations made by NWN in the request for amendment and supporting record that the Council deems to be binding commitments made by the site certificate holder. As provided in OAR 345-027-0020(1), “the Council shall not change the conditions of the site certificate except as provided for in OAR Chapter 345, Division 27.”

The following are mandatory conditions required pursuant to OAR 345-027-0020:

**Mandatory Condition 1:** The certificate holder shall submit a legal description of the Amendment 11 site to the Oregon Department of Energy within 90 days after beginning operation of the components authorized by Amendment 11. The legal description required by this rule means a description of metes and bounds or a description of the site by reference to a map and geographic data that clearly and specifically identify the outer boundaries that contain all parts of the facility. [OAR 345-027-0020(2)]

**Mandatory Condition 2:** The certificate holder shall design, construct, operate and retire the components authorized by Amendment 11:

- a. Substantially as described in the amended Site Certificate;
- b. In compliance with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances in effect at the time the Site Certificate is issued; and
- c. In compliance with all applicable permit requirements of other state agencies.

[OAR 345-027-0020(3)]

**Mandatory Condition 3:** Except as necessary for the initial survey or as otherwise allowed for wind energy facilities, transmission lines or pipelines under this section, the certificate holder shall not begin construction, as defined in OAR 345-001-0010, or create a clearing on any part of the site until the certification holder has construction rights on all parts of the site. For the purpose of this rule, “construction rights” means the legal right to engage in construction activities. For wind energy facilities, transmission lines or pipelines, if the certificate holder does not have construction rights on all or parts of the site, the certificate holder may nevertheless begin construction, as defined in OAR 345-001-001, or create a clearing on a part of the site if the certificate holder has construction rights on that part of the site and:

- a. The certificate holder would construct and operate part of the facility on that part of the site even if a change in the planned route of a transmission line or pipeline occurs during the certificate holder’s negotiations to acquire construction rights on another part of the site; or
- b. *[relates to wind energy facilities and therefore not applicable]*

[OAR 345-027-0020(5)]

**Mandatory Condition 4:** The certificate holder shall prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder. [OAR 345-027-0020(7)]

**Mandatory Condition 5:** Upon completion of construction, the certificate holder shall restore vegetation to the extent practicable and shall landscape all areas disturbed by construction in a manner compatible with the surroundings and proposed use. Upon completion of construction, the certificate holder shall remove all temporary structures not required for future operation and dispose of all timber, brush, refuse and flammable or combustible material resulting from clearing of land and construction of the facility. [OAR 345-027-0020(11)]

**Mandatory Condition 6:** The certificate holder shall notify the department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in Request for Amendment No. 11. After the department receives the notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division and to propose mitigation actions. [OAR 345-027-0020(13)]

**Mandatory Condition 7:** The certificate holder shall notify the department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site. [OAR 345-027-0020(14)]

**Mandatory Condition 8:** If the certificate holder becomes aware of a significant environmental change or impact attributable to the Amendment 11 components, the certificate holder shall, as soon as possible, submit a written report to the department describing the impact on the facility and any affected site certificate conditions. [OAR 345-027-0020(6)]

**Mandatory Condition 9:** Before any transfer of ownership of the facility or ownership of the site certificate holder, the certificate holder shall inform the department of the proposed new owners. The requirements of OAR 345-027-0010 apply to any transfer of ownership that requires a transfer of the site certificate. [OAR 345-027-0020(15)].

#### **Site Specific Conditions (OAR 345-027-0023)**

In addition to mandatory conditions imposed on all facilities, the Council rules also include “site specific” conditions at OAR 345-027-0023 that the Council may include in the site certificate to address issues specific to certain facility types or proposed features of facilities. Site specific

conditions which are included in the existing site certificate, or that would be modified as a result of the RFA are presented below:

**Site Specific Condition 1:** The certificate holder shall submit to the department copies of all incident reports involving the pipeline required under 49 CFR § 191.15 (Existing Site Certificate Condition VII(a)(9)). [OAR 345-027-0023(2)]

**Site Specific Condition 2:** The certificate holder shall design, construct and operate all pipelines in accordance with:

- a. The requirements of the U.S. Department of Transportation as set forth in Title 49, Code of Federal Regulations Part 192. [OAR 345-027-0023(3)(a)]
- b. The certificate holder shall develop and implement a program using the best available practicable technology to monitor the pipeline to ensure protection of public health. [OAR 345-027-0023(3)(b)]

**Site Specific Condition 3:** The corridor for the North Mist Transmission Pipeline, associated with Amendment 11, shall be as shown in Request for Amendment 11, Exhibit C, Project Location and Maps. Changes in pipeline corridor shall require prior Council approval. [OAR 345-027-0023(5)]

**Site Specific Condition 4:** Pursuant to Amendment 11, the site boundary is 5,472 acres and the permitted daily throughput of the facility is 635 MMcf. [OAR 345-027-0023(6)]

### **Conclusions of Law**

Based on the following analysis, and subject to compliance with the site certificate conditions listed above, the Council finds that the Project satisfies the requirements of OAR 345-022-0000.

#### **IV.A.2. Organizational Expertise: OAR 345-022-0010**

Compliance with the Council's Organizational Expertise Standard shall be determined following review of the following rule subparts:

- (1) The Council must find that the applicant has the organizational expertise to construct, operate and retire the proposed facility in compliance with Council standards and conditions of the site certificate. To conclude that the applicant has this expertise, the Council must find that the applicant has demonstrated the ability to design, construct and operate the proposed facility in compliance with site certificate conditions and in a manner that protects public health and safety and has demonstrated the ability to restore the site to a useful, non-hazardous condition. The Council may consider the applicant's experience, the applicant's access to technical expertise and the applicant's*

- past performance in constructing, operating and retiring other facilities, including, but not limited to, the number and severity of regulatory citations issued to the applicant.*
- (2) The Council may base its findings under section (1) on a rebuttable presumption that an applicant has organizational, managerial and technical expertise, if the applicant has an ISO 9000 or ISO 14000 certified program and proposes to design, construct and operate the facility according to that program.*
  - (3) If the applicant does not itself obtain a state or local government permit or approval for which the Council would ordinarily determine compliance but instead relies on a permit or approval issued to a third party, the Council, to issue a site certificate, must find that the third party has, or has a reasonable likelihood of obtaining, the necessary permit or approval, and that the applicant has, or has a reasonable likelihood of entering into, a contractual or other arrangement with the third party for access to the resource or service secured by that permit or approval.*
  - (4) If the applicant relies on a permit or approval issued to a third party and the third party does not have the necessary permit or approval at the time the Council issues the site certificate, the Council may issue the site certificate subject to the condition that the certificate holder shall not commence construction or operation as appropriate until the third party has obtained the necessary permit or approval and the applicant has a contract or other arrangement for access to the resource or service secured by that permit or approval.*

### **Findings of Fact**

Subsections (1) and (2) of the Council's Organizational Expertise Standard require that the certificate holder demonstrate the ability to design, construct, and operate a facility in compliance with Council standards and all Site Certificate conditions, as well as to restore the site to a useful, non-hazardous condition. The Council may consider the certificate holder's experience and past performance in constructing, operating and retiring other facilities. Subsections (3) and (4) address third party permits.

NWN's core business is the local distribution of natural gas. The requested amendment would not permit construction and operation of a new type of facility, but would allow expansion of the site boundary and construction and operation of new facilities similar to those currently in operation at the existing Mist Facility. Many of the individuals responsible for the design and construction of the Project are the same individuals responsible for development of the Calvin Creek area in 1997, the South Mist Feeder extension in 1999, and the new compressor at Miller Station in 2001.<sup>11</sup> NWN states that its facilities are operated in full compliance with all EFSC standards and Site Certificate conditions.<sup>12</sup> The department receives annual compliance reports from NWN and to date has not identified any compliance issues or violations with site certificate conditions.

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<sup>11</sup> RFA, Project Description and Division 27 Compliance, Section VII.A.

<sup>12</sup> Id.

As described in Section IV.A.7, *Retirement and Financial Assurance* of this order, NWN provided a copy of the bond issued to NWN by SafeCo Insurance Company of America for Amendment No. 9 site restoration costs and a copy of NWN's 2014 Annual Report showing a net revenue of \$754 million. Historic business experience, current authorized payment bond, and NWN's annual financial statement support the Council's conclusion that NWN has demonstrated reasonable assurance of its ability to restore the site to a useful, non-hazardous condition in the event of facility retirement.

NWN would not rely on any state or local permits issued to third parties for the Project for which EFSC would normally find compliance, and no ISO programs are proposed with the Project. Therefore, sections (2) and (3) of this standard do not apply.

The Project would require two federally delegated third-party permits from the Oregon Department of Environmental Quality (DEQ). One third-party permit would be for use of a Water Pollution Control Facilities (WPCF) permit, owned by Enerfin Resources, for disposal of saline process water produced during gas withdrawal from the Adams reservoir; and the second third-party permit would be for use of a National Pollutant Discharge Elimination (NPDES) permit, owned by Portland General Electric (PGE), for disposal of hydrostatic pipeline test water. While NWN proposes to use these third-party permits, PGE's NPDES permit is currently under review for renewal by DEQ. DEQ has stated that it will allow the Project to use the PGE NPDES permit without modification, though DEQ authorization must be requested by PGE and NWN and obtained before hydrostatic test water discharge.<sup>13</sup> In addition, DEQ approval of a permit modification for Enerfin Resource's WPCF would be required to allow disposal of saline process water produced during gas withdrawal from the Adams reservoir. NWN requested the required modification on June 30, 2015. DEQ has confirmed the complete request in a letter sent to NWN on June 30, 2015, and submitted by NWN in Exhibit E.<sup>14</sup>

NWN states that the Project would also require two federally delegated permits issued directly to NWN: an Air Contaminant Discharge Permit (ACDP), to be issued by DEQ, and a NPDES 1200-C Construction Stormwater Permit, also issued by DEQ. NWN submitted applications for both of these permits to DEQ in April 2015 and included copies of the permit applications in Exhibit E of the RFA, as attachments E-1 and E-2. DEQ submitted a letter to ODOE in May 2015 confirming receipt of the complete NPDES 1200-C permit application, and that the permit would be issued following receipt of a final Erosion and Sediment Control Plan and Council approval of the amended site certificate.<sup>15</sup>

Based upon the evidence provided, the Council finds that the certificate holder has provided reasonable assurance that it can successfully construct, operate and retire all Project components associated with the requested amendment in a manner that protects public health and safety, and has demonstrated the ability to restore the site to a useful, non-hazardous condition. In addition, the Council imposes Waste Minimization Conditions 2 and 3, requiring

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<sup>13</sup> MSTAMD11Doc41 Jennifer Purcell, DEQ.

<sup>14</sup> RFA, Exhibit E, Attachment E-3.

<sup>15</sup> MSTAMD11Doc16 Krista Ratliff, DEQ.

NWN to provide written confirmation of permit receipt and proof of agreement for use of the federally-delegated third-party permits. Based on the evidence provided and site certificate conditions, the Council finds that the certificate holder has a reasonable likelihood of entering into a contract with the identified third parties for access to the resources and services secured by those permits.

### **Conclusions of Law**

Based on the evidence in the record, the Council finds that, subject to compliance with the site certificate conditions listed above, NWN satisfies the Council's Organizational Expertise Standard.

### **IV.A.3. Structural Standard: OAR 345-022-0020**

- (1) *Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that:*
- (a) *The applicant, through appropriate site-specific study, has adequately characterized the site as to the Maximum Considered Earthquake Ground Motion as shown for the site in the 2009 International Building Code and maximum probable ground motion, taking into account ground failure and amplification for the site specific soil profile under the maximum credible and maximum probable seismic events; and*
  - (b) *The applicant can design, engineer, and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from maximum probable ground motion events. As used in this rule "seismic hazard" includes ground shaking, ground failure, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement, and subsidence;*
  - (c) *The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and*
  - (d) *The applicant can design, engineer and construct the facility to avoid dangers to human safety presented by the hazards identified in subsection (c).*

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### **Findings of Fact**

OAR 345-022-0020 requires the Council to find that the certificate holder has adequately characterized the potential seismic, geological and soil hazards of the Project site, and that the certificate holder can design, engineer and construct the Project to avoid dangers to human safety from these hazards. The Council does not preempt the jurisdiction of any state or local government over matters related to building code compliance. In addition to the specific conditions included in this order, the Council has adopted a number of mandatory site certificate conditions that apply to the Project, and which require NWN to satisfactorily

implement the design, engineering, and construction practices proposed in the RFA in order to satisfy the EFSC Structural Standard.<sup>16</sup> The analysis area for the Structural Standard is the area within the site boundary.

NWN's assessment of geologic hazards and other requirements of the Structural Standard can be found in RFA Exhibit H and associated technical appendices. Additional information related to the Structural Standard can also be found in NWN's RFA Project Description and Division 27 Compliance section, Section VII.B.

To facilitate the Council's evaluation of compliance with the Structural Standard, OAR 345-021-0010(1)(h)(A) requires that the certificate holder provide a geologic report meeting the guidance in the Oregon Department of Geology and Mineral Industries (DOGAMI) Open File Report 00-004 "Guidelines for Engineering Geologic Reports and Site-Specific Seismic Hazard Reports." The Guidelines outline four major areas that include: (1) general geologic and geographic information of the site and surrounding areas; (2) geologic map of the area within the site boundary and on-site investigations; (3) geologic descriptions of the soils and rock formations occurring in and around the site; and (4) an assessment of the factors influencing potential geologic hazards. NWN provided the information in RFA Exhibit H and supporting technical appendices in response to these DOGAMI guidelines. Site-specific geotechnical work was conducted by NWN's contractor, GeoEngineers, between 2013 and 2015. Site-specific assessment reports are provided as appendices to Exhibit H.

The Council and the department must review site certificate amendment requests against the EFSC standards and rules currently in effect. The current Structural Standard (OAR 345-022-0020(1)(a)) requires use of the 2009 International Building Code, and the Division 21 application contents (OAR 345-021-0010(1)(h)) requires use of the 2010 Oregon Structural Specialty Code as well as the 2009 International Building Code. The International Building Code and the Oregon Structural Specialty Code have both been updated since the versions referenced in the current EFSC rules; however, until the EFSC rules are updated to reflect the newer codes, the versions as stated in the current rule apply for purposes of compliance with the EFSC standard. However, as discussed below, NWN has also provided information to confirm compliance with the current code requirements.

DOGAMI reviewed the RFA including the associated geotechnical reports and provided comments on June 8, 2015.<sup>17</sup> The department also contracted with an independent consulting firm (Carlson Geotechnical) to support the department's review of RFA Exhibit H and supporting technical documentation. In response to the comments and requests for information, NWN conducted additional technical analysis and prepared a revised Exhibit H and accompanying technical appendices, submitted to ODOE on September 30, 2015. In response to the revised Exhibit H, DOGAMI reviewed and provided a comment letter on October 23, 2015 stating that it finds the revised Exhibit H to be compliant with the applicable Oregon administrative rules

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<sup>16</sup> Mandatory conditions are found at OAR 345-027-0020.

<sup>17</sup> MSTAMD11Doc3, William Burns DOGAMI.



(OAR 345-021-0010(1)(h), covering the requirements of Exhibit H, and OAR 345-022-0020, the EFSC Structural Standard).<sup>18</sup>

The Council makes the following findings of compliance with each of the Structural Standard requirements:

*OAR 345-022-0020(1)(a): The applicant, through appropriate site-specific study, has adequately characterized the site as to the Maximum Considered Earthquake Ground Motion as shown for the site in the 2009 International Building Code and maximum probable ground motion, taking into account ground failure and amplification for the site specific soil profile under the maximum credible and maximum probable seismic events*

OAR 345-022-0020(1)(a) requires the certificate holder to adequately characterize the probability and severity of seismic events and ground failure at the site. NWN contracted with the geotechnical and consulting engineering firm GeoEngineers to prepare a geologic report pursuant to the DOGAMI guidelines.

As explained in Exhibit H of the RFA, the NMCS, the utility corridor, and the southern portion of the NMTP would be located in the uplands and mountainous region of the Coast Range; the northern portion of the NMTP, including the terminus at Port Westward Industrial Park (PWIP), would be located north of highway U.S. 30 in a flat, broad agricultural region just south of the Columbia River. Exhibit H notes that because Columbia County contains recoverable quantities of natural gas, the geology of the area has been well-studied.<sup>19</sup> Exhibit H of the RFA describes the geologic units underlying the Project area, based upon maps produced by DOGAMI. Exhibit H also describes the soil units in the Project area, based on Natural Resource Conservation Service soil maps and Soil Conservation Service Soil Surveys of Columbia County. Exhibit H notes that while many faults have been identified in the area around Mist, the closest active fault as mapped by the US Geologic Survey is the Gales Creek Fault Zone, located approximately 20 miles south of the Project site.

NWN conducted a site-specific study of the analysis area as required by the currently applicable EFSC rules. NWN states in Exhibit H that seismic hazard de-aggregations were performed for 475-year, 2,475-year, and 4,975-year hazard levels for rock outcrop conditions at three locations: the NMCS location, NMTP milepost 6.1 (approximate mid-point of the pipeline), and NMTP milepost 12.1 (approximate northern terminus of the pipeline).<sup>20</sup> The 475-year motion corresponds to a 10 percent probability of exceedance in 50 years, the 2,475-year motion corresponds to a 2 percent probability of exceedance in 50 years, and the 4,975-year motion has a 1 percent probability of exceedance in 50 years.<sup>21</sup> The modeling is described in detail in

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<sup>18</sup> MSTAMD11Doc45, William Burns, DOGAMI.

<sup>19</sup> RFA Exhibit H, Section H.2.1.

<sup>20</sup> RFA Exhibit H, Section H.6.2.

<sup>21</sup> Id.

Exhibit H and the accompanying technical reports. As described by NWN, seismic de-aggregation results demonstrated that most substantial seismic hazard for the 475-year, 2,475-year, and 4,975-year earthquake levels are the magnitude 8.0-9.0 Cascadia Subduction Zone event, the magnitude 6.8 to 6.9 deep intraplate earthquake, and the magnitude 6.0 to 6.2 crustal fault earthquake.<sup>22</sup> NWN also conducted an assessment of ground acceleration for all three earthquake levels and at the same locations in the site boundary (NMCS, milepost 6.1, and milepost 12.1). This information is presented in Exhibit H, Table H-8. Peak ground acceleration is normally expressed as acceleration of earth's gravity, or "g". At the NMCS, the peak ground acceleration for rock outcrop conditions for the 475-year, 2,475-year, and 4,975-year earthquakes are 0.2057g, 0.5010g, and 0.6743g. At milepost 6.1 of the NMTP, the peak ground acceleration for rock outcrop conditions for the 475-year, 2,475-year, and 4,975-year earthquakes are 0.2052g, 0.4881g, and 0.6539g. At milepost 12.1 of the NMTP, the peak ground acceleration for rock outcrop conditions for the 475-year, 2,475-year, and 4,975-year earthquakes are 0.2060g, 0.4768g, and 0.6347g.<sup>23</sup> NWN notes that peak ground acceleration varies by up to six percent between the NMCS and northern terminus of the NMTP.<sup>24</sup> NWN also conducted a peak ground acceleration model for the Project adjusted for soil site class. NWN determined soil site class by analyzing soil borings and by geologic interpretation, and concluded the soil site class to be "D" from the NMCS to mile post 7.6 of the NMTP, and soil site class "E" from mile post 7.6 to the pipeline terminus. Soil site class adjusted peak ground acceleration model results are shown on Table H-9 of Exhibit H.<sup>25</sup>

Based upon the evidence presented, the Council finds that NWN has adequately characterized the Project site as to the MCE and maximum probable ground motion, taking into account ground failure and amplification for the site specific soil profile under the maximum credible and maximum probable seismic event.

*OAR 345-022-0020(1)(b): The applicant can design, engineer, and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from maximum probable ground motion events. As used in this rule "seismic hazard" includes ground shaking, ground failure, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement, and subsidence;*

Exhibit H and associated technical appendices of the RFA contain a detailed discussion of the seismic hazards expected to affect the Project.

### *Ground Shaking*

As discussed above, the maximum considered earthquake that could affect the Project is the Cascadia Subduction Zone event, estimated at up to magnitude 9.0. In Exhibit H, NWN states that underground steel pipelines with high-quality arc welded joints have a low risk of damage

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<sup>22</sup> RFA Exhibit H, Section H.6.2, Tables H-3, H-4, and H-5 show the summary of the seismic hazard de-aggregation modeling. Table H-6 lists the quaternary faults located within 50 miles of the site boundary.

<sup>23</sup> RFA Exhibit H, Section H.6.4.1.1, Table H-8.

<sup>24</sup> RFA Exhibit H, Section H.6.4.1.1.

<sup>25</sup> RFA Exhibit H, Section H.6.4.1.2.

from ground shaking in the absence of other deformation adversely affecting the pipeline. NWN references two studies to support this claim, from the USGS and from Southern California Gas Company.<sup>26</sup>

To further mitigate risk from seismic hazards, NWN has committed to build the Project in accordance with the Oregon Structural Specialty Code (OSSC), which uses the 2012 International Building Code (IBC), including current amendments by Oregon and local agencies.<sup>27</sup> The 2014 OSSC went into effect July 1, 2014, and uses the 2012 IBC. As it is proposed by NWN, the Council adopts Structural Standard Condition 1, requiring NWN to design and construct the Project according to the OSSC which uses the 2012 IBC, including current amendments by Oregon and local agencies.

#### *Ground Failure (Fault Rupture or Displacement)*

NWN states that the closest USGS mapped fault is the Gales Creek Fault Zone, located approximately 18.7 miles south of the site boundary, and that the historic record does not record many small earthquakes in the immediate Project vicinity, indicating a low probability of future earthquakes large enough to cause ground rupture. Additionally, NWN states that site surveys and an assessment of LiDAR data did not indicate evidence of past fault rupture. As such, fault rupture is not considered a significant hazard to the Project.<sup>28</sup>

#### *Landslide (Seismically induced)*

Exhibit H contains an assessment of the risks posed by landslides to the Project. As NWN notes, earthquakes can cause landslides, including reactivating ancient landslides. NWN states that it has sited the Project to avoid very steep slopes (greater than 70%) and existing landslides, to the extent possible, though states that the NMTP crosses two ancient landslides and is within 1,500 feet of several others. The NMCS would be located on a landform that is interpreted as a landslide deposit, based on analysis of subsurface boring samples. The remainder of the NMTP south of U.S. 30 would follow either along existing roads adjacent to gentle to moderate slopes, or would cross land near gentle to moderate slopes, or near ridge tops.<sup>29</sup>

NWN states that there is a low risk that an earthquake could cause an ancient landslide to reactivate, but that if such an event did occur, the overall risk that a landslide could damage the NMTP or NMCS and then cause a hazard to the public is also low because the known landslides that could affect the NMCS and the NMTP, if reactivated, are located in unpopulated areas.<sup>30</sup>

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<sup>26</sup> RFA Exhibit H, Section H.6.4.1.

<sup>27</sup> RFA Exhibit H, Section H.8. International Building Code Section 1613 contains design codes related to geology, seismicity, and near-surface soils, with slight modifications by amendments from the state of Oregon and local agencies.

<sup>28</sup> RFA Exhibit H, Section 6.4.2.

<sup>29</sup> RFA Exhibit H, Section H.6.4.3.

<sup>30</sup> Id.

*Liquefaction and Liquefaction-Induced Hazards (Subsidence, Lateral Spreading)*

NWN included in Exhibit H an assessment of the liquefaction and liquefaction-induced hazards to the Project. NWN conducted an extensive liquefaction modeling analysis of the liquefaction hazards in the Project area, the results of which are found in Exhibit H, Section H.6.4.4. The assessment was focused on the floodplain area north of highway U.S. 30, as NWN concluded that this is the only portion of the Project that could be susceptible to liquefaction.<sup>31</sup> NWN assessed the liquefaction potential of each of 18 soil boring samples under the maximum credible ground shaking potential in the analysis area, the Cascadia subduction zone event with magnitude earthquake 9.0. NWN also assessed the potential for liquefaction settlement and lateral spreading in the floodplain area north of highway U.S. 30 and how these could impact the integrity and safety of the NMTP.

NWN's assessment of liquefaction potential concluded that under maximum credible earthquake ground shaking, some of the alluvial material in the floodplain is susceptible to liquefaction.<sup>32</sup> NWN's assessment of liquefaction shows that maximum expected vertical differential settlement is 12 inches; however, this is well within the normal range of curvature design for 24-inch pipelines, and as stated by NWN, is effectively in the same category as construction layout tolerances. NWN's assessment of potential impact from lateral spreading to the Project concluded that while lateral spreading is possible in the floodplain area, the magnitude of lateral spreading is not sufficient to cause permanent deformation to the NMTP and has a negligible potential to rupture the NMTP.<sup>33</sup> NWN states that the design of the NMTP in accordance with OSSC and IBC standards (required as under Structural Standard Condition 1) would adequately protect the Project and public safety from liquefaction and liquefaction-related hazards. NWN does not propose any specific mitigation related to liquefaction or liquefaction-related hazards.<sup>34</sup>

*Tsunami Inundation and Seismically Induced Seiche*

As described by NWN in Exhibit H, the Project site is located approximately 40 miles from the mouth of the Columbia River and the Pacific Ocean and is outside the tsunami inundation zone. NWN also cites a technical study and paper that assessed the potential for tsunami penetration up the Columbia River; the study found that a tsunami may create a wave height between 0-1 meters at the area near the Project but that the wave would be contained within the existing channel of the river.<sup>35</sup> Accordingly, tsunami inundation is not considered a significant risk to the Project.

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<sup>31</sup> RFA Exhibit H, Section H.6.4.4 discusses that liquefaction is not typically associated with mountainous terrain with groundwater located tens to hundreds of feet below ground surface; additionally assessment of boring samples taken from the NMCS area confirmed that liquefaction is not a risk at the NMCS.

<sup>32</sup> RFA Exhibit H, Section H.6.4.4.1.

<sup>33</sup> RFA Exhibit H, Sections H.6.4.4.2 and H.6.4.4.3.

<sup>34</sup> RFA Exhibit H, Section H.8.

<sup>35</sup> RFA Exhibit H, Section H.6.4.6.

NWN explains that a seismically induced seiche is a phenomena whereby a water body suddenly rises in water height due to an earthquake. NWN explains that seiches generally occur in enclosed or semi-enclosed waterbodies, though they could occur on rivers and sloughs such as are located near the northern portion of the NMTP. NWN further explains that the area north of highway U.S. 30 has a relatively thick accumulation of low rigidity sediment, and is less susceptible to seismically induced seiche. NWN concludes that due to the thick accumulation of low rigidity sediment, and that the Project is not in an area with an enclosed or semi-enclosed water body, and as such the risk of seiche is minor and is not considered a significant risk to the Project.<sup>36</sup>

### *Discussion*

In Exhibit H and its associated technical appendices, NWN described the potential seismic and geologic hazards that are expected to occur at the Project area. In order to maintain compliance with the Structural Standard, the Council's rules implement a number of mandatory conditions in all site certificates.<sup>37</sup> Mandatory Condition 6, included in Section IV.A.1 *General Standard of Review* of this order, requires NWN to notify ODOE, DOGAMI, and the state building codes division if site investigations reveal conditions in foundation rocks that differ significantly from those described in requests for amendments, and that if this is the case, the Council in consultation with DOGAMI and the state building codes division may require NWN to propose additional mitigation. Mandatory Condition 7, included in Section IV.A.1 *General Standard of Review* of this order requires NWN to notify ODOE, DOGAMI, and the state building codes division if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site. In addition, Structural Standard Condition 2, which is also a mandatory site certificate condition, requires NWN to design, engineer, and construct the Project to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events.<sup>38</sup> These three conditions further ensure that the Project is designed, engineered, and constructed to avoid dangers to human safety presented by seismic hazards affecting the site.

In Exhibit H, NWN committed to completing additional geotechnical investigation prior to Project construction. As proposed by NWN, the final scope of the studies will be determined by NWN's geotechnical consultants and confirmed by ODOE in consultation with DOGAMI.<sup>39</sup> The additional studies include:

- Civil site plans for the NMCS, the utility conduit, and NMTP alignments rights of way. Civil site plans will include:
  - Existing topography,
  - Proposed grading (cut and fill),
  - Alignment of the utility conduit and NMTP,
  - Existing utilities, culverts, and other site features within the rights of way, and

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<sup>36</sup> RFA Exhibit H, Section H.6.4.8.

<sup>37</sup> OAR 345-027-0020.

<sup>38</sup> OAR 345-027-0020(12).

<sup>39</sup> RFA Exhibit H, Section H.5.

- Final positioning of equipment within the NMCS area.
- Site-specific geotechnical studies for the proposed cut and fill slopes along the pipeline and utility conduit alignments, following the development of civil site plans and site grading delineation. Site-specific geotechnical studies will include slope stability analysis, as needed, to provide recommendations to mitigate potential adverse impacts to slope stability that may result from cutting into hillsides adjacent to existing roadways. The study will also include recommendations for restoring site grades to pre-construction conditions, and recommendations for engineered fill slopes will include specifications for materials to be used, adequacy of native soils to be used as fill, lift thickness, and compaction criteria for wet and dry weather conditions.<sup>40</sup>
- Site-specific geotechnical evaluation for the development of the NMCS, once final site grading and final facility location is determined. Additional borings will be completed to define geotechnical conditions at the proposed equipment locations at the site once final layout is determined. If cuts and fills greater than five feet are anticipated, additional borings will be completed in cut and fill slope locations to evaluate the stability of cut and fill slopes. The final geotechnical engineering report will include the information and assessment identified in Exhibit H, Section H.5.
- Evaluation of the two landslides identified along the utility conduit alignment to better define risk to adjacent logging road and utility conduit, and to evaluate potential road stabilization options to be discussed with the road owner.

The Council adopts Structural Standard Condition 3, requiring that NWN conduct the geotechnical investigations and studies as described here and as committed to by NWN in Exhibit H. Structural Standard Condition 3 also requires that NWN and its geotechnical consultant confirm the scope of the studies with ODOE in consultation with DOGAMI.

Additionally, NWN committed to designing and building the Project to meet the standards of the 2014 Oregon Structural Specialty Code, which incorporates the 2012 International Building Code (required to be implemented under Structural Standard Condition 1). As noted above, the current EFSC rules reference the 2010 OSSC and the 2009 IBC. Constructing the Project to the 2014 OSSC standards would further reduce potential dangers to human safety presented by seismic hazards affecting the Project site.

As noted above, in response to the revised Exhibit H, DOGAMI reviewed and provided a comment letter on October 23, 2015 stating that it finds the revised Exhibit H to be compliant with the applicable Oregon administrative rules (OAR 345-021-0010(1)(h), covering the requirements of Exhibit H, and OAR 345-022-0020, the EFSC Structural Standard).<sup>41</sup>

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<sup>40</sup> A comment letter from Columbia County (MSTAMD11Doc31 Columbia County) specifically requested that this condition be included as a condition in the amended site certificate.

<sup>41</sup> MSTAMD11Doc45, William Burns, DOGAMI.

Based on the evidence provided, the Council concludes that NWN can design, engineer, and construct the Project to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from maximum probable ground motion events.

*OAR 345-022-0020(1)(c) and (d): (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety presented by the hazards identified in subsection (c).*

NWN characterized the potential non-seismic geologic and soil-related hazards that could affect the Project in Exhibit H and the Project Description and Division 27 Compliance section. The hazards considered are related to erosion, flooding, groundwater, and slope stability and landslides.

### *Erosion*

Project-related erosion concerns are addressed in Section IV.A.4 Soil Protection Standard of this order. NWN has included a full assessment of its proposed compliance with the Soils Standard section in RFA Exhibit I. As described in the findings of compliance with the Soils Standard, this order includes a number of conditions to reduce potential Project-related impact to soils, including erosion. NWN has also developed and proposes to implement a number of related plans during construction and operation to protect soils and reduce Project impacts, including an Erosion and Sediment Control Plan (included as Attachment C to this order). Considering the Project design and required site certificate conditions, the Project is unlikely to adversely affect or be aggravated by soil erosion, or create a danger to human safety from erosion.

### *Flooding and Groundwater*

NWN states in Exhibit H that the northern portion of the NMTP, north of U.S. 30, is within the Columbia River floodplain, and that the area is protected from flooding by a series of dikes and levees. The Project in this area would consist entirely of buried pipeline. NWN notes that for most areas within the floodplain, the pipeline would be buried 40 feet or more below ground surface, and would be buried more than 50 feet below waterways including the Clatskanie River and Beaver Slough.<sup>42</sup> The upland portion of the Project, south of U.S. 30, is not in an area that is generally prone to flooding.

NWN states in Exhibit H that the floodplain area north of U.S. 30 has shallow groundwater that would be encountered during construction of the NMTP. While HDD techniques will be used for installation of most of the NMTP in this area, there are three short sections that would be installed using trenching. During trenching, dewatering may be necessary if a substantial volume of groundwater is encountered. Pipelines installed in such conditions of shallow

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<sup>42</sup> RFA Exhibit H, Section H.9.2.

groundwater and installed at relatively shallow depths, may require buoyancy control. NWN states that it would use concrete coated pipe or concrete pipe weights at the open-trench segments of the NMTP north of U.S. 30, and thus would counteract pipeline buoyancy that could result from flooding or high levels of groundwater.<sup>43</sup> Considering the design of the Project, both flooding and shallow groundwater conditions are unlikely to affect the Project and are therefore unlikely to lead to a situation that poses a risk to human safety.

### *Landslide and Slope Stability*

NWN completed a desktop study and field investigation of the potential landslide and slope stability hazards present in the analysis area. The desktop study included a review of the State Landslide Inventory Database (SLIDO), historic aerial photographs, and LiDAR digital elevation models. Exhibit H of the RFA, Table H-11, describes the landslides in the site boundary. Maps included in Exhibit H show the locations of the identified historic landslides (Figures H-9 to H-15). As noted above in relation to seismically-induced landslides, NWN states that it has sited the Project to avoid very steep slopes (those greater than 70%) and existing landslides, to the extent possible, though the NMTP crosses two ancient landslides, and is within 1,500 feet of several other mapped landslides. The NMCS would be located on a landform that is interpreted as a landslide deposit, based on analysis of subsurface boring samples. The remainder of the NMTP follows either along existing roads adjacent to gentle to moderate slopes, or crosses land near gentle to moderate slopes, or near ridge tops.<sup>44</sup>

As discussed in Exhibit H, the NMTP crosses two mapped landslides, and crosses near a third mapped landslide. NWN's assessment found no evidence of recent movement, such as ground cracks or bowed conifer trees. As such, NWN concludes that these three landslides are likely relic landslides and are dormant or inactive, and present a low risk to the Project.<sup>45</sup>

The utility corridor is near four mapped landslide areas. NWN's assessment determined that one of the mapped landslides could not impact the utility conduit as it is located on an opposite drainage, and the conduit in this location is located on top of a stable ridge. A second mapped landslide was further assessed by NWN, and no indication of landslide activity was observed; NWN has concluded that this is either not a landslide or is a relict and inactive landslide that poses low risk to the Project. NWN identified two additional landslides that may have occurred recently, on the downslope, or fill, side of a logging road where the utility conduit would be located. As mitigation, NWN would install the utility conduit on the in-board, or cut, side of the logging road, where it is less likely to be affected by a potential future reactivation of these two landslides.<sup>46</sup> In addition, NWN has committed to conducting further study of this area to better define the risk to the logging road and utility conduit, and to evaluate potential road stabilization options. This study is required under Structural Standard Condition 3.

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<sup>43</sup> Id.

<sup>44</sup> RFA Exhibit H, Section H.6.4.3.

<sup>45</sup> RFA Exhibit H, Section H.7.4.2.1.

<sup>46</sup> RFA Exhibit H, Section H.7.4.2.2.



As noted above, NWN described in Exhibit H that the NMCS would be located on a landform that is interpreted as a landslide deposit, based on analysis of subsurface boring samples and LiDAR modeling. As described by NWN, there is no evidence of recent landslide activity such as bowed or bent conifer trees, and as such, NWN has concluded that the landslide deposits at the NMCS location are likely ancient and stable.<sup>47</sup>

NWN has a system-wide landslide monitoring program, which assigns a risk level to known landslides that may affect its pipeline and associated facilities, and monitors the landslides on a regular basis. NWN would add the eight identified landslides that may affect the Project to its landslide monitoring program.<sup>48</sup> The Council finds that any future landslide hazards that are discovered by NWN that may impact the Project must also be added to its landslide monitoring program. This would further mitigate the potential risk posed by landslides to the Project. The Council adopts Structural Standard Condition 4, requiring that NWN include the identified landslides that may impact the Project in its landslide monitoring program, as well as future landslide hazards identified during additional investigations. In the event that a landslide impacts the Project, NWN states that there is a low risk to public safety as the landslide hazards are located in unpopulated areas.

As discussed by NWN, there may be areas where excavation into steep slopes may be required to install the NMTP adjacent to existing logging roads, and that cutting and filling on slopes in excess of 50 percent could create localized slope instability. In order to mitigate for this risk, NWN has committed to incorporating the following measures into the final design of construction corridors along overland segments of the Project:

- Permanent cut and fill slopes will be included at a maximum gradient of 2H:1V (horizontal to vertical).
- Though not anticipated, any fill slopes will be keyed into undisturbed, firm native material.
- Corridors on sloping ground will be constructed with waterbars to prevent capturing and concentrating surface water runoff.

These measures must be incorporated in the geotechnical study and grading plans required under Structural Standard Condition 3.

As noted above, in response to the revised Exhibit H, DOGAMI reviewed and provided a comment letter on October 23, 2015 stating that it finds the revised Exhibit H to be compliant with the applicable Oregon administrative rules (OAR 345-021-0010(1)(h), covering the requirements of Exhibit H, and OAR 345-022-0020, the EFSC Structural Standard).<sup>49</sup>

Based upon the evidence provided, the Council concludes that NWN has adequately characterized the potential geologic and soil hazards of the Project site and its vicinity that

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<sup>47</sup> RFA Exhibit H, Section H.7.4.2.3.

<sup>48</sup> RFA Exhibit H, Section H.9.3.2. Table H-12 shows the eight identified landslides that may impact the Project, and the assigned risk ranking and associated monitoring schedule.

<sup>49</sup> MSTAMD11Doc45, William Burns, DOGAMI.

could, in the absence of a seismic event, adversely affect or be aggravated by the construction and operation of the Project, and that NWN can design, engineer, and construct the Project to avoid dangers to human safety presented by the identified hazards.

### **Amendment 11 Structural Standard Conditions**

The Council adopts the following conditions to ensure and maintain compliance with the Structural Standard and reduce potential danger to human safety presented by seismic hazards that may affect the Project.

**Structural Standard Condition 1:** The site certificate holder shall design and build the components authorized by Amendment 11 according to the Oregon Structural Specialty Code which uses the 2012 International Building Code, with current amendments by the state of Oregon and local agencies.

**Structural Standard Condition 2:** The site certificate holder shall design, engineer, and construct the components authorized by Amendment 11 to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. Seismic hazards include ground shaking, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement, and subsidence. [OAR 345-027-0020(12)]

**Structural Standard Condition 3:** Prior to beginning construction of Amendment 11 components, the site certificate holder shall complete the following geotechnical investigations. The final scope of the studies will be determined by NWN's geotechnical consultants and confirmed by the department in consultation with DOGAMI. The additional studies shall include:

- Civil site plans for the NMCS, the utility conduit, and NMTP alignments rights of way. Civil site plans will include:
  - Existing topography,
  - Proposed grading (cut and fill),
  - Alignment of the utility conduit and NMTP,
  - Existing utilities, culverts, and other site features within the rights of way, and
  - Final positioning of equipment within the NMCS area.
- Site-specific geotechnical studies for the proposed cut and fill slopes along the pipeline and utility conduit alignments, following the development of civil site plans and site grading delineation. Site-specific geotechnical studies will include slope stability analysis, as needed, to provide recommendations to mitigate potential adverse impacts to slope stability that may result from cutting into hillsides adjacent to existing roadways. The study will also include recommendations for restoring site grades to pre-construction conditions, and recommendations for engineered fill slopes will include

specifications for materials to be used, adequacy of native soils to be used as fill, lift thickness, and compaction criteria for wet and dry weather conditions.<sup>50</sup>

- Site-specific geotechnical evaluation for the development of the NMCS, once final site grading and final facility location is determined. Additional borings will be completed to define geotechnical conditions at the proposed equipment locations at the site once final layout is determined. If cuts and fills greater than five feet are anticipated, additional borings will be completed in cut and fill slope locations to evaluate the stability of cut and fill slopes. The final geotechnical engineering report will include the information and assessment identified in Exhibit H, Section H.5.
- Evaluation of the two landslides identified along the utility conduit alignment to better define risk to adjacent logging road and utility conduit, and to evaluate potential road stabilization options to be discussed with the road owner.

**Structural Standard Condition 4:** The site certificate holder shall include the identified landslide hazards in its established landslide monitoring program. If future investigations identify additional landslide hazards that may adversely impact the Amendment 11 components, those landslide hazards shall also be added to the landslide monitoring program.

### **Conclusions of Law**

Based on the foregoing findings of facts and conclusions, and subject to compliance with the site certificate conditions listed above, the Council finds that the Project complies with the Council's Structural Standard.

### **IV.A.4. Soil Protection: OAR 345-022-0022**

*To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in a significant adverse impact to soils including, but not limited to, erosion and chemical factors such as salt deposition from cooling towers, land application of liquid effluent, and chemical spills.*

### **Findings of Fact**

The Soil Protection Standard requires the Council to find that, taking into account mitigation, the design, construction and operation of a facility are not likely to result in a significant adverse impact to soils. Construction and operation of a proposed facility could adversely affect soils by means of erosion, compaction and chemical spills. Adverse impacts to soils can affect crop production on adjacent agricultural lands, native vegetation, fish and wildlife habitat, and water quality. NWN's assessment of potential soil impacts and assessment of compliance with the Soil Protection Standard are included in Exhibit I of the RFA. Additional information related

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<sup>50</sup> A comment letter from Columbia County (MSTAMD11Doc31, Columbia County) specifically requested that this condition be included as a condition in the amended site certificate.

to the Project's potential effects to soils and proposed mitigation measures, as described by NWN, can be found in Exhibit G Materials Analysis and Exhibit K Land Use of the RFA. The study area for the Soil Protection Standard is the area within the Project site boundary.

### Existing Soil Conditions and Land Use

Existing soil conditions within and around the site boundary are shown in Exhibit I of the RFA, specifically on Figures I-2 through I-6. Table I-2 of Exhibit I of the RFA describes the soils units, including the erosion potential and permeability of the various soil types. NWN classified soils using Natural Resources Conservation Service (NRCS) data. The Project crosses a variety of soil types, topography, elevation, groundwater depth, and other soil and erosion potential factors. As described in Exhibit I of the RFA, the northern portion of the NMTP would cross lowland diked farmland and pasture, at sea level elevation, with groundwater at less than 10 feet below ground surface. The NMCS and southern portions of the NMTP would be located at elevations up to 1,750 feet with groundwater up to hundreds of feet below ground surface.<sup>51</sup>

As discussed throughout this order, the area within and surrounding the site boundary generally consists of three distinct land uses. The north portion of the site boundary, along the NMTP corridor north of U.S. Route 30 (U.S. 30), is mostly agricultural, including a large poplar tree plantation. Other uses include animal pasture and grazing, berry farming, and mint farming. South of U.S. 30, the upland portion of the site boundary is mostly commercially harvested timberland and associated infrastructure such as roads and a log sorting yard, as well as natural gas production areas and NWN's Mist underground natural gas storage facility. Other types of development features are interspersed through the site boundary and the surrounding area, including U.S. 30, the BNR railroad, houses, farm buildings, roads including logging roads, gas wells, and other development features.

### Potential Adverse Impacts to Soil

Exhibit I and its associated attachments describe NWN's assessment of how the Project may impact soils, as well as NWN's proposed mitigation measures. Additional information related to the Project's potential impacts to soils, as described by NWN, and proposed mitigation measures can be found in Exhibit G and Exhibit K of the RFA.

### *Construction*

As described in Exhibit I of the RFA, during construction, soils would be directly impacted by Project activities including trenching, HDD drill pad and staging area preparation, clearing for the NMCS, and maintenance or expansion of roads. Soils may also be impacted by erosion, compaction, changes in drainage patterns, or spills/releases of chemicals or other liquid materials used during construction such as bentonite drilling fluid proposed for use during HDD. As described in that exhibit, erosion from water, particularly stormwater, is a concern in the

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<sup>51</sup> RFA, Exhibit I, Section 1.3.

upland portion of the site boundary (south of U.S. 30) due to steep slopes and high average rainfall.<sup>52</sup>

In an agency comment letter, Jennifer Purcell of DEQ noted a possible issue related to potential Project-related impacts to drinking water sources, specifically regarding potential Project impacts to the Midland Water Association's intake on Graham Creek.<sup>53</sup> Elevated turbidity, which can result from soil erosion that migrates into waterways, is noted in the DEQ comment letter as the concern on Graham Creek. Potential soil erosion impacts and mitigation measures are discussed in this section as it relates to the Soil Protection Standard. Additional assessment of the Project's potential impact on drinking water sources is included in Section IV.A.13, *Public Services* of this order.

### *Operation*

As described in Exhibit I of the RFA, during Project operation soil may be impacted at and near the NMCS by improperly managed hazardous material spills or by stormwater runoff. NWN states that erosion is less likely to be a concern during Project operation provided that temporarily impacted areas are appropriately revegetated following completion of construction. As described in Exhibit P of the RFA, herbicides may be used by NWN for vegetation management of the NMTP corridor in the forested areas of the site boundary. Herbicides are discussed in Section IV.A.8, *Fish and Wildlife Habitat* of this order.

### Measures to Mitigate Adverse Impacts to Soils during Project Construction

#### *Erosion Concerns*

As described above and in the RFA, Project construction may adversely impact soils and cause erosion. As such, NWN has proposed a number of management and mitigation measures intended to reduce potential impacts to soils. The mitigation measures and best management practices (BMPs) specific to soils are included in the Project's Erosion and Sediment Control Plan (ESCP, included as Attachment C to this order) and the Agricultural Impact Mitigation Plan (AIMP, included as Attachment D to this order). In Exhibit I, Section 1.6.1, NWN listed the specific mitigation measures and BMPs from the ESCP and AIMP that would be implemented to minimize impacts to soils. Those mitigation measures and BMPs include:

#### Forested Areas

- Stripping of topsoil to a minimum depth of 12 inches, and stockpile topsoil for replacement after pipeline installation to promote vegetation growth.
- Installation of sediment fence or other approved BMPs at downslope slides of excavations and disturbed areas.

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<sup>52</sup> RFA, Exhibit I, Section 1.5.1.

<sup>53</sup> MSTAMD11Doc5 Jennifer Purcell, ODEQ.

- Installation of check dams along areas of concentrated water flow runoff, particularly in roadside ditches.
- Placing straw mulching, erosion control fabric, and/or hydro-seed with tacifier on all soils disturbed by construction. In general, erosion control fabric will be placed over mulch where slopes exceed 40 percent, on stream adjacent banks, or within drainage channels restored after construction.
- Providing temporary sediment traps downstream of intermittent stream crossings.
- In collaboration with agriculture and commercial timber operators, planting of designated seed mixes and seedlings within affected areas to reestablish permanent vegetative cover and to restore commercial timber.
- Constructing and maintaining waterbars in sloping overland segments of the pipeline alignment.
- Retaining of vegetative buffers where practical.

Agricultural Areas and Wetland Areas (all wetlands in the Project boundary are in agriculture areas)

- Stripping of topsoil to a minimum depth of 18 inches, and stockpile topsoil within entry and exit workspaces and open trench segments for replacement after pipeline installation to promote vegetation growth.
- Placing straw mulching over applied seed. Straw mulch will be applied at 4,000 pounds per acre, or a functional equivalent. Mulch will not be applied within wetland boundaries.
- Installing orange sediment fence to identify construction limits and limit off-site migration of soils.
- Replacing stockpiled topsoil, and reseed with approved seed mixes, or in accordance with landowner agreements.
- Retaining vegetative buffers in areas where excavation is not required to install the pipeline.
- Providing temporary sediment traps downstream of intermittent stream crossings.
- Planting designated seed mixes within affected areas.
- Placing load dispersing timber mat roads within pipe stringing and fabrication workspaces, and particularly where these workspaces cross mapped wetlands, to reduce soils compaction and disturbance.
- Decompacting topsoil and subsoil as necessary.
- Segregating and replacing hydric soils to match preconstruction conditions.

The ESCP is a condition of approval of the National Pollutant Discharge Elimination System (NPDES) 1200-C construction permit issued by the DEQ.<sup>54</sup> The EPA has delegated management of NPDES permits in Oregon to DEQ. The NPDES 1200-C permit applies during construction, and is intended to regulate and manage stormwater. NWN submitted its NPDES 1200-C permit

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<sup>54</sup> The NPDES 1200-C permit is a federally-delegated permit that is not governed by this amended site certificate.

application, including the ESCP, to DEQ on April 24, 2015 and included a copy of the application in Exhibit E of the RFA, Attachment E-2 (the ESCP is included in RFA Exhibit I, Appendix A). Based on its evaluation of the NPDES permit application and associated ESCP, DEQ notified the department on May 26, 2015 that DEQ expects to be able to issue the NPDES 1200-C construction stormwater permit for the Project within 30 days of receiving the amended site certificate from the Council and review completion of the final version of the ESCP.<sup>55</sup>

The AIMP (Attachment D to this order) includes measures intended to mitigate potential Project-related impacts to agricultural operations and agricultural lands. Many of the measures included in the AIMP would also reduce and mitigate Project impacts to soils, including measures to reduce and mitigate impacts to topsoil, protect wetlands and wet agriculture lands, reduce and mitigate soil compaction, and reduce erosion.

Implementing the measures described above and the measures in the ESCP and AIMP would reduce potential Project-related erosion and other impacts to soils. To ensure compliance with the ESCP and AIMP and to ensure any adverse impacts to soils are effectively mitigated, the Council adopts Soil Protection Conditions 1 and 2, which require NWN to implement the final ESCP, as approved by DEQ, and the AIMP, respectively.

In addition to these conditions, Mandatory Condition 5, as included in Section IV.A.1 *General Standard of Review* of this order requires that following completion of construction, NWN restore vegetation to the extent practicable and landscape all areas disturbed by construction in a manner compatible with the surroundings and proposed use. This condition would further minimize the potential for erosion.

#### *Potential Soil Impacts from Spills*

NWN states in its Exhibit G Materials Analysis of the RFA that minor quantities of chemicals and lubricants, such as materials used for equipment maintenance, would be stored on-site at construction yards and that the quantities of these materials would be similar to household levels. Exhibit G describes that during construction, NWN intends to refuel large pieces of equipment on-site using mobile fueling trucks and that fuel would not be permanently stored at construction yards. Smaller mobile vehicles (such as pickup trucks) would be refueled offsite at nearby privately owned fueling stations.<sup>56</sup>

In order to reduce the risk of spills of hazardous materials from construction vehicle and equipment refueling or from storage and use of minor quantities of hazardous materials, and to contain any spills that do occur, NWN would develop and implement a construction spill prevention and management plan (SPMP). The construction SPMP would describe procedures and BMPs to be followed by contractors during such activities as equipment refueling, and controlling, containing, and cleaning up any spills that accidentally occur. The construction

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<sup>55</sup> MSTAMD11Doc16 Krista Ratliff, ODEQ.

<sup>56</sup> RFA, Exhibit G, Section 4.1.

SPMP would contain at a minimum the procedures and BMPs as described in Exhibit I, Section 1.6.1.6, of the RFA as well as the requirements for oil and hazardous material emergency response pursuant to DEQ rules at OAR 340, Division 142. The procedures and BMPs include:

- Use of secondary containment around stationary equipment (including drill rigs, drilling fluid pumps, centrifugal pumps, and mobile fluid storage tanks),
- Use of drip pans during equipment maintenance,
- Proper storage of materials on-site,
- Maintenance of spill kits at construction areas,
- Refueling of all equipment at least 100 feet away from water bodies and delineated wetlands,
- Training of employees on the BMPs and procedures included in the construction SPMP, and
- Requirements for oil and hazardous material emergency response consistent with DEQ rules at OAR 340, Division 142.

The Council finds that implementation of the construction SPMP as described above would reduce the potential for accidental hazardous material spills to adversely impact soils, and would contain procedures to properly manage, contain, and reduce the significance of any spills that unintentionally occur during Project construction. In order to ensure implementation of these measures, the Council adopts Soil Protection Condition 3, which requires NWN to develop and implement the construction SPMP in order to mitigate potential adverse impacts to soils.

#### *Potential Soil Impacts from Releases of Drilling Fluids*

As described in Exhibit I of the RFA, one of the purposes for using HDD construction techniques for pipeline installation, as opposed to open trenching, is to reduce impacts to surface soils, landscapes, farmland, wetlands, and waterways. However, as also described in Exhibit I of the RFA, during the HDD drilling process, there is a risk of drilling fluid surface release, also known as inadvertent return.<sup>57</sup> Uncontrolled surface release of drilling fluid, in sufficient quantities, could adversely impact soils, as well as fish and wildlife habitat and waterways. As discussed in Exhibit I of the RFA, the risk of surface release is higher in areas of relatively thin soil cover, such as at HDD entry and exit points. As explained in Exhibit I, the Project Description and Division 27 Compliance section, as well as Exhibit G, drilling fluid used during HDD would mostly consist of water and bentonite clay. In some instances, specialized polymers would be used to control fluid loss to prevent binding of clay particles or swelling of clays, or to control loss of drilling fluid circulation. NWN states in Exhibit I that the typical polymers used during HDD are not considered hazardous chemicals, and that NWN would not allow any hazardous chemicals to be added to drilling fluids.<sup>58</sup>

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<sup>57</sup> RFA, Exhibit I, Section 1.5.1.1.

<sup>58</sup> Id.



In order to reduce the risk of an inadvertent return during HDD, and to reduce the potential significance of any inadvertent return that does occur, NWN has developed and would implement an Inadvertent Return Response Plan (IRRP) when working in and near wetlands and waterways. The IRRP was submitted as part of Exhibit J of the RFA, and is included as Attachment F to this order. The IRRP contains a number of measures to reduce the risk of an inadvertent return and reduce the significance of an inadvertent return, should one occur. Such measures include staff training, a list of response materials and equipment, and operating procedures. In addition to the measures included in the IRRP, NWN proposes to use a monitor during HDD to watch for surface fluid release at the entry and exit points of the HDD drill and the area within 150 feet of the entry/exit locations. The department received two public comments expressing concern that an inadvertent return could release drilling fluid into waterways, and subsequently cause harm to aquatic habitat, fish, and drinking water supply.<sup>59</sup> Potential impacts to aquatic habitat, fish, and drinking water supply are assessed in Section IV.A.8, *Fish and Wildlife Habitat*, Section IV.A.9 *Threatened and Endangered Species*, and Section IV.A.13 *Public Services*, of this order.

The Council finds that implementation of the IRRP in conjunction with the HDD monitoring procedure as described above would reduce the potential for inadvertent returns of drilling fluids to adversely impact soils, and would contain procedures to properly manage, contain, and reduce the significance of any inadvertent returns that occur during Project construction. To maintain compliance with the Soil Protection Standard, the Council adopts Soil Protection Condition 4, which requires NWN to implement the IRRP and HDD monitoring in order to mitigate potential adverse impacts to soils.

#### Measures to Mitigate Adverse Impacts to Soils during Project Operation

Based on NWN's description of Project operations and impacts and proposed mitigation, Project operation is unlikely to lead to adverse impacts to soil. Areas temporarily disturbed during construction would be restored to pre-construction conditions and replanted with appropriate vegetation, thus reducing the potential for Project-related erosion or issues related to changing drainage patterns during operation. Minor quantities of oil, lubricants, cleaners, and anti-freeze would be stored on-site during operation and maintenance of the NMCS (Table G-2, Exhibit G of the RFA, lists the materials to be used during Project operation). As stated in Exhibit G of the RFA, full oil changes would be conducted regularly at the NMCS by specialized contractors or trained NWN personnel, and used oil, triethylene glycol, and oil/water separator liquid would be collected, transported, and recycled by a vendor.<sup>60</sup>

To protect soils and the environment around the NMCS, and to reduce or eliminate potential adverse impacts from accidental spills or releases during operation, NWN would develop and implement an operational SPMP. The operational SPMP is described in Exhibit I, Section 1.6.2. The operational SPMP would include measures to protect soils by reducing the potential for

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<sup>59</sup> MSTAMD11Doc23 Diana Peach; MSTAMD11Doc22 Columbia Riverkeeper.

<sup>60</sup> RFA Exhibit G, Section 4.2.

spills or releases to occur, managing the impact of any accidental spill or release that occurs, reducing the potential of an accidental spill migrating off-site from the NMCS, as well as the requirements for oil and hazardous material emergency response pursuant to DEQ rules at OAR 340, Division 142. The operational SPMP would include at a minimum the following BMPs and measures:

- Installation of containment diking at the NMCS designed to hold chemical spills.
- Installation of curbing at the NMCS to prevent spills and leaks from being released to the environment, and routing runoff to treatment or control areas.
- Installation of drip pans to contain very small volumes of leaks, drips, and spills.
- Maintenance of on-site absorbent socks and absorbent granules to control and clean-up a spill or release.
- Training of employees on the BMPs and procedures included in the operational SPMP.
- The requirements for oil and hazardous material emergency response pursuant to DEQ rules at OAR 340, Division 142.

Based on the foregoing analysis, the Council finds that the development and implementation of the operational SPMP will minimize the potential for accidental spills or releases to cause a significant impact to soils during Project operation. Therefore, the Council adopts Soil Protection Condition 5, which requires NWN to complete and implement the operational SPMP as described in Exhibit I.

### Monitoring

NWN proposes the following programs to monitor and report on the adequacy of soil protection methods:

- A trained employee would monitor the area around HDD entry and exit points, and an area 150 feet around the entry/exit points, during all times when drilling fluid is being circulated. The monitor would watch for signs of inadvertent drilling fluid return, and would issue a containment installation order if signs of an inadvertent return are detected. As described in the IRRP, if drilling fluid is inadvertently released into wetlands or waterways, the monitor will order that directional drilling stop immediately and the event response procedures in the IRRP will be implemented. The certificate holder shall contact ODOE within 48 hours if there is an inadvertent return that does not impact wetlands or waterways but does require issuance of a containment installation order.
- During construction, the ESCP would require NWN's designated erosion and sediment control inspector to visually inspect its BMPs and discharge outfalls daily when rainfall and runoff occur. If the erosion protection measures are inadequate or ineffective, alternative methods would be developed and implemented in consultation with ODOE and DSL.

- As a component of the restoration and revegetation program to be implemented following completion of construction, NWN would monitor the success of its replanted vegetation, as required by Mandatory Condition 5.

### **Amendment 11 Soil Protection Conditions**

The Council adopts the following conditions to ensure and maintain compliance with the Soil Protection Standard, and to reduce and mitigate potential adverse impacts to soils.

**Soil Protection Condition 1:** During construction of the Amendment 11 components, the certificate holder shall conduct all construction work in compliance with a final Erosion and Sediment Control Plan that is satisfactory to the Oregon Department of Environmental Quality as required under the National Pollutant Discharge Elimination System Construction Stormwater Discharge General Permit 1200-C.

**Soil Protection Condition 2:** During construction of Amendment 11 components occurring partially or wholly on privately-owned agricultural land, the certificate holder shall implement the Agricultural Impact Mitigation Plan, provided as Attachment D of this order.

**Soil Protection Condition 3:** Prior to beginning construction of Amendment 11 components, the certificate holder shall prepare and submit to the department for review and approval a construction spill prevention and management plan (SPMP) for implementation during construction. The construction SPMP shall include at a minimum the following procedures and best management practices (BMPs):

- Use secondary containment around stationary equipment (including drill rigs, drilling fluid pumps, centrifugal pumps, and mobile fluid storage tanks),
- Use drip pans during equipment maintenance,
- Properly store materials on-site,
- Maintain spill kits at construction areas,
- Refuel all equipment at least 100 feet away from water bodies and delineated wetlands,
- Train employees on the BMPs and procedures included in the construction SPMP, and
- The requirements for oil and hazardous material emergency response consistent with DEQ rules at OAR 340, Division 142.

**Soil Protection Condition 4:** During horizontal directional drilling (HDD) associated with components authorized by Amendment 11, the certificate holder shall implement the procedures in the Inadvertent Return Response Plan (IRRP), provided as Attachment F of this order. The certificate holder shall employ a monitor during HDD to watch for surface fluid release at the entry and exit points of the HDD drill and the area within 150 feet of the entry/exit locations. The certificate holder shall add the Oregon Department of Energy to the list of agencies that will be contacted by phone within 24 hours of an inadvertent return that impacts a wetland or perennial stream. The certificate holder shall contact the

department within 48 hours if there is an inadvertent return that does not impact wetlands or waterways but does require issuance of a containment installation order.

**Soil Protection Condition 5:** Prior to operation of components authorized by Amendment 11, the certificate holder shall prepare and submit to the department for review and approval an operational Spill Prevention and Management Plan (SPMP). The operational SPMP shall contain at a minimum the following procedures and best management practices:

- Install containment diking at the NMCS designed to hold chemical spills.
- Install curbing at the NMCS buildings to prevent spills and leaks from being released to the environment, and route runoff to treatment or control areas.
- Install drip pans to contain very small volumes of leaks, drips, and spills.
- Maintenance of on-site absorbent socks and absorbent granules to control and clean-up a spill or release.
- Train employees on the BMPs and procedures included in the operational SPMP.
- The requirements for oil and hazardous material emergency response pursuant to DEQ rules at OAR 340, Division 142.

Subject to compliance with these conditions, the Council finds that, with mitigation, the design, construction and operation of the Project would not result in a significant adverse impact to soils.

### **Conclusions of Law**

Based on the foregoing findings of facts and conclusions, and subject to compliance with the site certificate conditions listed above, the Council finds that the Project complies with the Council's Soil Protection Standard.

#### **IV.A.5. Land Use: OAR 345-022-0030**

- (1) To issue a site certificate, the Council must find that the proposed facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission.*
- (2) The Council shall find that a proposed facility complies with section (1) if:*
  - (a) The applicant elects to obtain local land use approvals under ORS 469.504(1)(a) and the Council finds that the facility has received local land use approval under the acknowledged comprehensive plan and land use regulations of the affected local government; or*
  - (b) The applicant elects to obtain a Council determination under ORS 469.504(1)(b) and the Council determines that:*
    - (A) The proposed facility complies with applicable substantive criteria as described in*

*section (3) and the facility complies with any Land Conservation and Development Commission administrative rules and goals and any land use statutes directly applicable to the facility under ORS 197.646(3);*

*(B) For a proposed facility that does not comply with one or more of the applicable substantive criteria as described in section (3), the facility otherwise complies with the statewide planning goals or an exception to any applicable statewide planning goal is justified under section (4); or*

*(C) For a proposed facility that the Council decides, under sections (3) or (6), to evaluate against the statewide planning goals, the proposed facility complies with the applicable statewide planning goals or that an exception to any applicable statewide planning goal is justified under section (4).*

*(3) As used in this rule, the “applicable substantive criteria” are criteria from the affected local government’s acknowledged comprehensive plan and land use ordinances that are required by the statewide planning goals and that are in effect on the date the applicant submits the application. If the special advisory group recommends applicable substantive criteria, as described under OAR 345-021-0050, the Council shall apply them. If the special advisory group does not recommend applicable substantive criteria, the Council shall decide either to make its own determination of the applicable substantive criteria and apply them or to evaluate the proposed facility against the statewide planning goals.*

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### **Findings of Fact**

Under OAR 345-021-0010(1)(k), NWN must elect to address the Council’s Land Use Standard either by obtaining local land use approvals under ORS 469.504(1)(a) or by obtaining a Council determination under ORS 469.504(1)(b). As stated in the RFA, NWN elected to have the Council make the land use determination under ORS 469.504(1)(b) and OAR 345-022-0030(2)(b) for the major components and related or supporting facilities proposed in the RFA.<sup>61</sup> However, consistent with previous amendments, NWN elected to obtain local land use approval from Columbia County for the four I/W wells, which are not within EFSC jurisdiction. NWN provided information about compliance with the Council’s Land Use Standard in Exhibit K of the RFA.

The Council must apply the Land Use Standard in conformance with the requirements of ORS 469.504. Under ORS 469.504(1)(b)(A), the Council may find compliance with statewide planning goals if the Council finds that the Project “complies with applicable substantive criteria from the affected local government’s acknowledged comprehensive plan and land use regulations that are required by the statewide planning goals and in effect on the date the application is

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<sup>61</sup> In addition to the requested land use approvals, the Project would require development of four high-capacity injection/withdrawal wells. These wells are under the jurisdiction of the Department of Geology and Mineral Industries (DOGAMI) and therefore are not addressed in this order.

submitted.” Under OAR 345-027-0070(10), in evaluating amendment requests, the Council must apply the applicable substantive land use criteria, as described in OAR 345-022-0030, in effect on the date the RFA is filed. NWN filed RFA #11 on April 30, 2015; Columbia County is the affected local government.<sup>62</sup>

The Project would be located in Columbia County on lands zoned for Primary Agriculture (PA-80), Primary Forestry (PF-80), and Resource Industrial – Planned Development (RIPD). In addition, portions of the Project would be located in the following overlay zones: Flood Hazard; Riparian Corridors, Wetlands, Water Quality and Fish and Wildlife Habitat Protection; and, Wetland Area. Figure K-1 and Figure K-2, as presented in Exhibit K, present the land use zones and overlay zones within and surrounding the Project area. As described in Section II.A *Proposed Facility Modifications* of this order, Project components include the underground natural gas storage reservoir expansion, NMCS, 13-mile NMTP, underground electrical and communication lines, and injection/withdrawal (I/W) pipelines. Portions of the Project within PA-80 zoned land and the overlay zones referenced above include 4.6 miles of the NMTP, including the pipeline alignment from HDD Bore Pad No. 1 to HDD Bore Pad No. 9 (see Figures C-2.21 through C-2.31 in Exhibit C of the RFA). Portions of the Project within PF-80 zoned land include 7.6 miles of the NMTP, including the pipeline alignment from the NMCS to HDD Bore Pad No. 1 (see Figures C-2.1 through C-2.21 in Exhibit C); underground natural gas storage reservoir expansion area; underground electrical and communication lines; and, I/W pipelines. Portions of the Project within RIPD zoned land include 0.8 of a mile of the NMTP, including the pipeline alignment from HDD Bore Pad No. 9 to the PWIP connection location (see Figures C-2.32 through C-2.34 of Exhibit C).

The land use analysis begins with the identification of “applicable substantive criteria.” As the governing body of Columbia County, the Council appointed the Columbia County Board of Commissioners as the Special Advisory Group (SAG) for the original application for site certificate filed in 1981, which remains in effect for subsequent amendments with Project components located in Columbia County.<sup>63</sup> The department provided notice of this RFA to the Columbia County SAG on May 7, 2015. The applicable substantive criteria include provisions from Columbia County’s 2010 acknowledged zoning ordinance (CCZO) and the acknowledged 2011 Columbia County Comprehensive Plan (CCCP).

The land use approvals and development permits required from Columbia County for the Project are presented in Table LU-1, *Requested Land Use Approvals and Permits*.

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<sup>62</sup> In accordance with ORS 469.401(3), after issuance of the amended site certificate, Columbia County shall “upon submission by the applicant of the proper applications and the payment of proper fees, but without hearings or other proceedings” promptly issue the related permits and approvals, subject only to the conditions set forth in the site certificate. Each state or local government agency that issues a permit, license or certificate continues to exercise enforcement authority over the permit, license or certificate.

<sup>63</sup>Order Appointing Columbia County Commissioners as Special Advisory Groups, March 13, 1981.

**Table LU-1: Requested Land Use Approvals and Permits**

Permit or Approval	Relevant Criteria	Applicable to:
PA-80 Approval	CCZO 306.10 CCZO 307 <sup>1</sup> CCZO 308	NMTP Within PA-80 Zone
Conditional Use Permit	CCZO 507 CCZO 508 CCZO 509 CCZO 1503.5	NMCS NMTP Within PF-80 Zone Underground Electrical and Communication Lines I/W Pipeline
Site Design Review Approval	CCZO 1563	Project
Flood Hazard Overlay Development Permit	CCZO 1108 CCZO 1112	NMTP, Only Within Flood Hazard Overlay
<p>Notes:</p> <ol style="list-style-type: none"> <li>1. As explained in greater detail below, based on state law, the CCZO 307 General Review Standards do not apply to the Project. Nonetheless, the order discusses these criteria because NWN recognizes the agricultural protection policies that underlie the standards.</li> <li>2. As discussed in greater detail below, the NMTP is a utility facility necessary for public service and therefore is allowable within the County's PA-80 zone subject to the criteria set forth at CCZO 306.10, which mirror the statutory criteria at ORS 215.275. As noted below, the NMTP is not subject to review criteria beyond those provided by CCZO 306.10, which are consistent with ORS 215.275 and OAR 660-033-0130(16).<sup>64</sup></li> </ol> <p>Source: RFA Exhibit K, Table K-1</p>		

The applicable substantive criteria related to each type of Project land use, in effect on the date NWN submitted its RFA, are presented in Table LU-2, *Applicable Substantive Criteria* below.<sup>65</sup>

<sup>64</sup> In *Brentmar v. Jackson County*, 321 OR 481, 496 (1995) the Oregon Supreme Court determined that for uses permitted under ORS 215.283(1), counties may not apply additional approval criteria beyond those authorized by statute. The proposed NMTP is a utility necessary for public service under ORS 215.283(1)(c). Therefore, although identified as a conditional use in the County's code, the County recognizes that the county's conditional use criteria do not apply to the proposed use.

<sup>65</sup> MSTAMD11Doc21 Meriel Darzen. Public Comment letter, received on June 8, 2015, raised an issue regarding the requirement for NWN to file a land use application or obtain landowner consent (from Hopville Farms). The referenced requirement is established for utility facility service lines, which are conditionally allowed in the PA-80 zone pursuant to CCZO Section 304.10. CCZO Section 304.10 does not apply to the proposed NMTP and has not been identified by NWN, the department or SAG (Columbia County) as an applicable substantive criteria. The proposed NMTP is a utility facility necessary for public service under ORS 215.283(1)(c) and therefore, the NMTP is not subject to review criteria beyond those provided by CCZO 306.10, which directly implement ORS 215.275 and OAR 660-033-0130(16). As discussed above regarding the Hopville Farms contested case request, Hopville Farms summarily questioned the project's compliance with numerous land use provisions, but did not include any facts or analysis to substantiate its concerns.

**Table LU-2: Applicable Substantive Criteria**

<b>2010 Columbia County Zoning Ordinance</b>	
<i>Article III – Resource Districts</i>	
Section 300	Primary Agriculture Use Zone – 80 (PA-80)
Section 306	Conditional Uses
Section 307	General Review Standards
Section 308	Development Standards
Section 500	Primary Forest Zone – 80 (PF-80)
Section 505	Conditional Uses
Section 507	Siting of Dwellings and Structures
Section 508	General Review Standards
Section 509	Standards of Development
<i>Article IV – Rural Development Districts</i>	
Section 680	Resource Industrial – Planned Development
Section 683	Uses Permitted Under Prescribed Conditions
<i>Article VI – Special Districts, Overlap Districts and Special Provisions</i>	
Section 1100	Flood Hazard Overlay
Section 1170	Riparian Corridors, Wetlands, Water Quality, and Fish and Wildlife Habitat Protection Overlay Zone
Section 1180	Wetland Area Overlay
<i>Article VII – Discretionary Permits</i>	
Section 1503	Condition Uses
Section 1550	Site Design Review
Section 1563	Standards for Approval
<b>2011 Columbia County Comprehensive Plan</b>	
Part II: Citizen Involvement Part IV: Forest Lands Part V: Agriculture Part X: Economy Part XIII: Transportation Part XIV: Public Facilities and Services Part XV: Energy conservation Part XVI: Goal 5: Open Space, Scenic and Historic Areas, and Natural Areas Part XVIII: Air, Land, and Water quality	

Pursuant to ORS 469.504(5), the Council has applied the applicable substantive criteria identified in Table LU-2, *Applicable Substantive Criteria*, to the Project. An evaluation of Project compliance with the applicable substantive criteria is presented below.

CCZO Section 300 – Primary Agriculture Use Zone

*Section 306: Conditional Uses. The following uses may be approved, subject to compliance with the procedures and criteria under Sections 307, 308, and 1503 Conditional Use Permit hearing, the prescriptive standards specified herein, and other applicable state, federal and local regulations and permits:*



*306.10 Utilities Necessary for Public Services, including wetland waste treatment systems, but not including commercial facilities for the purpose of generating electrical power for public use by sale, or transmission towers over 200 feet in height, or to interstate natural gas pipelines and associated facilities authorized by and subject to regulation by the Federal Energy Regulatory Commission, may be allowed subject to Sections 307, 308, 1503 and 1550 and to the following criteria:*

*A. To demonstrate that a utility is necessary, an applicant must show that reasonable alternatives have been considered and that the utility must be sited in the Primary Agriculture Zone due to one or more of the following factors:*

- 1. Technical and engineering feasibility;*
- 2. The proposed facility is locationally dependent. A utility facility is locationally dependent if it must cross land in one or more areas zoned for exclusive farm use in order to achieve a reasonably direct route or to meet unique geographical need that cannot be satisfied on other lands;*
- 3. Lack of available urban or nonresource lands;*
- 4. Availability of existing rights-of-way;*
- 5. Public health and safety; and*
- 6. Other requirements of state and federal agencies.*

As described above, 4.6 miles of the approximately 12 mile NMTP would be located in the county's Primary Agriculture (PA-80) zone. The NMTP is a "utility necessary for public service" because it consists of a utility structure that is intended to provide a service (i.e., the transmission of natural gas.) Therefore, the use is allowable in the PA-80 zone, subject to the above-listed criteria, which mirror the requirements of ORS 215.275. Notwithstanding the language in the County's code, the conditional use requirements beyond those that are consistent with ORS 215.275 are not applicable to the NMTP because, as a utility facility necessary for public service under ORS 215.283(1)(g), the use is permitted subject only to the requirements of ORS 215.275.

CCZO 306.10 and ORS 215.275 require NWN to demonstrate that it has considered "reasonable alternatives" to siting the Project on non-EFU zoned lands, and that the use must cross EFU-zoned land as a result of at least one of the six factors listed above. NWN's alternative analysis evaluated the proposed NMTP route under each of the six factors and included the following analysis in Exhibit K of its RFA:

1. Technical and engineering feasibility limitations: As explained in greater detail in the *NMTP Site Selection Detail* (on pages 5-9 of Exhibit K of the RFA) within the PA-80 zone, the NMTP must avoid geotechnically unstable areas. The NMTP must also avoid areas within public rights of way where conflicts with other utilities are likely, and must provide ample areas outside populated areas for underground HDD boring pads and operations, and other construction-phase work area. In addition, certain HDD bore pad

locations are required to achieve sufficient depth under U.S. Highway 30, the Clatskanie River, and Beaver Slough.

2. The pipeline is locationally dependent: On a macro level, as shown on Figure K-4 (Exhibit K of the RFA), the NMTP must cross PA-80-zoned land in the county as it is not possible to connect the North Mist Compressor Station (NMCS) and the Port Westward Industrial Park (PWIP) without crossing lands within the PA-80 zone. In other words, the NMTP must cross land in the PA-80 zone in order to achieve a reasonably direct route. On a micro level, however, as explained in the *NMTP Site Selection Detail*, NWN has made every reasonable effort to establish a pipeline corridor within the county that avoids as much agricultural-zoned land as possible, and minimizes and mitigates those impacts where necessary, including installing the NMTP underground to eliminate permanent impacts to agricultural operations, using HDD techniques to minimize the extent of temporary impacts, choosing bore pad locations and temporary construction areas on the margins of agricultural fields and near existing farm roads, and restoring agricultural land and associated improvements to their former condition if they are damaged or disturbed by siting, maintenance, repair, or reconstruction.
3. Lack of available urban and nonresource lands: There are no urban or nonresource lands in the vicinity of the NMTP. It would not be possible to connect the NMCS and the PWIP without crossing lands within the PA-80 zone.
4. Availability of existing rights of way: NWN proposes to make extensive use of existing roadways and pipeline corridors in the forest-zoned section of the NMTP. However, within the PA-80-zoned area, it is not possible to take a reasonably direct route to the PWIP and site the NMTP within existing rights of way.
5. Public health and safety: NWN states in Exhibit K that the protection of the NMTP from risk of damage and consequential public safety risks is of paramount importance; and as such, NWN states that it exceeds safety requirements and avoids locations where third-party damage to the pipeline is possible or likely, including avoiding conflicts with other utilities within certain rights of way. To minimize the public's exposure to traffic safety risks along U.S. Highway 30, NWN will bore under the highway, which necessitates siting Bore Pad No. 2 within the PA-80 zone.
6. Other requirements of state or federal agencies: It is necessary to site the NMTP within the PA-80 zone, in part, to avoid impacts to environmentally sensitive areas, wildlife habitat areas, and protected animal and plant species. For example, the route through the PA-80 zone was chosen to minimize impacts to the U.S. Fish and Wildlife Service's Julia Butler Hanson Fish and Wildlife Refuge, as well as wetlands and waterways. As described in Exhibits J and Q of the RFA, NWN adjusted the NMTP route to avoid impacts to wetlands and waters to the extent practicable and, as a result, there is only a single stream (Clatskanie River) crossing within the range of listed fish species; as discussed above, this segment of the NMTP will be installed via HDD to avoid impacts.

The alternatives analysis required under the county's code and corresponding statutory provision does not require that NWN evaluate alternative EFU-zoned routes on which the proposed use could be located. Rather, NWN must consider whether there are reasonable non-EFU locations that could serve the proposed use. As stated in Exhibit K, NWN considered alternative pipeline routes and none were able to achieve similar safe, and efficient (direct) results as the proposed pipeline route through EFU-zoned land and therefore none were determined to be reasonable. As described in NWN's *Site Selection Detail*, non-EFU locations are not available for the proposed use; it is not reasonably possible to transport the natural gas via pipeline from the NMCS to PWIP without crossing EFU-zoned land. Fundamentally, the proposed NMTP is locationally dependent because "it must cross land in one or more areas zoned for exclusive farm use in order to achieve a reasonable direct route."

Because of the necessity to cross EFU-zoned land, in addition to the analysis provided for the other factors, which provide additional support and justification for the proposed pipeline route, the Council finds that the proposed NMTP complies with the criteria of CCZO 306.10 and requirements of ORS 215.275.

- B. Cost alone may not be the only consideration in determining that a utility facility is necessary for public service. Land costs shall not be included when considering alternative locations for substantially similar utility facilities and the siting of public facilities that are not substantially similar.*

Under CCZO 306.10.B and ORS 215.275, cost may be a consideration in determining whether a utility facility is necessary for public service.<sup>66</sup> As explained in Exhibit K, NWN anticipates that the cost of the proposed pipeline route would be less than alternatives, but not because of its location within the PA-80 zone. The cost savings of the proposed pipeline route compared to other alternatives would result primarily because it would be a direct route from the proposed NMCS to the PWIP and would use existing roadways and pipeline corridors. However, as NWN further explains, the proposed route would not be the lowest cost alternative. NWN has designed the route to minimize impacts on agricultural practices, including utilization of HDD construction techniques, siting temporary construction areas in the margins of agricultural fields, and avoiding sensitive crops. These routing decisions would offset the cost-savings and further support NWN's contention that cost is not the sole consideration in the proposed pipeline route selection. Accordingly, the Council finds that the proposed pipeline route complies with this criterion.

- C. The County shall impose clear and objective conditions to mitigate and minimize the impacts of the proposed facility in order to prevent a significant change in accepted*

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<sup>66</sup> ORS 215.275(3), which the county's code implements, states, in full, that "[c]osts associated with any of the factors listed in subsection (2) of this section[implemented through CCZO 305.10.A] may be considered, but cost alone may not be the only consideration in determining that a utility facility is necessary for public service. Land costs shall not be included when considering alternative locations for substantially similar utility facilities. The Land Conservation and Development Commission shall determine by rule how land costs may be considered when evaluating the siting of utility facilities that are not substantially similar." The LCDC rules are located at OAR 66-033-0130(16).

*farming practices or a significant increase in costs of farm practices on surrounding farmlands.*

The county's code and ORS 215.275 require the county to impose conditions to "mitigate and minimize the impact" of the Project in order to prevent a significant change in accepted farming practices or a significant increase in the cost of surrounding farm practices. As explained in Exhibit I of the RFA, existing farm uses in the Project area include pastureland, tree farms, and crops including blueberry and mint. As described in Exhibit K, NWN proposes to route the NMTP to avoid agricultural land to the extent possible and to minimize impacts where use of agricultural-zoned land would be necessary. NWN also proposes to implement an Agricultural Impact Mitigation Plan (AIMP), which details NWN's proposed mitigation for agricultural impacts. The proposed AIMP describes how NWN would avoid and minimize impacts and, where impacts are unavoidable, mitigate or provide compensation for agricultural impacts. Mitigation proposed in the AIMP includes stripping and segregating topsoil where trenching is necessary, and returning the stripped topsoil following backfilling, grading and subsoil compaction; measures to prevent the spread of noxious weeds; and rehabilitation of staging areas and HDD drill pads (the AIMP is included as Attachment D to this order). NWN must also obtain a National Pollutant Discharge Elimination System (NPDES) 1200-C permit,<sup>67</sup> which would require implementation of an erosion and sediment control plan (ESCP) and the use of best management practices (BMPs) to minimize erosion potential (the draft ESCP is included as Attachment C to this order). Soil Protection Conditions 1 and 2 ensure implementation of and compliance with the conditions and measures proposed in the ESCP and the AIMP, respectively. Following completion of construction and restoration of temporarily impacted areas, farming practices can continue as prior to construction; farming can occur on top of the NMTP right of way, including plantation tree farming.<sup>68</sup> Subject to compliance with these conditions, the Council finds compliance with this criterion.

*D. The County shall require the owner of the utility facility to restore any agricultural land that is damaged or otherwise disturbed by the siting, maintenance, repair or reconstruction of the facility. A bond or other security instrument may be imposed for such consideration.*

The county's code and ORS 215.275 require the utility facility owner to restore any agricultural land damaged or disturbed by the Project by siting, maintenance, repair or reconstruction activities. Restoration of construction impacts are addressed and required in the proposed AIMP, included as Soil Protection Condition 2. The AIMP includes 20 mitigation measures, including requirements for NWN to utilize agricultural specialists, coordinate with landowners, evaluate and restore impacts, and conduct monitoring and ongoing mitigation following the completion of construction. The Council concurs that these measures would result in the restoration of potential agricultural impacts from the Project during siting, maintenance, repair

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<sup>67</sup> The required NPDES 1200-C Construction Stormwater Permit is a federally delegated state permit that is not governed by this amended site certificate.

<sup>68</sup> RFA Exhibit K, Section 2.0

or reconstruction activities. Subject to compliance with Soil Protection Condition 2, the Council finds that the proposed use satisfies this criterion.

- E. The establishment or extension of a sewer system by public or private entities as defined by OAR 660-011-0060(1)(f) in a Primary Agriculture Zone shall be subject to the provisions of OAR 660-011-0060. Systems that solely collect, transfer and/or dispose of storm water runoff or animal waste from farm use defined in ORS 215.20392) are not considered "sewer systems" for this subsection.*

The NMTP does not include any proposed sewer system extension. Therefore, this criterion does not apply.

#### *Section 307: General Review Standards*

*307.1: All uses in the Primary Agriculture Zone shall meet the review standards found in the above enabling sections 304, 305 or 306. To also ensure compatibility with farming and forestry activities, the Planning Director, hearings body or Planning Commission shall determine that a use authorized by Sections 304, 305, or 306, except as specifically noted, shall meet the following requirements:*

- A. The proposed use will not force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; and*
- B. The proposed use will not significantly increase the cost of accepted farm or forest practices on lands devoted to farm or forest use.*

The requirements of CCZO Section 307.1 do not apply as review criteria to the NMTP use because, as a "utility facility necessary for public service" under ORS 215.283(1)(c), the NMTP is subject only to compliance with CCZO Section 306.10, which directly implement ORS 215.275 and OAR 660-033-0130(16).<sup>69</sup>

#### *Section 308: Development Standards*

*308.1: The minimum average lot width shall be 100 feet for all activities except farming and forestry.*

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<sup>69</sup> NWN asserts that, if that standard did apply, the proposed NMTP would satisfy the two substantive criteria because the construction and operation of that portion of the pipeline that extends through the PA-80 zone would be compatible with existing farm and grazing operations and would not significantly alter accepted farming practices; and that it is not anticipated to substantially increase the cost of farming and grazing operations. As NWN explains, the HDD pads, construction laydown areas and areas that must be trenched may result in some minor changes in sowing and harvesting patterns, but NWN would avoid and minimize impacts to the extent practicable; and would mitigate or compensate for unavoidable impacts. Because the pipeline would be located underground, and because the HDD pads and temporary construction staging areas would be located to limit planting and harvest patterns, NWN asserts the NMTP would not substantially increase the cost of accepted farming and grazing operations.

*308.2: The minimum average lot depth shall be 100 feet for all activities except farming and forestry.*

*308.3: All newly created lots or parcels and those with permitted, reviewed or conditional uses, shall have a minimum of 50 foot frontage on a public or private right-of-way and an approved access in accordance with this ordinance, the Columbia County Road Standards and the Rural Transportation System Plan.*

*308.4: Setbacks. The following are minimum setbacks for all buildings and structures. In addition, all structures are subject to any special setback lines, where specified on designated arterial or collectors.*

- A. No structure shall be constructed closer than 30 feet to a property line. In the event the subject property is bordered by a zone with more restrictive setbacks, the more restrictive setback of the adjoining zone shall control on the side of the subject property adjoining the more restrictive setback.*
- B. Setbacks in wetland areas shall be required in accordance with Sections 1170 and 1180 of the Columbia County Zoning Ordinance.*

*308.5: Height. There shall be a height limitation of 100 feet in the PA-80 Zone for farm use structures, except for on those lands containing abandoned mill sites that were rezoned to industrial uses pursuant to ORS 197.719 or are subject to Airport Overlay Zone, or any structure which has received a conditional use or variance approval which allows a greater height of said structure. Unless otherwise prohibited, the maximum building height for all non-farm, non-forest structures shall be 50 feet or 2½ stories, whichever is less.*

*308.6 Signs. The standards and requirements described in Section 1300 of the Columbia County Zoning Ordinance shall apply to all signs and name plates in the Exclusive Farm Use Zone.*

*308.7 The Oregon Department of Fish & Wildlife shall be notified and provided with the opportunity to comment on any development within a Goal 5 protected wildlife habitat area.*

*308.8 Dwellings and other structures to be located on a parcel within designated big game habitat areas pursuant to the provisions of Section 1190 are also subject to the additional siting criteria contained in Section 1190.*

Within the PA-80 zone portion of the Project, the proposed development would not require any division of lots or parcels, there are no proposed structures, and no development is proposed to occur within a Goal 5 protected wildlife habitat area. Therefore, CCZO Section 308.1 through 308.5 and 308.7 through 308.8 standards do not apply.

The only applicable Development Standard is CCZO Section 308.6, which requires compliance with the County's sign provision, CCZO Section 1300. This standard requires specific design review, setbacks, sidewalk and driveway clearance, and placement so as not to result in visual obstruction. NWN acknowledges that all signs must comply with the applicable, non-discretionary requirements. The Council adopts Land Use Condition 1 to ensure compliance with Columbia County sign requirements.

Subject to compliance with the conditions of approval listed above, the Council finds that the portion of the proposed development within the PA-80 zone would satisfy all applicable substantive approval criteria.

#### CCZO Section 500 – Primary Forest Zone

*Section 505 Conditional Uses. The following conditional uses may be allowed subject to the general review standards and process in Sections 1503 and 1603 of the Zoning Ordinance. All authorized uses and permanent structures shall also meet the applicable standards listed in Sections 506, 507, and 508 of the Zoning Ordinance and all other local, state, and federal laws pertaining to these uses.*

*505.2 Exploring, mining and processing of oil, gas, or other subsurface resources, as defined in ORS Chapter 520 and the mining and processing of mineral and aggregate resources as defined in ORS Chapter 517.*

*505.7 New electrical transmission lines with right-of-way width of up to 100 feet as specified in ORS 772.210 and new distribution lines (e.g., electrical, gas, oil, geothermal) with right-of-way 50 feet or less in width.*

As described in the RFA, the proposed underground natural gas storage reservoir expansion, I/W pipeline, underground electrical and communications lines, NMCS, and 7.6 miles of the NMTP would all be located within the County's PF-80 zone. Consistent with OAR 660-006-0020(4), which implements Statewide Planning Goal 4, the proposed I/W pipeline, the underground electrical and communications lines, and the NMCS all relate to the processing of gas resources and therefore are allowable under CCZO Section 505.2 as conditional uses in the County's PF-80 zone. The NMTP would be a new distribution line with a permanent right-of-way of 50 feet or less, and is therefore also allowable as a conditional use in the PF-80 zone under CCZO Section 505.7. The following applicable conditional use criteria implement and, therefore, ensure compliance with OAR 660-006-0020(5) and CCZO 1503.

#### *Section 507 Siting of Dwellings and Structures*

*507.1 All new dwellings and structures are subject to the siting standards of this section. Relevant physical and locational factors including, but not limited to, topography, prevailing*

*winds, proximity to existing roads, access, surrounding land use and source of domestic water shall be used to identify a site which:*

*507.1.A Has the least impact on nearby or adjacent lands zoned for forest or agricultural use;*

The NMCS is proposed to be located in the PF-80 zone, and is the only above-ground structure associated with the Project.<sup>70</sup> Therefore, the County's PF-80 zone conditional use standards for structures apply only to the NMCS.

NWN states that the NMCS site was selected for its proximity to the existing Adams reservoir, in an area developed with other natural gas production and storage facilities. Based on NWN's proposed design, the NMCS would result in less than seven acres of permanent impacts to PF-80 zoned land use. As NWN explains, by co-locating the NMCS site with the three-acre I/W well pad site, the NMCS would be the only location requiring underground pipeline installations from the I/W wells across forest-zoned lands. In addition, NWN states that co-locating the NMCS and I/W well pad sites would avoid the need to inject methanol in the pipelines in order to lower the dew point, which therefore reduces hazardous air pollutants. NWN proposes to access the NMCS from existing logging roads in order to eliminate the need to take additional land out of timber production. As NWN explains, because the NMCS must be located in close proximity to the Adams reservoir, and the entire area around the Adams reservoir is zoned for forest use, the proposed development could not avoid impacting forest-zoned land. However, based on NWN's proposed siting and mitigation efforts, including co-location and use of existing logging roads, the Council finds that NWN has identified a site where the proposed structure has the least impact on nearby forest-zoned lands.

*507.1.B Ensures that forest operations and accepted farming practices on the tract will not be curtailed or impeded by locating dwellings and structures as near to each other and to existing developed areas as possible considering topography, water features, required setbacks and firebreaks;*

The NMCS is proposed to be located in an area already developed with other, previously approved natural gas production and storage facilities, which have been evaluated to ensure forest operation impacts are minimized. As the only structure proposed for development, the NMCS is proposed to be located in close proximity to the previously developed area. NWN proposes to further minimize impacts to forest operations by co-locating the NMCS site with the I/W well pad site and an existing well, and by accessing the NMCS site from existing logging roads. NWN also proposes to coordinate tree removal with the surface property owners and to limit tree removal to the area within the immediate I/W well pad site. The Council agrees that the proposed NMCS siting and proposed co-location with the I/W well pad site would minimize

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<sup>70</sup> An 80-foot meteorological tower is also proposed in this area. That tower is considered a "utility pole" under CCZO 100.102, and is considered a minor improvement not customarily regulated through zoning ordinances. Therefore, siting standards do not apply to the proposed meteorological tower.



any impacts on forest operations. To ensure and maintain compliance with this criterion, the Council adopts Land Use Condition 2 which requires NWN to coordinate with and provide written notification to affected surface property owners on timing and location of tree removal during site preparation and ground-disturbing activities associated with the NMCS and I/W well pad sites.

*507.1.C Minimizes the amount of forest lands used for building sites, road access and service corridors;*

As proposed, the NMCS must be located in close proximity to the Adams reservoir. Because the Adams reservoir, and the area surrounding it, are all zoned for forest use, the proposed NMCS must also be located on forest-zoned land. However, as explained in the RFA, the NMCS is proposed to permanently impact no more than seven acres of forest-zoned land, and would be accessed by existing logging roads, which would avoid additional impacts on forest-zoned land. The Council finds that the NMCS would minimize the amount of forest land used for building sites and road access.

*507.1.D Is consistent with the provisions of Section 510 related to Fire Siting Standards and minimizes the risk associated with wildfire; and*

The provisions of CCZO Section 510 related to Fire Siting Standards apply to new dwellings located in the PF-80 zoned land uses. The Project does not include any new dwellings. Therefore, this criterion does not apply to the Project.

*507.1.E Is consistent with other requirements contained in the Comprehensive Plan or implementing ordinances, including, but not limited to, regulations which apply to flood, steep slopes, and landslide hazard areas, development within the Willamette River Greenway, development in forested areas or development in significant resource and natural areas, such as wetland riparian and slide-prone areas.*

Compliance with each applicable substantive criterion from the County's zoning ordinance is addressed throughout these findings. Compliance with all applicable substantive criteria from the CCCP are addressed below. Natural hazards are also addressed in findings of compliance presented in Section IV.A.3, *Structural Standard*, of this order. Generally, and as further explained in the Structural Standard findings, the NMCS site would be located on a large ancient, but stable landslide. NWN proposes to include this landslide in its landslide management system database for annual monitoring under NWN's criteria for low-risk landslides. To address potential erosion concerns, NWN's required NPDES Permit 1200-C would require a detailed erosion and sediment control plan; and NWN would be required to reseed exposed soils after construction. Subject to Soil Protection Condition 1, the Council finds that the proposed NMCS would, or with conditions, could comply with all comprehensive plan and implementing ordinance standards.

*507.2 The applicant shall provide evidence consistent with OAR 660-006-0029(3) that domestic water supply is from a source authorized in accordance with the Department of Water Resources' administrative rules for the appropriation of ground water or surface water in OAR Chapter 690 and not from a Class II stream as defined in the Forest Practices Rule in OAR Chapter 629. If the water supply is unavailable from public sources or sources located entirely on the subject property, then the applicant shall provide evidence that a legal easement has been obtained permitting domestic water lines to cross the properties of affected owners.*

*507.3 As a condition of approval, if road access to the dwelling is by a road owned and maintained by a private party or by the Oregon Department of Forestry or the U.S. Bureau of Land Management, then the applicant shall provide proof of a long-term road access use permit or agreement. The road use permit may require the applicant to agree to accept responsibility for road maintenance.*

NWN has not proposed any domestic water wells or dwellings as part of the Project. Therefore, CCZO Sections 507.2 and 507.3 do not apply to the Project.

*507.4 Pursuant to OAR 660-006-0029(5), approval of a dwelling shall be subject to the following requirements:*

*507.4.A The owner of the tract shall plant a sufficient number of trees on the tract to demonstrate that the tract is reasonably expected to meet Department of Forestry stocking requirements at the time specified in the Department of Forestry administrative rules;*

*507.4.B Land Development Services shall notify the Columbia County Assessor of the above condition at the time the dwelling is approved;*

*507.4.C If the property is over 10 acres the owner shall submit a stocking survey report or a Forest Land Assessment and Stocking Compliance Application to the Columbia County Assessor and the Assessor shall verify that the minimum stocking requirements have been met by the time required by the Department of Forestry administrative rules;*

*507.4.D Upon notification by the Assessor, the Department of Forestry shall determine whether the tract meets minimum stocking requirements of the Forest Practices Act. If the Department determines that the tract does not meet those requirements, the Department shall notify the owner and the Assessor that the land is not being managed as forest land. The Assessor shall then remove the forest land designation pursuant to ORS 321.359 and impose additional tax pursuant to ORS 321.372; and*

*507.4.E A waiver of remonstrance shall be recorded with the County Clerk certifying that the owner will not remonstrate against or begin legal action or suit proceeding to cause or persuade the owner or operator of any farm and forest lands to modify the conduct of legal and accepted farm and forest operations.*

*507.5 Dwellings and other structures to be located on a parcel within designated Big Game Habitat areas pursuant to the provisions of Section 1190 are subject to the additional siting criteria contained in Section 1190.*

NWN's request does not include any proposed dwellings. Therefore, CCZO Sections 507.4 and 507.5 do not apply to the Project.

#### *Section 508 General Review Standards*

*The Planning Director or hearings body shall determine that a use authorized by Sections 504 and 505 meets all of the following requirements:*

*508.1 The proposed use will not force significant change in, or significantly increase the cost of, accepted farming or forest practices on agriculture or forest lands;*

Project components within the PF-80 zoned portion of the Project include the proposed NMCS and I/W pipelines, which would be located on a pad not to exceed seven acres. While the Project would result in up to seven acres of permanent impact to forest practices on forest lands, NWN has indicated that it would provide compensation to the surface landowner for the loss of timber operations and loss of timber harvest resulting from tree removal at the site. In addition, the proposed underground electrical and communication lines would be located on forest lands. NWN intends to implement construction practices to avoid and minimize potential impacts to forest practices, including utilizing existing road right of way for trenching and installing the proposed underground electrical and communication lines, as well as utilizing existing roads and pipeline corridors to the extent feasible for the proposed NMTP. As explained in Exhibit K of the RFA, existing forestry practices include timber management and logging activities. As stated in the RFA, NWN intends to minimize impacts to forest lands from the NMTP route by allowing vegetation to grow back in the construction corridor with the exception of commercial timber in an area 10-feet wide above the NMTP.<sup>71</sup> Based on the limited amount of permanent impact and the proposed practices to minimize and mitigate those impacts, the Council finds that the Project would comply with this requirement.

*508.2 The proposed use will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel;*

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<sup>71</sup> CCZO Section 508.1 establishes a requirement to evaluate potential impacts of a proposed use on accepted farming practices on agricultural lands within a PF-80 zone. The Project is not proposed in a PF-80 zone where accepted farming practices or agricultural lands are present. Therefore, this portion of the Section 508.1 requirement has not been addressed.

The proposed NMCS would contain more than 1,000 cubic feet of flammable gas at standard atmospheric pressure within containers and therefore would be classified as a Hazardous Structure per the 2014 Oregon Structural Specialist Code, Section 307. As a classified Hazardous Structure, NWN would be required to implement additional fire control measures and implement an explosion relief measure that complies with Fire Code provisions. As explained in the RFA, to further ensure the operation of the NMCS would not increase fire hazard, fire detection and suppression systems would be installed within the proposed NMCS. In addition, NWN proposes to provide 24-hour remote monitoring of the proposed NMCS during operations.<sup>72</sup>

NWN contacted both the Clatskanie RFPD and Mist-Birkenfeld RFPD for concurrence on potential Project operational impacts on fire protection services. Attachment U-2 of Exhibit U of the RFA includes confirmation from the Clatskanie RFPD and Mist-Birkenfeld RFPD that Project operation would not be expected to result in substantial, adverse impacts to the ability to provide fire protection services to the community. Based on NWN's evaluation of the Clatskanie RFPD's staff and resources, Project operation could adversely affect Clatskanie RFPD's ability to provide fire protection services to the community if fire-related emergencies were frequent. Implementation of Public Services Condition 1 would reduce potential impacts to fire protection service providers during Project operation by requiring NWN to develop a fire protection and safety plan for the NMCS and NMTP and to consult with the Mist-Birkenfeld and Clatskanie RFPD Fire Marshall to ensure activities comply with applicable requirements. Subject to compliance with this condition, the Council finds that Project operation is not likely to significantly increase fire hazard, significantly increase fire suppression costs or significantly increase risks to fire suppression personnel.

*508.3 A waiver of remonstrance shall be recorded with the County Clerk certifying that the owner will not remonstrate against or begin legal action or suit proceeding to cause or persuade the owner or operator of any farm or forest lands to modify the conduct of legal and accepted farm or forest operations; and*

The property on which the proposed NMCS would be located is privately-owned and used for forest practices. NWN proposes to either lease or purchase the seven-acre NMCS site. If NWN leases the site, this provision does not apply.

If NWN purchases the seven-acre site, the requirements of CCZO Section 508.3 would apply. To ensure compliance with this provision, the Council adopts Land Use Condition 3 which requires NWN to file a waiver of remonstrance with Columbia County.

*508.4 The proposed use is consistent with requirements contained in the Comprehensive Plan or implementing ordinances, including, but not limited to, regulations which apply to flood hazard areas, development within the Willamette River Greenway, development in*

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<sup>72</sup> RFA, Exhibit E, Attachment E-1, p.12.

*forested areas or development in significant resource areas, such as riparian, wetlands or slide-prone areas.*

Compliance with applicable Comprehensive Plan provisions are addressed below, and are largely implemented through the CCZO. Based on the Council's findings, the Project complies with applicable CCCP and CCZO provisions. Subject to compliance with the condition of approval listed above, the Council finds that the Project complies with this requirement.

#### *Section 509 Standards of Development*

*509.1 The minimum average lot or parcel width and minimum average lot or parcel depth shall be 100 feet for all activities except farming or forestry.*

*509.2 Access to parcels in this zone shall meet Fire Safety Design Standards for Roads in the County Road Standards and access standards found in Section 510 of the Zoning Ordinance.*

*509.3 There shall be no height limitation for forest operation and management - related structures unless otherwise permitted in the Primary Forest Zone. The maximum building height for all non-farm, non-forest structures shall be 50 feet or 2 ½ stories, whichever is less.*

*509.4 The standards and requirements described in Section 1300 of the Zoning Ordinance shall apply to all signs and name plates in the Primary Forest Zone.*

*509.5 The Oregon Department of Fish & Wildlife shall be notified and provided with the opportunity to comment on any development within major and peripheral Big Game Habitat.*

#### *509.6 Setbacks:*

- A. There shall be a minimum setback of 50' for front, side, and rear yards for all development in the Primary Forest Zone.*
- B. When this Ordinance or any other ordinance requires a greater or lesser setback than is required by this subsection, the greater setback shall apply.*
- C. All structures are subject to any special setbacks when adjacent to arterial or collector streets designated in the County Transportation Systems Plan.*
- D. No structure or use shall be established in a manner likely to cause contamination of a stream, lake or other body of water. Riparian and natural hazard setbacks set forth in Sections 1170 and 1182 of the Zoning Ordinance shall apply.*
- E. When land divisions create parcels of less than 40 acres for uses listed in Subsection 511.2A., provided those uses have been approved pursuant to this Ordinance, required building setbacks for these parcels will be determined on a case-by-case basis by the Director or the hearings body.*

- F. The owner shall provide and maintain primary fuel-free fire break and secondary fire break areas on land surrounding the dwelling and primary fuel-free break areas surrounding accessory structures in the Primary Forest Zone pursuant to the provisions in Subsections 510.2 and .3.*

CCZO Section 509 establishes standards for all development within PF-80 zoned land and, therefore, applies to the proposed NMCS and the I/W well pad site.<sup>73</sup> As described in the RFA, the proposed seven-acre NMCS site and adjacent three-acre well pad site for the I/W wells are both included within larger parcels, and are not currently owned by NWN; NWN would either lease or purchase these properties from the landowners. If NWN elects to purchase either or both sites, NWN would apply for and secure a partition from the County in accordance with the requirements of CCZO Section 509.1. Access to the site would be provided by a combination of existing private forestry and county roads. As stated in the RFA, any upgrades or improvements to existing roads would be completed in accordance with CCZO Section 509.2 and County Road Fire Safety Design Standards through approval of the Columbia County public works department.<sup>74</sup> The height of structures proposed at the NMCS would not exceed 50-feet and the NMCS would be located more than 50-feet from the parcel boundary, which is the required setback in the PF-80 zone. Land Use Condition 1 ensures temporary and permanent signs used during Project construction and operation comply with requirements of provision CCZO Section 509.4. Big Game habitat areas were not identified by NWN or ODFW within the land use analysis area; therefore, the requirements of CCZO Section 509.4 would not apply to the Project.

The Council adopts Land Use Conditions 3, 4 and 5 to ensure compliance with the applicable provisions established in CCZO 509.1, 509.2, 509.3, and 509.6. Those conditions require NWN to ensure that the NMCS and I/W well pad site are partitioned if NWN purchases the site; and require NWN to obtain both a Public Road Construction Permit and County Road access permit prior to construction. Subject to compliance with these conditions of approval, the Council finds that the portion of the proposed development within the PA-80 zone complies with the applicable requirements CCZO Section 509.

#### CCZO Section 680 – Resource Industrial – Planned Development

*681 Purpose: The purpose of this district is to implement the policies of the Comprehensive Plan for Rural Industrial Areas. These provisions are intended to accommodate rural and natural resource related industries which:*

*681.1 Are not generally labor intensive;*

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<sup>73</sup> An 80-foot meteorological tower is also proposed in this area. That tower is considered a “utility pole” under CCZO Section 100.102, and would be considered a minor improvement not customarily regulated through zoning ordinances and would thereby be excluded from the definition of a structure under CCZO Section 509. Therefore, development standards would not apply to the proposed meteorological tower.

<sup>74</sup> RFA, Project Description and OAR Division 27 Compliance, Section V.I.

*681.2 Are land extensive;*

*681.3 Require a rural location in order to take advantage of adequate rail and/or vehicle and/or deep water port and/or airstrip access;*

*681.4 Complement the character and development of the surrounding rural area;*

*681.5 Are consistent with the rural facilities and services existing and/or planned for the area; and*

As described in Exhibit K of the RFA, approximately 4,626 feet of the proposed NMTP adjacent to the PWIP would be located in the Resource Industrial – Planned Development (RIPD) zone. As stated in Exhibit U of the RFA, the overall Project operation is anticipated to result in two new fulltime employees. The Council agrees that this level of operation would not be labor intensive.

The portion of the proposed NMTP within the RIPD zone would be located primarily underground, below existing asphalt surfaces currently utilized for industrial uses within PGE's PWIP property. Therefore, this portion of the NMTP would be land extensive because all land located above the pipeline is extensively used for existing industrial uses. Moreover, because most of the portion of the NMTP within the RIPD zone would be subsurface, it would have no impact on the existing character or development of the surrounding rural area and would be consistent with existing and planned rural facilities and services in the area.

The proposed NMTP is a linear facility, beginning at the NMCS and ending at PWIP. PWIP is located within an existing RIPD zone. Because the NMTP is locationally dependent and must cross an RIPD zone in order to distribute natural gas from the proposed NMCS to PWIP, the Council agrees that the proposed use requires its rural location for purposes of Section 681.3 criteria.

Therefore, the Council finds that the Project would comply with CCZO Sections 681.1, 681.2, 681.3, 681.4, and 681.5.

*681.6 Will not require facility and/or service improvements at significant public expense; and,*

*The uses contemplated for this district are not appropriate for location within Urban Growth Boundaries due to their relationship with the site specific resources noted in the Plan and/or due to their hazardous nature.*

As explained in the RFA, the portion of the NMTP in the RIPD zone would rely on the existing PWIP fire protection system and would not require any additional services or facility improvements that would result in significant public expense. And, because the NMTP is locationally dependent and must cross the RIPD zone in order to distribute natural gas from the proposed NMCS to PWIP, the Council finds that the Project complies with these criteria.

## Section 683 Uses Permitted Under Prescribed Conditions

*683 Uses Permitted Under Prescribed Conditions: The following uses may be permitted subject to the conditions imposed for each use:*

*683.1 Production, processing, assembling, packaging, or treatment of materials; research and development laboratories; and storage and distribution of services and facilities subject to the following findings:*

The purpose of the NMTP is to distribute natural gas from the NMCS to PWIP, which is allowed under this section as a use permitted under the following prescribed conditions:

*683.1.A The requested use conforms with the goals and policies of the Comprehensive Plan – specifically those policies regarding rural industrial development and exceptions to the rural resource land goals and policies.*

Compliance with applicable goals and policies of the comprehensive plan is addressed below.

*683.1.B The potential impact upon the area resulting from the proposed use has been addressed and any adverse impact will be able to be mitigated considering the following factors:*

*683.1.B.1 Physiological characteristics of the site (i.e., topography, drainage, etc.) and the suitability of the site for the particular land use and improvements;*

*683.1.B.2 Existing land uses and both private and public facilities and services in the area;*

*683.1.B.3 The demonstrated need for the proposed use is best met at the requested site considering all factors of the rural industrial element of the Comprehensive Plan.*

The portion of the NMTP within the RIPD zone would be located primarily underground within PGE's PWIP property, which is predominately flat with slopes of less than three percent and is protected from flood hazards by an existing Beaver Drainage District levee system.<sup>75</sup> Therefore, the topography and drainage of the area is well suited to support the proposed use for distribution of services from pipeline operation. Moreover, PGE's PWIP is utilized for operation of existing, industrial, power-generating facilities; there would be no impact from the NMTP to the existing, industrial land uses at the site.

The NMTP is needed to distribute natural gas from the proposed NMCS to PGE's PWIP. As previously discussed, the NMTP is locationally dependent. Because it is locationally dependent

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<sup>75</sup> RFA, Exhibit K, Section 5.4.3.



within an RIPD zone, the Council finds that the need for natural gas distribution is best met at the requested PWIP site. The Comprehensive Plan's rural industrial element goals are addressed below.

*683.1.C The requested use can be shown to comply with the following standards for available services:*

*683.1.C.1 Water shall be provided by an on-site source of sufficient capacity to serve the proposed use, or a public or community water system capable of serving the proposed use.*

*683.1.C.2 Sewage will be treated by a subsurface sewage system, or a community or public sewer system, approved by the County Sanitarian and/or the State DEQ.*

*683.1.C.3 Access will be provided to a public right-of-way constructed to standards capable of supporting the proposed use considering the existing level of service and the impacts caused by the planned development.*

*683.1.C.4 The property is within, and is capable of being served by, a rural fire district; or, the proponents will provide on-site fire suppression facilities capable of serving the proposed use. On-site facilities shall be approved by either the State or local Fire Marshall.*

As stated in the RFA, the portion of the NMTP in the RIPD zone would not require water or sewage services; therefore CCZO Sections 683.1.C.1 and 683.1.C.2 standards would not apply to the Project. Because the portion of the NMTP in the RIPD zone would be located within PGE's PWIP property, CCZO Sections 683.1.C.3 and 683.1.C.4 also apply to PWIP's existing facility. As explained in the Final Order for Port Westward Generating Project,<sup>76</sup> Kallunki Road provides access to PWIP and is a public right of way with sufficient capacity to support traffic increases during construction and operation. Additionally, PWIP maintains an on-site, high-pressure fire-protection system and has sufficient access to receive services from the Clatskanie Rural Fire Department. Because the NMTP would rely on the same access and fire suppression facilities, the Council finds that the Project complies with CCZO Sections 683.1.C.3 and 683.1.C.4 standards.

The Council finds that the portion of the proposed development within the RIPD zone satisfies all applicable substantive approval criteria.

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<sup>76</sup> PWG, Original Final Order, Attachment D, p.9. Available at:  
[http://www.oregon.gov/energy/Siting/docs/PWG/PWG\\_final\\_order\\_att\\_110802.pdf](http://www.oregon.gov/energy/Siting/docs/PWG/PWG_final_order_att_110802.pdf)

CCZO Section 1503 – Conditional Uses

*1503.5 Granting a Permit: The Commission may grant a Conditional Use Permit after conducting a public hearing, provided the applicant provides evidence substantiating that all the requirements of this ordinance relative to the proposed use are satisfied and demonstrates the proposed use also satisfies the following criteria:*

*1503.5.A The use is listed as a Conditional Use in the zone which is currently applied to the site;*

*1503.5.B The use meets the specific criteria established in the underlying zone;*

Project components in the PF-80 zone that would require a Conditional Use Permit include the I/W pipeline, underground electrical and communications lines, NMCS, and a portion of the NMTP. The proposed I/W pipeline, underground electrical and communications lines, and the NMCS all pertain to the processing of gas resources and therefore are allowable as conditional uses in the County's PF-80 zone under CCZO Section 505.2. Under the County's code, the NMTP is a proposed distribution line with a right of way of 50 feet or less and therefore also is an allowable conditional use within a PF-80 zone under CCZO Section 505.7. Based on the evaluation of Project compliance with CCZO Sections 507, 508, and 509, as provided above, the Council finds the proposed uses would comply with the specific criteria in the underlying PF-80 zone.

*1503.5.C The characteristics of the site are suitable for the proposed use considering size, shape, location, topography, existence of improvements, and natural features;*

The proposed NMCS, portions of the I/W pipeline, and NMTP would be located on a seven-acre site in the PF-80 zone.<sup>77</sup> As explained in the RFA, the topography includes gentle slopes along a broad mid-slope bench with elevations ranging from approximately 1,285 to 1,320 feet above mean sea level. These facilities would be located in close proximity to the Adams reservoir, near existing logging roads and existing and proposed well pads. The underground electrical and communication lines would traverse through densely vegetated mountainous terrain, existing gravel roads, and a power line corridor, with elevations ranging from 1,280 to 1,500 feet mean sea level. Portions of the underground electrical and communication lines would be co-located with the NMTP and would be located in close proximity to existing natural gas pipelines. Based on the size of the site, location of existing gas processing and distribution facilities, and the existing commercial uses within the vicinity, the site would be suitable for the proposed use.

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<sup>77</sup> NWN proposes to lease or purchase a total of ten acres ; the site(s) would be partitioned in accordance with Columbia County requirements to provide a seven-acre site for the proposed NMCS and portions of the I/W pipeline and NMTP. The remaining three acres would be used for four proposed I/W wells and a portion of the I/W pipeline. As previously described, the four I/W wells are under jurisdiction of Columbia County and DOGAMI and are not further evaluated in this order.

*1503.5.D The site and proposed development is timely, considering the adequacy of transportation systems, public facilities and services existing or planned for the area affected by the use;*

As stated in the RFA, the portion of the Project located in the PF-80 zone would not be served by public sewers or sewage treatment, water service, or stormwater drainage services, and the Project would not require new public facilities or services. Solid waste would be generated during Project construction, which would be transferred and disposed of at the Coffin Butte Landfill in Corvallis, Oregon in accordance with Columbia County's Solid Waste Management Ordinance.<sup>78</sup>

Impacts to transportation systems from Project construction and operation are not expected to affect volume-to-capacity ratios or level of service ratings. As presented in Exhibit U of the RFA, NWN proposes to reduce potential traffic volume and congestion impacts during Project construction by using vanpools to transport workers from a designated meeting place to the site and requesting contractors to use locally sourced and pre-fabricated materials. When completed, Project operation would result in employment of two new, fulltime employees, which would not significantly increase the existing volume-to-capacity ratios or be expected to result in impacts to existing transportation systems.

The Project is not anticipated to result in significant adverse impacts to existing fire and police services. However, due to potential fire hazard risks during Project operation and limited staff resources at the Clatskanie RFPD, NWN has proposed measures to reduce fire risks, including implementation of site and regulatory training for all Project personnel. NWN also proposes to develop fire protection and safety plans for both the proposed NMCS and NMTP. In addition, as an existing operating facility, the Mist Facility is equipped with existing fire protection equipment including a fire suppression truck, foam fire pumper/fire extinguisher, and wildland fire tools. The Council finds that Public Services Condition 1 is necessary to reduce potential fire hazards and implement adequate staff training. Subject to compliance with this condition of approval, that the Council finds that, with regard to the adequacy of the public services, the development of the site is timely.

*1503.5.E The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs, or precludes the use of surrounding properties for the primary uses listed in the underlying district;*

As described in Exhibit K of the RFA, tree removal would be required during site preparation for the seven-acre site proposed for the NMCS, a portion of the I/W pipeline, and a portion of the NMTP. NWN has indicated that tree removal would be coordinated with landowners and landowners would be monetarily compensated for the harvest loss. The surrounding area is comprised of forest use and natural gas processing facilities, which the Council agrees would not be substantially altered as a result of the Project.

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<sup>78</sup> RFA, Exhibit U, Section 3.3.3.3 p.14.

*1503.5.F The proposal satisfies the goals and policies of the Comprehensive Plan which apply to the proposed use;*

Consistency with applicable CCCP goals and policies is addressed below.

*1503.5.G The proposal will not create any hazardous conditions.*

Pursuant to CCZO Sections 505.2 and 505.7, conditional uses allowed within a PF-80 zone include processing of gas, and distribution lines with right-of-ways of 50-feet or less; these conditional uses necessarily involve some level of inherent risk or hazard.<sup>79</sup>

Potential Project related hazards include impacts to slope stability during hillside pipeline installation, retrogressing landslide scarps, erosion, and fire hazards as described above in the evaluation of compliance with CCZO Section 507.1.E and Section 508.2. As described above, NWN proposes to conduct annual landslide monitoring to reduce and avoid potential impacts from retrogressing landslide scarps; to comply with erosion and sediment control conditions of the NPDES Permit 1200-C and reseed exposed soils after construction to reduce and avoid potential impacts from erosion; and to implement fire safety and protection plans. In addition, as described in Section IV.A.3 *Structural Standard*, of this order, conditions adopted by the Council include completion of Site Specific Geotechnical Studies and development of mitigation measures to reduce slope stability issues; and, implementation of a Site Specific Evaluation and Stability Plan.

Subject to compliance with the condition of approval listed above, the Council finds that the portions of the Project requiring a Conditional Use permit from Columbia County satisfy all applicable substantive approval criteria.

#### CCZO Section 1550 – Site Design Review

##### *1550 Site Design Review*

*The site Design Review process shall apply to all new development, redevelopment, expansion, or improvement of all community, governmental, institutional, commercial, industrial and multi-family residential (4 or more units) uses in the County.*

CCZO Section 1550 requires site design review for all new development and, therefore, would be required for the entire Project.

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<sup>79</sup> Because the CCZO does not define “hazardous condition,” the department interprets the term as presented in Section 1503.5(G) as being implemented by the more specific conditional use standards established in Section 507 (507.1.E) and Section 508 (508.2).

*1563 Standards for Approval*

*The Planning commission or Director shall make a finding with respect to each of the following criteria when approving, approving with conditions, or denying an application:*

*1563. A Flood Hazard Areas: See CCZO §1100, Flood Hazard Overlay Zone. All development in Flood Hazard Areas must comply with State and Federal Guidelines.*

The proposed NMTP would cross Columbia County's Flood Hazard Overlay Zone and be located within the County's "AE" flood zone and the Columbia River floodplain. NMTP excavation, trenching and pipeline installation would create a short-term, temporary, low level risk of flooding impacts. Once operational, the NMTP would be located underground; therefore, there would be no anticipated impact on the water elevation of the base flood or risks from flooding.

*1563.B Wetlands and Riparian Areas: Alterations of wetlands and riparian areas shall be in compliance with State and Federal laws.*

As described in Exhibit J of the RFA, Project construction and operation would result in approximately 6.4 acres of temporary wetland impacts, which would be restored following the completion of Project construction. As discussed in Section IV.D.2. *Removal-Fill Law*, of this order the Council adopts Removal-Fill Conditions 1, 2 and 3 to ensure and maintain compliance with the Site Rehabilitation of Temporary Impacts Plan, monitoring requirements, and conditions of the Removal-Fill Permit.

*1563.C Natural Areas and Features: To the greatest practical extent possible, natural areas and features of the site shall be preserved.*

NWN proposes to construct the proposed NMCS and NMTP in order to avoid sensitive resources and hazard areas, and to minimize impacts to forestry. Project components would be located in areas to avoid Category 1 and 2 habitat, with mitigation proposed for all other habitat impacts. NWN proposes to implement BMPs to reduce the likelihood of disturbance and direct take of Columbia white-tailed deer. NWN proposes to utilize HDD construction techniques to reduce potential impacts to fish, wildlife, and candidate threatened and endangered plant species. Moreover, as described in Section IV.D.2 *Removal-Fill Law*, of this order, the Project would result in temporary removal-fill impacts to wetlands of less than two acres and would not result in any permanent wetland impacts.

*1563.D Historic and Cultural sites and structures: All historic and culturally significant sites and structures identified in the 1984 Comprehensive Plan, or identified for inclusion in the County Periodic Review, shall be protected if they still exist.*

As described in Exhibit S of the RFA, NWN identified historic-era buildings and structures during field survey work for the Project. The two historic-era buildings are outside of the analysis area but located on parcels crossed by the analysis area. The third structure is the Burlington

Northern Railroad. None of these three resources are currently listed on the National Register of Historic Places (NRHP); however, based upon a comment letter received from Oregon SHPO,<sup>80</sup> the Burlington Northern Railroad and an historic-era building located at 77434 Palm Hill Road should be evaluated for NRHP listing eligibility. Therefore, for purposes of this order, these two resources are considered as having a “likelihood” for NRHP listing.

Project construction near these resources would include trenchless, subsurface HDD construction and would not result in above-ground construction or activities at or near the resource locations. The portion of the NMTP section that would cross the Burlington Northern Railroad would be underground and would not have the potential to impact above-ground historic-era sections of the railroad. Therefore, the Council finds that Project construction would not have the potential to impact above-ground historic resources. Operations and maintenance of the NMTP corridor would include vegetation maintenance for clearing of fire and safety hazards; however, as stated in Exhibit K of the RFA, vegetation maintenance would not result in substantial ground-disturbing activities beyond trimming of overgrown vegetation.

*1563.E Lighting: All outdoor lights shall be shielded so as to not shine directly on adjacent properties and roads.*

NWN proposes to install outdoor lighting only at the NMCS. As stated in Exhibit K of the RFA, NWN has indicated that outdoor lighting at the NMCS would be shielded so as not to shine directly on adjacent properties and roads.

*1563.F Energy Conservation: Buildings should be oriented to take advantage of natural energy saving elements such as the sun, landscaping and land forms.*

NWN proposes that the NMCS would be oriented to take advantage of natural energy saving elements, to the extent practical.

*1563.G Transportation Facilities: Off-site auto and pedestrian facilities may be required by the Planning Commission, Planning Director or Public Works Director consistent with the Columbia County Road Standards and the Columbia County Transportation Systems Plan.*

As explained in Exhibit U of the RFA, operation of the NMCS would result in two new, full-time employees. The NMCS would be remotely controlled from the Mist Facility’s existing Miller Station. Sufficient parking capacity would be available at the existing Miller Station and the NMCS for new employees and inspection/monitoring personnel. Additional off-site auto and pedestrian facilities would not be expected to be needed to support Project operations. Based on the above analysis, and subject to compliance with the site certificate conditions, the Council finds that the Project satisfies the County’s Site Design standards.

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<sup>80</sup> MSTAMD11Doc11 Jason Allen, SHPO.

## CCZO Section 1100 – Flood Hazard Overlay

### *1105 Development Permit*

*1105.1 A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 1104. The permit shall be for all structures allowed by the underlying zone, including manufactured homes, as set forth in the “Definitions”, and for all development including fill and other activities, also set forth in the “Definitions”.*

The segment of the proposed NMTP between U.S. 30 and PWIP would be located within Columbia County’s flood hazard overlay zone. In addition, the segment of the proposed NMTP located between U.S. 30 and the Clatskanie River would also be located within an AE zone which is a “special flood hazard area.”<sup>81</sup> Because development would occur within an area of special flood hazard, a development permit is required pursuant to CCZO Section 1105.1. The floodplain development permit would be reviewed and approved by Columbia County’s floodplain manager and would include an evaluation of Project location, potential flood related impacts, and flood-proofing protection requirements to ensure protection of public health and safety and minimize public and private losses due to flood conditions. The Council adopts Land Use Condition 6, requiring NWN to obtain the development permit and maintain a copy of the permit onsite for the duration of the Project.<sup>82</sup>

### *General Standards*

#### *1108.1 Anchoring*

*1108.1.A All new construction and substantial improvements shall be anchored to prevent floatation, collapse, or lateral movement of the structure.*

#### *1108.2 Construction Materials and Methods*

*1108.2.A All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.*

*1108.2.B All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.*

*1108.2.C Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.*

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<sup>81</sup>CCZO Section 1102.1 defines “special flood hazard area” as that land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year.

<sup>82</sup> MSTAMD11Doc031 Glen Higgins, Columbia County. Columbia County submitted a comment letter on June 18, 2015 requesting inclusion of a condition requiring NWN to apply for and obtain a Floodplain Development Permit which the department recommends the Council adopt as Land Use Condition 6.

Because the proposed NMTP would be located within Columbia County's Flood Hazard Overlay Zone, the NMTP must comply with the general standards in CCZO Section 1108. As described in the RFA, the NMTP would be installed deep below the existing ground surface using HDD construction techniques, with the exception of a 1,300-foot section that would be installed using open trench techniques. The segment of NMTP to be installed in the floodplain using HDD construction techniques would be placed a maximum depth of 50 to 100 feet below ground surface, depending on surface type, to prevent the potential of flotation, collapse, or lateral movement. The segment of the NMTP to be installed using open trench technique would be designed with buoyancy controls and therefore would not have the potential to increase flood damage to surrounding properties.

*1112 Standards for Areas Where Elevations are Determined (AE Zones)*

*In areas within Zones A1-30 and AE on the community FIRM with a Base Flood Elevation but where no regulatory floodway has been designated, new construction, substantial improvements, or other development (including fill) shall be prohibited, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other and anticipated development, will not increase the water elevation of the base flood more than one foot at any point within the community.*

No regulatory floodway has been designated for the portion of the proposed NMTP located within the AE zone. Therefore, to ensure that the development does not increase the water elevation of the base flood more than one foot, NWN proposes to backfill any AE zoned areas excavated during pipeline installation with on-site native soils and return them to their original contour. As stated in the RFA, any on-site native soils not used for excavation backfill would be hauled offsite and properly disposed of outside the AE zone.

Based on NWN's proposal for development of that portion of the NMTP within the floodplain zone and within the AE zone, the Council finds that the Project complies with the County's floodplain standards.

CCZO Section 1170 – Riparian Corridors, Wetlands, Water Quality, and Fish and Wildlife Habitat Protection Overlay Zone

*1175 Permitted Uses and Activities. Notwithstanding the prohibitions set forth in Subsection 1173 above, the following activities are allowed within the riparian corridor boundary:*

*1175.B The following development is allowed within the riparian corridor boundary.*

*1175.B.4. Drainage facilities, utilities and irrigation pumps.*



CCZO Section 1170 establishes permitted uses within riparian corridor boundaries. As a utility facility, the Project meets the definition of a permitted use.<sup>83</sup>

*1177 Requirements for new activities and development identified in Sub-section 1175 and 1176, above, shall be allowed in the riparian corridor boundary subject to the following requirements:*

*1177.A All applicable permits from state and federal agencies, such as the Oregon Division of State Lands (DSL) and Oregon Department of Fish and Wildlife (ODFW) must be obtained by the land owner prior to commencing the use or activity.*

*1177.B For activities and development for which land use permits, building permits, grading permits, variances or stormwater/erosion control permits are required, the County shall provide notification to ODFW of the proposed development activity. The County shall consider the recommendations of ODFW, including any mitigation recommendations, prior to issuance of permits and may condition permit approval on recommended measures to mitigate loss of fish and wildlife habitat pursuant to applicable provisions of OAR Chapter 635, Division 415.*

The department has provided the analysis of applicable substantive criteria identified in CCZO Section 1177 below, in the analysis of applicable substantive criteria identified in CCZO Section 1184.

#### CCZO Section 1180 – Wetland Area Overlay

*1183 Permitted Uses: Uses and development activities permitted outright or conditionally in the underlying zone shall be permitted in the Wetland Area Overlay Zone if they will not result in filling, drainage, removal of vegetation, or other alteration which would destroy or degrade a significant wetland as defined in Section 1182. Minor drainage improvements necessary to ensure effective drainage on surrounding agricultural lands under Oregon Department of Agriculture wetland rules shall be allowed where such an action has been fully coordinated with the Oregon Department of Fish and Wildlife, the Columbia County Soil and Water Conservation District, and the Division of State Lands. Existing drainage ditches may be cleared to original specifications without County review.*

*1184 Development Standards:*

*1184.C Activities Prohibited within the Wetland Riparian Corridor Boundary. In addition to the prohibitions of the underlying zone, the following development activities are prohibited in wetland riparian corridor boundaries, except as provided for in Sub-sections 1184(E) and (F) of this Sub-section:*

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<sup>83</sup> Because the CCZO identifies utilities as a permitted use within a riparian corridor boundary, the setback standards established in CCZO 1171 do not apply.

*1184.C.1 The alteration of the wetland riparian corridor by grading, the placement of fill material, and/or impervious surfaces, including paved or gravel parking areas or paths, and/or the construction of buildings or other structures which require a building permit under the State of Oregon Uniform Building Code, as amended, or other land use permit.*

*1184.C.2 The removal of riparian trees or vegetation.*

*1184.E Exceptions to prohibited activities. Notwithstanding the prohibitions set forth in sub section (C), above, the following development activities are allowed within the wetland riparian corridor boundary:*

*1184.E.2 The following development is allowed within the riparian corridor boundary:*

*1184.E.2.d Drainage facilities, utilities and irrigation pumps;*

Section 1180 of the CCZO establishes permitted uses within wetland overlay areas. As a utility, the Project is a permitted use within a riparian corridor boundary. Because it is a permitted use, the setback standards established in CCZO 1184 do not apply.

*1184.G New activities and development identified in Sub-section 1184(E) and 1184(F), above, shall be allowed in the wetland riparian corridor boundary subject to the following requirements:*

*1184.G.1 All applicable permits from state and federal agencies, such as the Oregon Division of State Lands (DSL) and Oregon Department of Fish and Wildlife (ODFW) must be obtained by the land owner prior to commencing the use or activity.*

*1184.G.2 For activities and development for which land use permits, building permits, grading permits, variances or stormwater/erosion control permits are required, the County shall provide notification to ODFW of the proposed development activity. The County shall consider the recommendations of ODFW, including any mitigation recommendations, prior to issuance of permits and may condition permit approval on recommended measures to mitigate loss of fish and wildlife habitat pursuant to applicable provisions of OAR Chapter 635, Division 415.*

As part of the RFA, NWN provided copies of state and federal permit application submitted to applicable state and federal agencies including the Joint Permit Application (Department of State Lands and U.S. Army Corps of Engineers) and 1200-C NPDES Permit (Department of Environmental Quality) along with letters of receipt indicating timing of anticipated review and

approval from the applicable agencies. There were no permits required from ODFW for the Project.

As part of the RFA review process, the department requests review and comment of RFA materials from reviewing agencies, including ODFW. ODFW provided review and comments on the RFA, requesting conditions of approval and implementation of BMPs related to the Columbia White-tail Deer, which have been incorporated into this order.

Subject to compliance with the site certificate conditions listed above, the Council finds that the Project would comply with requirements for development of a permitted use in the riparian overlay zone and in the wetland area overlay zone.

### Columbia County Comprehensive Plan

#### **Part II: Citizen Involvement**

##### Applicable Goals:

2. *To increase the citizens' awareness of planning programs at both the county and state level.*
3. *To provide methods by which county citizens, organizations and interest groups have opportunities to be informed and participate in all phases of the planning process.*
4. *To provide a means for broad-based dissemination and availability to the public of technical information and other relevant planning documents, ordinances, plans, maps and correspondence.*
5. *To assure county support for the Citizen Involvement Programs (CPACs) in the form of human, financial, informational and technical assistance.*
6. *To insure continued citizen participation in the planning process and periodic reevaluation of the Citizen Involvement Program.*

##### Applicable Policies:

1. *To stimulate citizen involvement in the County by providing broad exposure to all phases of the planning process through radio and newspaper notices, general mailings and public meetings.*
7. *To fund and support the Citizen Involvement Program at a level sufficient to assure citizen involvement remains an integral part of both the current and long-range planning process.*

NWN has elected to address EFSC's Land Use Standard by obtaining an EFSC determination under ORS 469.504(1)(b). Therefore, EFSC's procedures, rather than the County's specific public involvement procedures, apply to the Project. However, as stated in Exhibit K of the RFA, EFSC's rules and process provides notice, comment periods, and public participation opportunities that are generally consistent with the Citizen Involvement goal. Therefore, the Council finds that the Project is consistent with the CCCP Part II applicable goals and policies.

#### ***Part IV Forest Lands***

##### *Goal:*

*To conserve forest lands for forest uses.*

##### *Applicable Policies:*

- 1. Conserve forest lands for forest uses, including:*
  - A. The production of trees and the processing of forest products;*
  - B. Open space;*
  - C. Buffers from noise;*
  - D. Visual separation from conflicting uses;*
  - E. Watershed protection;*
  - F. Wildlife and fisheries habitat;*
  - G. Soils protection from wind and water;*
  - H. Maintenance of clean air and water;*
  - I. Compatible recreational activities; and*
  - J. Grazing land for livestock.*

The goals and policies of Part IV Forest Lands of the CCCP direct the County to conserve forest lands for forest use. Portions of the Project within PF-80 zoned land would be located on a seven-acre site including the NMCS, I/W pipeline, and a portion of the NMTP. While preparation of the seven-acre site would require tree removal, NWN has indicated that tree removal activities would be coordinated with landowners and landowners would be compensated for the monetary loss in timber crops. Additionally, NWN proposes to minimize impacts on nearby forest-zoned lands through co-location of communication and utility lines

with a portion of the NMTP and use of existing logging roads for site access. Therefore, the Council finds that the Project is consistent with the CCCP Part IV applicable goals and policies.

### ***Part V Agriculture***

#### **Goal:**

*To preserve agricultural land for agricultural uses.*

#### **Applicable Policies:**

- 4. Protect agricultural lands from non-farm encroachments.*
- 11. Prevent land uses that interfere with or impair agricultural management from occurring on designated agricultural lands.*
- 15. Permit non-farm/non-forest uses only when not in conflict with agricultural or forestry activities.*
- 17. Allow non-farm uses in accordance with ORS 215.283 and ORS 215.284.*

The goals and policies of Part V Agriculture of the CCCP are primarily directives to Columbia County and would not directly apply to the Project. The County implements requirements, provisions and criteria established in the CCZO for areas zoned PA-80 to achieve CCCP Part V goals and policies. As discussed above in CCZO Section 300, Project components within a PA-80 include the NMTP. The NMTP is a utility facility necessary for public service, and is therefore a non-farm use permitted on agricultural lands pursuant to ORS 215.283(1)(c), subject only to the provisions of ORS 215.275. Additionally, the NMTP would be installed using trenchless, HDD construction techniques, and would be located underground thereby avoiding all permanent impacts to PA-80 land use. NWN has developed an Agriculture Impact Mitigation Plan which would further reduce and avoid impacts to PA-80 zoned land during Project construction and operation. Therefore, through compliance with the implementing code provisions, the Council finds that the Project is consistent with the CCCP Part V directives.

### ***Part X Economy***

#### **Goals:**

- 1. To strengthen and diversify the economy of Columbia County and insure stable economic growth.*
- 2. To utilize Columbia County's natural resources and advantages for expanding and diversifying the economic base.*

Applicable Policies:

1. *Encourage the creation of new and continuous employment opportunities*
2. *Encourage a stable and diversified economy.*

The goals and policies of Part X Economy of the CCCP are directives to the County and would not directly apply to the Project. However, as stated in Exhibit K of the RFA, the Project would generate temporary and permanent jobs within the local community and would contribute to the local tax base. Therefore, to the extent it could be construed as an applicable standard, the Council finds that the Project would be consistent with CCCP Part X goals and policies.

**Part XIII Transportation**

Goal:

*The creation of an efficient, safe, and diverse transportation system to serve the needs of Columbia County residents.*

Applicable Policies:

9. *Restriction of the location of new pipelines and high voltage transmission lines to within existing rights-of-way will be encouraged whenever possible.*

The goal and policy of Part XIII Transportation of the CCCP are directives to the County and would not directly apply to the Project. However, as stated in Exhibit K of the RFA, siting criteria that influenced NWN's selection process for the NMTP included identifying a direct route from the NMCS to PWIP while minimizing disturbance and avoiding sensitive resources; minimizing impacts to forestry and agricultural practices by routing along existing roads, pipeline corridors, and property lines and avoiding sensitive crops, where possible; navigating difficult and varied topography to avoid hazard areas; and locating the route through land for which NWN negotiated or is in the process of negotiating long-term pipeline easements. NWN proposes to use existing rights-of-way to the extent feasible. Therefore, to the extent it could be construed as an applicable standard, the Council finds that the Project is consistent with CCCP Part XIII goal and applicable policy.

**Part XIV Public Facilities and Services**

Goal:

*To plan and develop a timely, orderly, and efficient arrangement of public [sic] as a framework for urban and rural development.*

Applicable Policies:

1. *Require that adequate types and levels of public facilities and [sic] be provided in advance of or concurrent with development.*

The goal and policy of Part XIV Public Facilities and Services of the CCCP are directives to Columbia County and would not directly apply to the Project. However, as described in Exhibit U of the RFA, Project construction and operation would not rely on public facilities including sewer and sewage treatment, water, and stormwater drainage. Use of a public waste facility would be needed during Project construction; NWN has indicated intent to utilize the Coffin Butte Landfill in Corvallis, Oregon which has confirmed sufficient capacity to accept the estimate volume of waste generated from the Project. Access to the NMCS would be provided from U.S. 30 and existing logging roads which would be improved in accordance with the County's Fire Safety Design Standards for Roads. As stated in Exhibit U of the RFA, NWN will ensure access to the NMCS is approved by the Mist-Birkenfeld Fire District, which has jurisdiction over the forest-zoned portions of the Project. Therefore, to the extent it could be construed as an applicable standard, the Council finds that the Project is consistent with CCCP Part XIV goal and applicable policy.

**Part XV Energy Conservation**

Goal:

*To strive for an energy efficient land use pattern based upon sound economic principles.*

Applicable Policy:

4. *The County will encourage the development of alternative energy sources.*

The goal and policy of Part XV Energy Conservation of the CCCP are directives to Columbia County and would not directly apply to the Project. However, as explained in Exhibit K of the RFA, although the Project would not be powered by a renewable energy source, the purpose of the Project is to provide natural gas to PWIP for supplemental power generation when power from wind generation is not available due to the fluctuating nature of wind patterns, wind turbine operation, and wind power generation. Therefore, to the extent it could be construed as an applicable standard, because the Project is intended to supplement power from an alternative energy source, the Project furthers the CCCP Part XV goal and policy 4.

**Part XVI Goal 5 Open Space, Scenic and Historic Areas, and Natural Areas**

Open Space Goal:

*To conserve open space in Columbia County.*

Applicable Policy:

1. *Recognize the economic and aesthetic value of open space as it relates to planning for agriculture, forestry, wetlands, and other open space resources.*

Energy Goal:

*To protect deposits of energy materials in the County and prevent injury to surrounding lands and residents.*

Applicable Policy:

1. *Rely on ODOGAMI to require that wells are drilled, cased, and plugged in such a manner as to ensure public safety.*

Fish and Wildlife Habitat Goal:

*To protect and maintain important habitat areas for fish and wildlife in Columbia County.*

Applicable Policies:

2. *Protect significant nesting habitat from the adverse effect of logging and other land use practices.*
6. *Cooperate with the Oregon Department of Fish and Wildlife to better identify sensitive habitat areas for fish and wildlife and adopt implementing measures for their protection.*
10. *Prohibit diversion or impoundment of stream courses, which adversely impact fish and wildlife habitat.*
15. *Protect significant streams, lakes and wetlands from the adverse affects [sic] of development and other land use practices.*
16. *Cooperate with the Oregon Department of Fish and Wildlife and U.S. Fish and Wildlife to ensure that future development does not unduly conflict with riparian area protection.*
18. *Coordinate development or projects that affect Fish and Wildlife habitat shall with ODFW.*

Water Resources Goal:

*To protect and maintain the quality of water resources in Columbia County.*



Applicable Policies:

9. *Protect riparian vegetation along streams and lakes by requiring appropriate setbacks for nonwater-dependent uses and standards for removal of riparian vegetation.*
10. *Maintain rivers and streams in their natural state to the maximum extent practicable through sound land and water management practices. Consideration shall be given to natural, scenic, historic, economic, cultural, and recreational qualities of the rivers and adjacent lands.*
11. *Require that all development be planned, designed, constructed, and maintained so as to avoid the probability of accelerated erosion; pollution, contamination, or siltation of lakes, rivers, and streams; damage to vegetation; or injury to fish and wildlife habitats.*
12. *Minimize the removal of trees and other native vegetation that stabilize hillsides, retain moisture, reduce erosion, siltation and runoff, and preserve their natural scenic character.*
13. *Apply erosion and sediment reduction practices along riparian areas to assist in maintaining water quality.*
14. *Protect marshes, swamps, and other wetlands from filling, draining, or other alterations which would destroy or reduce their biological value.*

Historic and Cultural Areas Goal:

*To encourage the preservation and maintenance of cultural and historical sites, and to identify and preserve new sites.*

Applicable Policies:

4. *Support efforts to preserve, protect, and enhance the historic and cultural resources of the County.*

The goals and policies established in Part XVI are directives to the County and would not be directly applicable to the Project. However, the design, construction, and operation of the Project would be consistent with the policies established for open space, energy, fish and wildlife, water resources, and historic and cultural areas.

NWN has proposed to locate the Project a sufficient distance from open space resources within the County and therefore the Council finds the Project would be consistent with the CCCP's Part XVI open space policy. The Project would not require well drilling; however, the department requested review of the RFA by DOGAMI to ensure the Project demonstrates compliance with the Structural Standard to ensure public safety, consistent with the CCCP's Part XVI energy

policy. NWN proposes to design, construct and operate the Project to avoid Category 1 and Category 2 habitat, with mitigation measures proposed for all other habitat-related impacts consistent with comments received on the RFA from ODFW, consistent with the CCCP's Part XVI fish and wildlife habitat policies. NWN also proposes to design, construct, and operate the Project to avoid all permanent impacts to wetlands and other waters of the state, and has submitted a Joint Permit Application to DSL and USACE for removal-fill activities required within wetlands. As indicated in the RFA, all wetland impacts would be temporary, consistent with the CCCP's Part XVI water resources policies. The proposed trenchless HDD construction techniques would avoid all potential impacts to historic-era buildings identified within the Project analysis area as having the potential for NHRP eligibility status, consistent with the CCCP's Part XVI historic and cultural area policy.

Therefore, to the extent they could be construed as applicable standards, the Council finds that the Project is consistent with CCCP Part XVI goals and policies.

### ***Part XVIII Air, Land, and Water Quality***

#### *Noise Goal:*

*To control and limit the adverse impacts of noise.*

#### *Air, Land, and Water Quality Goal:*

*To maintain and improve land resources and the quality of the air and water of the County.*

#### *Policies:*

- 1. Work with the appropriate State and Federal agencies to insure that State and Federal water, air, and land resource quality standards are met.*
- 2. Comply with all applicable State and Federal standards and regulations regarding noise pollution.*

The goals and policies of Part XVIII Air, Land, and Water Quality of the CCCP are directives to the County and would not directly apply to the Project. However, NWN proposes to use trenchless, HDD construction techniques for a majority of the pipeline route to avoid, where possible, all impacts to wetlands, streams, and other waterbodies, thereby minimizing potential impacts to fish and other wildlife species, which utilize these habitats. Moreover, NWN would comply with all state and federal regulations regarding air and water quality by securing the requisite permits and approvals as described in Exhibit E of the RFA. Additionally, the Project would comply with all applicable Oregon DEQ noise control regulations as addressed in Section IV.D.1, *Noise Control Regulations*, of this order. Therefore, to the extent it could be construed as an applicable standard, the Council finds that the Project is consistent with CCCP XVIII goals and policies.

### Applicable Rules, Statutes and Goals

*OAR 345-021-0010(1)(k)(C) If the applicant elects to obtain a Council determination on land use: (iii) Identify all Land Conservation and Development Commission administrative rules, statewide planning goals and land use statutes directly applicable to the facility under ORS 197.646(3) and describe how the proposed facility complies with those rules, goals, and statutes.*

The CCCP includes goals and policies as directives to Columbia County; these directives are then implemented by the County through the CCZP. As stated in Exhibit K of the RFA, both the CCCP and CCZO were submitted to and acknowledged by DLCD for compliance with the statewide planning goals. The current versions of the CCZO and CCCP fully implement Oregon's land use statutes, statewide planning goals, and administrative rules that are potentially applicable to the Project. As previously stated, the CCCP includes directives to the County which are not directly applicable to the Project; moreover, there are no administrative rules, statewide planning goals or land use statutes identified as directly applicable to the Project.

*(iv) If the proposed facility might not comply with all applicable substantive criteria, identify the applicable statewide planning goals and describe how the proposed facility complies with those goals.*

As demonstrated in the analysis provided by the department in the evaluation of the Land Use Standard, the Council finds the Project complies with all applicable substantive criteria.

### Amendment 11 Land Use Conditions

The Council adopts the following conditions to ensure consistency and compliance with applicable substantive criteria of the affected local government (Columbia County) for which the Project is located.<sup>84</sup>

**Land Use Condition 1:** During construction and operation, the certificate holder shall design and construct signs for the Amendment 11 components in compliance with sign requirements of CCZO 308.6.

**Land Use Condition 2:** Prior to construction of components authorized by Amendment 11, the certificate holder shall coordinate with and provide written notification to surface property owners on timing and location of tree removal and other site preparation and ground disturbing activities associated with the NMCS and the I/W well pad sites. Copies of written notification to each affected surface property owner shall be maintained onsite and made available to the department upon request.

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<sup>84</sup> MSTAMD11Doc031 Glen Higgins, Columbia County. Columbia County submitted a comment letter on June 18, 2015 requesting inclusion of conditions that the Council adopts as Land Use Conditions 3, 4, 5, and 6; Soil Protection Condition 2; Public Services Condition 1; and Structural Standard Condition 3 to ensure compliance with applicable substantive criteria.

**Land Use Condition 3:** Prior to construction of components authorized by Amendment 11, the certificate holder shall provide written notification to the department verifying whether the NMCS parcel and I/W well pad site would be leased or purchased from the current landowners. If one or both sites are purchased, the certificate holder shall comply with the following requirements:

- (a) The certificate holder shall file a waiver of remonstrance with Columbia County certifying that the certificate holder would not remonstrate against or begin legal action or suit proceeding to cause or persuade the owner or operator of any farm or forest lands to modify the conduct or legal and accepted farm or forest operations. A copy of the waiver of remonstrance shall be provided to the department and maintained onsite for the duration of construction and made available to the department upon request.
- (b) The certificate holder shall secure a partition for the parcel in accordance with Columbia County Subdivision and Partitioning Ordinance and shall ensure that the purchased site complies with applicable parcel dimensions, County Road fire safety design standards, and setbacks. A copy of the approved partition shall be maintained onsite for the duration of construction and operation and made available to the department upon request.

**Land Use Condition 4:** Prior to construction or placement of a utility or facilities within a public road or county right-of-way, the certificate holder shall apply for and obtain a Public Road Construction Permit from the Columbia County Road Department. A copy of the road permit shall be maintained onsite and made available to the department upon request.

**Land Use Condition 5:** Prior to construction of Amendment 11 components, the certificate holder shall apply for and obtain a County Road access permit (part of the County Building Permit) from the Columbia County Land Development Services Department. A copy of the County Road access permit shall be maintained onsite and made available to the department upon request.

**Land Use Condition 6:** Prior to construction of the North Mist Transmission Pipeline, associated with Amendment 11, the certificate holder shall apply for and obtain a Floodplain Development permit from Columbia County Land Development Services Department for the NMTP for areas where the pipeline corridor is located in a Flood Hazard Area. A copy of the Development Permit shall be maintained onsite and made available to the department upon request.

**Land Use Condition 7:** Prior to construction of the North Mist Transmission Pipeline, associated with Amendment 11, the certificate holder shall apply for and obtain a Stream/Wetland Protection permit from Columbia County Land Development Services Department for the NMTP for areas where the pipeline corridor is located in a Wetland Area overlay zone.

## **Conclusions of Law**

Based on the foregoing findings and the evidence in the record, and subject to compliance with the site certificate conditions listed above, the Council finds that the Project complies with the identified applicable substantive criteria and, therefore, complies with the Council's Land Use Standard.

### **IV.A.6. Protected Areas: OAR 345-022-0040**

*(1) Except as provided in sections (2) and (3), the Council shall not issue a site certificate for a proposed facility located in the areas listed below. To issue a site certificate for a proposed facility located outside the areas listed below, the Council must find that, taking into account mitigation, the design, construction and operation of the facility are not likely to result in significant adverse impact to the areas listed below. References in this rule to protected areas designated under federal or state statutes or regulations are to the designations in effect as of May 11, 2007:*

- (a) National parks, including but not limited to Crater Lake National Park and Fort Clatsop National Memorial;*
- (b) National monuments, including but not limited to John Day Fossil Bed National Monument, Newberry National Volcanic Monument and Oregon Caves National Monument;*
- (c) Wilderness areas established pursuant to The Wilderness Act, 16 U.S.C. 1131 et seq. and areas recommended for designation as wilderness areas pursuant to 43 U.S.C. 1782;*
- (d) National and state wildlife refuges, including but not limited to Ankeny, Bandon Marsh, Baskett Slough, Bear Valley, Cape Meares, Cold Springs, Deer Flat, Hart Mountain, Julia Butler Hansen, Klamath Forest, Lewis and Clark, Lower Klamath, Malheur, McKay Creek, Oregon Islands, Sheldon, Three Arch Rocks, Umatilla, Upper Klamath, and William L. Finley;*
- (e) National coordination areas, including but not limited to Government Island, Ochoco and Summer Lake;*
- (f) National and state fish hatcheries, including but not limited to Eagle Creek and Warm Springs;*
- (g) National recreation and scenic areas, including but not limited to Oregon Dunes National Recreation Area, Hell's Canyon National Recreation Area, and the Oregon Cascades Recreation Area, and Columbia River Gorge National Scenic Area;*
- (h) State parks and waysides as listed by the Oregon Department of Parks and Recreation and the Willamette River Greenway;*
- (i) State natural heritage areas listed in the Oregon Register of Natural Heritage Areas pursuant to ORS 273.581;*
- (j) State estuarine sanctuaries, including but not limited to South Slough Estuarine Sanctuary, OAR Chapter 142;*

- (k) Scenic waterways designated pursuant to ORS 390.826, wild or scenic rivers designated pursuant to 16 U.S.C. 1271 et seq., and those waterways and rivers listed as potentials for designation;*
- (l) Experimental areas established by the Rangeland Resources Program, College of Agriculture, Oregon State University: the Prineville site, the Burns (Squaw Butte) site, the Starkey site and the Union site;*
- (m) Agricultural experimental stations established by the College of Agriculture, Oregon State University, including but not limited to: Coastal Oregon Marine Experiment Station, Astoria Mid-Columbia Agriculture Research and Extension Center, Hood River Agriculture Research and Extension Center, Hermiston Columbia Basin Agriculture Research Center, Pendleton Columbia Basin Agriculture Research Center, Moro North Willamette Research and Extension Center, Aurora East Oregon Agriculture Research Center, Union Malheur Experiment Station, Ontario Eastern Oregon Agriculture Research Center, Burns Eastern Oregon Agriculture Research Center, Squaw Butte Central Oregon Experiment Station, Madras Central Oregon Experiment Station, Powell Butte Central Oregon Experiment Station, Redmond Central Station, Corvallis Coastal Oregon Marine Experiment Station, Newport Southern Oregon Experiment Station, Medford Klamath Experiment Station, Klamath Falls;*
- (n) Research forests established by the College of Forestry, Oregon State University, including but not limited to McDonald Forest, Paul M. Dunn Forest, the Blodgett Tract in Columbia County, the Spaulding Tract in the Mary's Peak area and the Marchel Tract;*
- (o) Bureau of Land Management areas of critical environmental concern, outstanding natural areas and research natural areas;*
- (p) State wildlife areas and management areas identified in OAR chapter 635, Division 8.*

### **Findings of Fact**

The Protected Areas Standard requires the Council to find that, taking into account mitigation, the design, construction and operation of the Project is not likely to result in significant adverse impacts to any protected area as defined by OAR 345-022-0040. Impacts to protected areas were evaluated by NWN based on identification of protected areas, pursuant to OAR 345-022-0040, within the analysis area and an evaluation of the following potential impacts during Project construction and operation: excessive noise, increased traffic, water use, wastewater disposal, visual impacts of facility structures or plumes, and visual impacts from air emissions. In accordance with OAR 345-001-0010(59)(e) and consistent with the study area boundary, NWN defines the analysis area as the area within and extending 20 miles from the site boundary.<sup>85</sup>

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<sup>85</sup> For new applications for site certificates, the study area for the Protected Areas Standard, established in OAR 345-001-0010(59), is the area within and extending 20 miles from the site boundary. The study area establishes the boundaries used by an applicant in a Notice of Intent (NOI) to identify potential significant environmental impacts from a new energy facility. Upon receipt of an NOI for a new application for site certificate, ODOE prepares a project order that establishes, amongst other issues, the analysis area that shall be used by an applicant for its environmental studies associated with an application for site certificate. The study area and analysis area can be, but are not necessarily equivalent; the discretion for establishing the analysis area is with ODOE. However, for an amendment to an existing site certificate, such as is under review here, an NOI is

NWN conducted an evaluation of protected areas located within the analysis area to determine the potential Project-related impacts from construction and operation.

Table PA-1, *Distance of Protected Areas from the Project* below shows the identified protected areas within the analysis area, as presented by NWN in Exhibit L of the RFA.

**Table PA-1: Distance of Protected Areas from the Project**

Protected Area <sup>1</sup>	Distance (miles) and Direction from Project Site Boundary	Nearest Highway (Access) to Protected Area
<b>(d) National and State Wildlife Refuges</b>		
Lewis and Clark National Wildlife Refuge	13.8 WNW	US-30
Julia Butler Hansen Refuge	0.05 NW	US-30
<b>(f) National and State Fish Hatcheries</b>		
Gnat Creek Hatchery	11.4 W	US-30
Big Creek Hatchery	14.7 W	US-30
Blind Slough Netpen	15.3 W	US-30
Beaver Creek Hatchery	7.8 N	OR-407
Fallert Creek Hatchery	19.6 E	I-5
<b>(h) State Parks and Waysides</b>		
LL "Stub" Stewart State Park	17.2 S	OR-47
Bradley State Scenic Viewpoint	9.5 W	US-30
Banks-Vernonia State Trail	10.2 S	OR-47
<b>(i) State Natural Heritage Areas</b>		
Saddle Mountain State Natural Area	17.7 SW	OR-47
Tenasillahe Island Research Natural Area	11 NW	OR-4; OR-409
Blind Slough Swamp Preserve	15.8 WNW	US-30
<b>(n) Research Forests</b>		
Blodgett Tract	1.1 W	US-30
<b>(p) State Wildlife Areas and Managements Areas</b>		
Jewell Meadows Wildlife Area, Humbug Tract and Contract Refuge Tract	18.6 SW	OR-47
Jewell Meadows Wildlife Area, Creek and Fish Hawk Creek Tract	10.8 SW	OR-47
<b>Note:</b>		
1. There are no protected areas meeting the following criteria under OAR 345-022-0040(1): (a), (b), (c), l, (g), (j), (k), (l), (m) and (o).		

not submitted by the site certificate holder, and a project order is not issued by ODOE. For assessment of compliance with the EFSC Protected Area Standard, NWN proposed to use the site boundary and the area extending 20 miles from the site boundary as the analysis area. The department agreed with this approach.

As shown in Table PA-1, *Distance of Protected Areas from the Project*, the majority of the listed protected areas are located at least seven miles from the Project site boundary. The protected areas within closest proximity to the Project site boundary include the Julia Butler Hansen Refuge (JBHR) and Blodgett Tract Research Forest located approximately 0.05 mile northwest and 1.1 miles west of the site boundary, respectively. Potential adverse impacts from noise, traffic, water use and wastewater disposal, as well as visual impacts from Project related structures and air emissions, from Project construction and operation are discussed below.

### Evaluation of Potential Impacts to Protected Areas

#### *Potential Noise Impacts*

##### *Construction*

NWN evaluated Project-related construction noise impacts based on calculated noise levels and applicant proposed measures designed to reduce potential noise impacts.

As presented in Exhibit L of the RFA, Project construction would result in incremental increases in ambient noise levels that could be heard from portions of the JBHR located within and near the analysis area. As stated in Exhibit L, the portions of the JBHR located near the analysis area are the protected areas closest to HDD activities, and would result in the greatest noise impacts during Project construction. The closest part of the JBHR to the site boundary is called Kinnunen Cut Island, a portion of the Anunde Island Unit of JBHR. Construction activities near the JBHR would primarily include pipeline installation using HDD; HDD requires continuous operation of an HDD drill rig during pipe pull-back, with the potential for nighttime operations for short periods. As presented in Exhibit X of the RFA, calculated noise levels at or near the Kinnunen Cut Island during HDD activities range between 35 dBA on the north end of the island to as high as 55 dBA on the south end of the island.

NWN proposes to minimize temporary noise impacts by turning off idling equipment, driving equipment forward instead of backward whenever possible, lifting instead of dragging materials, using equipment with properly sized and maintained mufflers, and using engine intake silencers. With implementation of the applicant proposed measures, NWN states that noise levels at the closest protected area, the JBHR, would be temporary and short-term, and peak noise volumes would only occur during HDD activities. For these reasons, NWN concludes that Project-related construction noise would not be expected to result in a significant adverse impact at the JBHR or at protected areas located at greater distances than the JBHR to the site boundary. Therefore, short-term, temporary noise impacts generated during Project construction would not be expected to result in significant adverse impacts at protected areas within the analysis area.



### *Operation*

Although Project construction noise associated with HDD and NMTP installation would be located in close proximity (0.05 miles) to the JBHR, the JBHR would be located more than five miles from any source of operational noise, which includes two natural-gas fired internal combustion engine driven compressors that would operate at the NMCS. The nearest protected area to Project-related operational noises, Blodgett Tract research forest, would be located approximately 1.1 miles west of the NMCS site. As presented in Exhibit X of the RFA, the maximum incremental increase in existing noise levels from concurrent operation of the proposed NMCS and existing Miller Station were calculated at 26 dBA.<sup>86</sup> NWN indicates that this noise level would be barely perceivable by humans at 50-feet (from the source) and that, therefore, noise levels from Project operation would not be expected to be audible or result in significant adverse impacts at any designated protected area based on distance from the noise source and noise attenuation.

### *Potential Traffic Impacts*

#### *Construction*

Roadway access to protected areas within the analysis area is predominately provided via local roads from State and District Highways including US-26, US-30, and OR-47 as presented in Table PA-1, *Distance of Protected Areas from the Project* above. As stated in Exhibit L, US-26 would not be used during Project construction and therefore Project-related traffic impacts to protected areas would not occur on this roadway.<sup>87</sup> Potential construction traffic impacts on US-30 and OR-47 from the Project are evaluated below.

Based on NWN's evaluation of roadways to be used during Project construction that also provide access to protected areas within the analysis area, overall worst case Project construction-related traffic could result in the following impacts<sup>88</sup>:

- US-30 could increase by an estimated 4 to 8 percent increase in annual average daily traffic (AADT) volumes compared to AADT compiled by the Oregon Department of Transportation (ODOT) for 2013.
- OR-47 could increase by an estimated 9 to 19 percent increase in AADT volumes compared to 2013 ODOT AADT.

The estimated traffic increase was calculated by NWN using the expected peak number of construction workers, 317. The peak number of construction workers, and associated traffic, is expected to occur over a short duration in month four of project construction.<sup>89</sup> As presented in Exhibit U of the RFA, U.S. 30 and OR 47 currently operate under capacity with a volume to

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<sup>86</sup> RFA Exhibit X, Section 4.2, Table X-5.

<sup>87</sup> RFA Exhibit L, Section 4.2.

<sup>88</sup> RFA Exhibit U, Section 3.3.3.5.

<sup>89</sup> Id.

capacity ratio less than 0.60. As stated in Exhibit U, the temporary increase in AADT from Project construction would not be anticipated to result in significant adverse impacts at protected areas because the roadways have sufficient capacity to support existing traffic levels and estimated worst-case or peak Project-construction traffic.

### *Operation*

As discussed in Exhibit U, Project operation would result in two new employees, or four roundtrips per day, and therefore traffic related impacts would not be expected to result in significant adverse impacts to protected areas.

### *Potential Water Use and Wastewater Disposal Impacts*

#### *Construction*

NWN proposes to provide water to construction workers at the NMCS site via a 25,000 gallon water tank; NWN would purchase water used for construction at the NMCS site from local purveyors. Additionally, 4.46 million gallons of water would be required during NMTP construction for hydrostatic testing of pipe, HDD, and dust abatement. As explained in Exhibit L and O of the RFA, NWN proposes to obtain all necessary water for NMTP construction from Beaver Slough and PGE's Beaver Generating Station pursuant to a limited use license to be issued by the Oregon Water Resources Department (OWRD).<sup>90</sup> The limited use license to be issued by OWRD would permit NWN to divert and use water for a short-term duration. As explained in the RFA, Project construction would not result in new water rights or new water uses affecting water available to protected areas and therefore NWN estimates there would be no significant adverse impacts to protected area water needs.<sup>91</sup>

#### *Operation*

As stated in the RFA, Project operation would not increase the amount of industrial water or wastewater generated by NWN's existing facilities; new water rights or new water uses would not be required<sup>92</sup> and therefore, would have no impact on protected areas.

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<sup>90</sup> Issuance of the limited water use license is under the jurisdiction of EFSC and is included in and governed by the site certificate. See Section IV.D.3 Water Rights for an assessment of the limited water use license.

<sup>91</sup> As explained in the RFA, water used for hydrostatic testing and HDD would be recycled for additional operations to minimize overall consumptions, where possible, and would then be discharged to PGE's Beaver Generation Station wastewater facility under PGE's NPDES Waste Discharge Permit. As explained in Section IV.A.2 of this Order, DEQ approval would be required prior to Project use of PGE's NPDES Waste Discharge Permit. As discussed in those findings, the Council adopts Organizational Expertise Condition 1 to the site certificate to require DEQ approval for use of a third-party permit (i.e. PGE's NPDES permit) is obtained prior to construction. Wastewater disposal during Project construction would be subject to compliance with PGE's NPDES Waste Discharge Permit.

<sup>92</sup> RFA, Exhibit L, Section 4.3.

## *Potential Visual Impacts from Structures and Air Emissions*

### *Construction*

As presented in Exhibit L of the RFA, the loss of vegetation during Project construction from the NMTP 80-foot easement would be minimally visible from six protected areas including the Lewis and Clark National Wildlife Refuge (13.8 miles west/northwest of the site boundary); Julia Butler Hansen Refuge (0.05 miles northwest of the site boundary); Bradley State Scenic Viewpoint (9.5 miles west of the site boundary); Saddle Mountain State Natural Area (17.7 miles southwest of the site boundary); Tenasillahe Island Research Natural Area (11 miles northwest of the site boundary); and, Jewell Meadows Wildlife Area, Humbug Tract, and Contract Refuge Tract (18.6 miles southwest of the site boundary). NWN indicates that vegetation would be cleared and the construction corridor graded, as needed, to provide safe and efficient operation of construction equipment. As explained in Exhibit L of the RFA, the existing viewshed from the identified protected areas identified above includes commercial timberland, a network of logging roads, clear-cut areas and forest stands. While NWN proposes to maintain a clearance of 10-feet from commercial timber for safety and access purposes, this spacing would be consistent with natural tree-spacing in old-growth Douglas-fir stands and would not be expected to result in a significant adverse impact to the scenic resources within those protected areas. In addition, NWN proposes to revegetate and allow for regrowth within the NMTP right-of-way, with the exception of a 10-foot corridor in commercial timberland, following the temporary loss of vegetation during construction (June 2016 – November 2017). Because of the minimal, and largely short-term, visual impacts, construction would not likely result in significant adverse impacts to protected areas.

### *Operation*

As presented in Exhibit L of the RFA, Project operation of the NMCS and 80-foot communication tower would be minimally visible from specific vantage points at the Blodgett Tract research forest, located approximately two miles west of the NMCS site. However, as stated in Exhibit L of the RFA, views of the NMCS and communication tower would predominately be blocked from view by high hills, terrain and existing vegetation and would not be expected to result in a significant adverse visual impact to protected areas. In addition, view of the NMCS would be minimally visible from specific vantage points at Bradley State Scenic Viewpoint; Saddle Mountain State Natural Area; and, Jewell Meadows Wildlife Area, Humbug Tract, and Contract Refuge Tract. However, as stated in Exhibit L of the RFA, access to these vantage points is limited and the viewshed, in general, from these protected areas would be blocked by forest vegetation surrounding the existing Mist Facility. Moreover, NWN has not proposed any structures that would generate emission plumes or that would result in visual impacts from air emissions would result in significant adverse impacts to protected areas.

The Council agrees with NWN's analysis. Considering the Project design and anticipated impacts, and based on the above reasoning, the Council finds that the design, construction and

operation of the Project would not be likely to result in significant adverse impacts to any designated protected areas.

### **Conclusions of Law**

Based on the foregoing findings of facts and conclusions, the Council finds that the Project complies with the Council's Protected Area Standard.

#### **IV.A.7. Retirement and Financial Assurance: OAR 345-022-0050**

*To issue a site certificate, the Council must find that:*

- (1) The site, taking into account mitigation, can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the facility.*
- (2) The applicant has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.*

### **Findings of Fact**

The Retirement and Financial Assurance Standard requires a finding that the Project can be restored to a useful, non-hazardous condition at the end of the Project's useful life, or should either the certificate holder stop construction prior to completion or the facility cease to operate. In addition, it requires a demonstration that the site certificate holder can obtain a bond or letter of credit to restore the site to a useful, non-hazardous condition. Retirement of the Project would require restoration in land uses currently designated for forestry and agriculture.

As presented in the RFA, restoration costs are primarily associated with the NMCS and aboveground portions of the natural gas transmission and I/W gathering pipelines.<sup>93</sup> NWN indicates that restoration activities at the NMCS and aboveground portions of pipeline would involve removing equipment, dismantling buildings, demolishing foundations, and recycling or disposing of materials at an appropriate landfill. Any hazardous materials stored in the buildings or located within the process equipment would be removed and disposed of in accordance with applicable state and federal hazardous materials statutes and rules. As explained in the RFA, NWN would not typically remove underground pipelines because removal would cause unnecessary disruption to the environment.<sup>94</sup> Therefore, NWN proposes to inspect and purge the pipelines to ensure that no hazardous materials remain. Pipelines would then be cut and capped below grade and left underground. If necessary, NWN would remove structural fill,

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<sup>93</sup> RFA, Project Description and OAR Division 27 Compliance, dated April 2015, Section VII.F, Retirement and Financial Assurance.

<sup>94</sup> RFA, Project Description and OAR Division 27 Compliance, dated April 2015, Section VII.F.3, Retirement and Financial Assurance, High-Pressure Transmission Pipeline.

restore topsoil, and revegetate to enable growth of commercial timber or encourage habitat redevelopment. The abandonment of the I/W and observation wells would be retired in accordance with DOGAMI and Columbia County requirements. For the reasons discussed above and based on compliance with existing site certificate Condition VII.B.(1)(c) (Mandatory Condition pursuant to OAR 345-027-0020(16)), the Council finds that the actions necessary to restore the site to a useful non-hazardous condition are feasible and that NWN is capable of restoring the site to a useful, non-hazardous condition.

NWN estimates that the restoration costs attributable to the Project are approximately \$3,030,000.<sup>95</sup> Costs consist of labor hours for above-ground equipment disassembly; hauling and disposal of foundations, equipment and materials; and, structural fill removal and placement of suitable soil. Acting on behalf of the Council, the department has reviewed the cost estimate, as well as restoration cost estimates for previous Mist Facility expansions (associated with Site Certificate Amendments 8 and 9). Based on the department's review, the Council finds that the site certificate holder's estimated cost is a reasonable estimate of an amount satisfactory to restore the site to a useful, nonhazardous condition. The cost estimate is consistent with Council's previous decisions regarding the estimated retirement and restoration cost of Mist Facility components associated with Site Certificate Amendments 8 and 9.

NWN provided a copy of the bond issued to NWN by SafeCo Insurance Company of America for Amendment No. 8, a copy of NWN's 2014 Annual Report, and an opinion from NWN's General Counsel affirming legal authority by NWN to construct and operate the Project without violating existing bond indenture provisions or similar agreement. Historic business experience, current authorized payment bond, and NWN's annual financial statement support the department's conclusions that NWN has a reasonable likelihood of obtaining a new bond, or of updating the existing bond, in the amount specified for restoration costs and without consideration of scrap metal value. In addition, the Council adopts the following conditions, requiring a bond or letter of credit in a form and amount satisfactory to restore the Project site is submitted:

**Retirement and Financial Assurance Condition 1:** Before beginning construction of the components authorized by Amendment 11, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition. The certificate holder shall maintain a bond or letter of credit in effect at all times until the Amendment 11 components have been retired. The Council may specify different amounts for the bond or letter of credit during construction and during operation of the Amendment 11 components. [OAR 345-027-0020(8)]

**Retirement and Financial Assurance Condition 2:** Prior to construction of the components authorized by Amendment 11, the certificate holder shall submit to the State of Oregon,

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<sup>95</sup> RFA, Project Description and OAR Division 27 Compliance, dated April 2015, Section VII.F.5, Retirement and Financial Assurance, Cost of Restoration; and Exhibit M, Attachment M-1.

through the Council, a bond or letter of credit naming the State of Oregon, acting by and through the Council, as beneficiary or payee. The initial bond or letter of credit amount for the Amendment 11 components is \$3.030 million (in first quarter 2015 dollars), to be adjusted to the date of issuance, and adjusted on an annual basis thereafter, as described in sub-paragraph (b) of this condition:

(a) The certificate holder may adjust the amount of the initial bond or letter of credit based on the final design configuration of the Amendment 11 components. Any revision to the restoration costs should be adjusted to the date of issuance as described in (b) and subject to review and approval by the Council.

(b) The certificate holder shall adjust the amount of the bond or letter of credit using the following calculation:

(1) Adjust the amount of the bond or letter of credit (expressed in first quarter 2015 dollars) to present value, using the U.S. Gross Domestic Product Implicit Price Deflator, Chain-Weight, as published in the Oregon Department of Administrative Services' "Oregon Economic and Revenue Forecast" or by any successor agency and using the first quarter 2015 index value and the quarterly index value for the date of issuance of the new bond or letter of credit. If at any time the index is no longer published, the Council shall select a comparable calculation to adjust first quarter 2015 dollars to present value.

(2) Round the result total to the nearest \$1,000 to determine the financial assurance amount.

(c) The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.

(d) The certificate holder shall use a form of bond or letter of credit approved by the Council. The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council under OAR 345-026-0080. The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.

**Retirement and Financial Assurance Condition 3:** The certificate holder shall retire the components associated with Amendment 11 if the certificate holder permanently ceases construction or operation of the Amendment 11 components. The certificate holder shall retire the components associated with Amendment 11 according to a final retirement plan approved by the Council, as described in OAR 345-027-0110. The certificate holder shall pay the actual cost to restore the site to a useful, non-hazardous condition at the time of retirement, notwithstanding the Council's approval in the amended site certificate of an estimated amount required to restore the site. [OAR 345-027-0020(9)]

**Retirement and Financial Assurance Condition 4:** If the Council finds that the certificate holder has permanently ceased construction or operation of the components authorized by Amendment 11 without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council shall notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the department within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the department to prepare a proposed final retirement plan for the Council's approval. Upon the Council's approval of the final retirement plan, the Council may draw on the bond or letter of credit described in section (8) to restore the site to a useful, non-hazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder shall pay any additional cost necessary to restore the site to a useful, non-hazardous condition. After completion of site restoration, the Council shall issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan. [OAR 345-027-0020(16)]

Subject to compliance with Retirement and Financial Assurance Conditions 1, 2, 3 and 4, the Council finds that the Project can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the facility; and that the certificate holder has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.

### **Conclusions of Law**

Based on the foregoing findings of fact, and subject to compliance with the site certificate conditions listed above, the Council finds that the Project complies with the Council's Retirement and Financial Assurance Standard.

### **IV.A.8. Fish and Wildlife Habitat: OAR 345-022-0060**

*To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025 in effect as of September 1, 2000.*

### **Findings of Fact**

The Fish and Wildlife Habitat Standard requires the Council to find that the design, construction, and operation of the Project are consistent with the Oregon Department of Fish and Wildlife (ODFW) fish and wildlife habitat mitigation goals and standards in OAR 635-415-0025. This rule creates requirements for mitigating impacts to fish and wildlife habitat, based on the functional quantity and quality of the habitat impacted as well as the nature, extent, and

duration of the impact. The rule also establishes a habitat classification system based on the function and value of the habitat it would provide to a specie or group of species likely to use it. There are six habitat categories, with category 1 being the most valuable, and category 6 the least valuable.

NWN addresses compliance with ODFW's fish and wildlife habitat goals and the EFSC standard in Exhibit P of the RFA. Based on comments from ODFW, NWN submitted a revised proposed habitat mitigation plan (HMP) to ODFW in August 2015. Based on additional comments from ODFW, NWN again revised its HMP in December 2015, and then further revised the HMP based on additional comments from ODFW in February 2016. The February 2016 HMP is further discussed below and is included as Attachment E to this order.

Public comment letters raised concern regarding the Project's potential adverse impact to fish and wildlife habitat, particularly salmon habitat.<sup>96</sup> ODFW submitted three comment letters discussing fish and wildlife habitat issues, the habitat mitigation plan, and compliance with the Fish and Wildlife Standard. ODFW submitted the letters in June 2015, December 2015, and January 2016. ODFW's district biologist submitted a separate comment email in May 2015; the ODFW district biologist did not have any significant concerns related to wildlife.<sup>97</sup>

#### Habitat Types and Categories in the Analysis Area

To identify the habitat types and categories within the site boundary, NWN conducted GIS desktop surveys followed by general wildlife and habitat categorization assessment field surveys in 2013, 2014, and 2015. The site boundary includes the NMCS, a 200-foot wide study corridor for the NMTP route, and temporary laydown and staging areas. The methods and results of the surveys are described in the General Biological and Habitat Categorization Survey Report, included as Attachment P-2 to Exhibit P of the RFA. NWN used Desktop GIS analysis techniques to assess habitat within the analysis area, but outside of the site boundary.<sup>98</sup>

The analysis area consists of two general ecosystems, roughly divided by U.S. Highway 30 and Burlington Northern Railroad. The northern portion of the analysis area consists of lowland farming areas, including poplar tree plantations, the Clatskanie River and Beaver Slough, and

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<sup>96</sup> See MSTAMD11Doc22 Columbia Riverkeepers, Public Comment; MSTAMD11Doc23 Diana Peach, Public Comment; MSTAMD11Doc25 Olin Younger and Elizabeth D'Aubigne, Public Comment.

<sup>97</sup> See MSTAMD11Doc19 and Doc20, Art Martin ODFW, MSTAMD11Doc007 Biederbeck ODFW, MSTAMD11Doc46 Susan Barnes ODFW, and MSTAMD11Doc47 Susan Barnes ODFW.

<sup>98</sup> For new applications for site certificates, the study area for fish and wildlife habitat, established in OAR 345-001-0010(59), is the area within and extending 0.5 miles from the site boundary. The study area establishes the boundaries used by an applicant in a Notice of Intent (NOI) to identify potential significant environmental impacts from a new energy facility. Upon receipt of an NOI for a new application for site certificate, ODOE prepares a project order which establishes, amongst other issues, the analysis area that shall be used by an applicant for its environmental studies associated with an application for site certificate. The study area and analysis area can be, but are not necessarily, equivalent; the discretion for establishing the analysis area is with ODOE. However, for an amendment to an existing site certificate, such as is under review here, an NOI is not submitted by the site certificate holder, and a project order is not issued by ODOE. For assessment of compliance with the EFSC Fish and Wildlife Habitat Standard, NWN proposed to use the site boundary and the area extending 0.5 miles from the site boundary as the analysis area. The department agreed with this approach.



PWIP facilities. The southern portion of the analysis area is mainly privately-held commercial timber forest in the Coast Range Mountains, consisting of previously-logged mixed-conifer forest, and is steep and rugged terrain. The commercial timber forest is actively logged by the landowner.

NWN identified six specific habitat types in the analysis area. The various habitat types are classified into habitat categories pursuant to the ODFW fish and wildlife habitat mitigation rule (OAR 635-415-0025). Habitat categories are assigned based on factors including habitat quality, uniqueness, irreplaceability, extent, importance to specific species, and other factors. As shown in Table P-1, Exhibit P of the RFA, the identified habitat types in the analysis area are:

- Open water (habitat categories 2-5)
- Wetlands (habitat categories 2, 3, and 5)
- Riparian forest and shrubland complexes (habitat categories 2-5)
- Upland forests and woodlands (habitat categories 2-5)
- Agriculture, pasture, and mixed environs (habitat categories 4 and 6)
- Urban and mixed environs (habitat category 6)

Exhibit P of the RFA, Table P-1, provides additional information and description related to the specific habitat types in the analysis area.

In its review of the RFA, ODFW staff questioned NWN's categorization of a small portion of open water in the analysis area as category 6 habitat and requested clarification from NWN as to the nature of the open water.<sup>99</sup> In its response to an amendment information request, NWN clarified that the category 6 open water is a graveled stormwater drainage ditch inside the fence line at PWIP. ODFW agreed that this area is correctly categorized as category 6 habitat.<sup>100</sup>

Potential impacts to individual species, including state sensitive species, is included below, and potential impacts to state and federally listed threatened and endangered species is included in Section IV.A.9, *Threatened and Endangered Species* of this order.

#### Potential Adverse Impacts to Habitat

The RFA states that the Project would cause temporary impacts to habitat classified as categories 3, 4, and 6, and permanent impacts to habitat classified as categories 4 and 6. NWN states that no category 2 or 5 habitat would be impacted by the Project.<sup>101</sup> Table FW-1, *Potential Temporary and Permanent Impacts by Habitat Category and Type*, recreated from Table P-5, Exhibit P, Section 6.2.1 of the RFA, describes the anticipated impacts by habitat type, category, and acreage.

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<sup>99</sup> MSTAMD11Doc19 and Doc20 Art Martin, ODFW.

<sup>100</sup> MSTAMD11Doc08 Art Martin, ODFW.

<sup>101</sup> RFA Exhibit P, Section 6.2.1.

**Table FW-1: Potential Temporary and Permanent Impacts by Habitat Category and Type**

Habitat Category and Type	Habitat Sub-type	Impacts (Acres)	
		Temporary	Permanent
<b>Category 3</b>		<b>1.59</b>	<b>—</b>
Upland forests and woodlands	Westside lowland conifer-hardwood forest	1.54	—
Wetlands	Emergent wetlands	0.05	—
<b>Category 4</b>		<b>112.69</b>	<b>10.57</b>
Open Water – Lakes, rivers, streams	Ephemeral streams	0.06	—
	Perennial streams	0.01	—
	Seeps/springs	<0.01	—
Riparian forest and shrubland complexes	Westside riparian	0.69	—
Upland forests and woodlands	Westside lowland conifer-hardwood forest	80.39	10.57
Wetlands	Emergent wetlands	6.27	—
	Forested wetlands	0.05	—
Agriculture, pasture, and mixed environs	Irrigated pastures and hay meadows	8.24	—
	Orchards, vineyards, wheat fields, other row crops, irrigated poplar plantations	16.97	—
<b>Category 6</b>		<b>16.58</b>	<b>0.22</b>
Open Water – Lakes, rivers, streams	Intermittent	0.01	—
Urban mixed environs	Urban mixed environs	16.57	0.22
<b>Total Estimated Temporary and Permanent Impacts =</b>		<b>130.86</b>	<b>10.79</b>

As described in Table FW-1, *Potential Temporary and Permanent Impacts by Habitat Category and Type*, NWN estimates that the Project would permanently impact approximately 10.57 acres of category 4 upland forest and woodland habitat. NWN states that the only areas of permanent impact would be for the NMCS, the well pad,<sup>102</sup> and the mainline block valve.<sup>103</sup> NWN also estimates an additional 0.22 acres of permanent impact to category 6 habitat. As

<sup>102</sup> As noted, EFSC jurisdiction only extends to the surface facilities related to the underground gas reservoir, but excluding the underground storage reservoir and the injection, withdrawal, or monitoring wells and individual wellhead equipment (see ORS 469.300(11)(a)(I)). These components are regulated by DOGAMI.

<sup>103</sup> RFA Exhibit P, Section 6.1.

noted by NWN in the HMP, the 10.57 acres includes approximately three acres of land to be occupied by the well pad.<sup>104</sup> The well pad is not subject to nor governed by the site certificate.

NWN estimates that the Project would temporarily impact approximately 130.86 acres of category 3, 4, and 6 habitat, including:

- Category 3 upland forest and woodland habitat and category 3 wetlands,
- Category 4 open water, riparian forest and shrubland complexes, upland forests and woodlands, wetlands, and agriculture, pasture, and mixed environs, and
- Category 6 open water and urban mixed environs.

As is shown on Table FW-1, *Potential Temporary and Permanent Impacts by Habitat Category and Type*, all impacts in the agriculture region north of U.S. Highway 30 would be temporary. Most of the NMTP in this area would be installed using horizontal directional drilling (HDD) techniques. The majority of the analysis area north of U.S. Highway 30 is classified as category 4 habitat, including agriculture, pasture, and the poplar plantation. Open waterways, including Beaver Slough and Clatskanie River, are category 2 habitat; however, the RFA states that the Project would avoid impacts to category 2 habitat, including waterways, through the use of HDD. Exhibit J of the RFA, specifically Attachment C-2 of the Joint Permit Application, contains engineering details related to HDD including cross-section drawings showing the entry and exit HDD boring locations and the estimated depth of the NMTP. As is shown on these drawings, NWN estimates that it would bore more than 60 feet below the Clatskanie River, more than 70 feet below Beaver Slough at one crossing, and more than 100 feet below Beaver Slough at a second crossing.

In the upland commercial timber portion of the site boundary, NWN would restrict tree growth within an area ten feet in width directly over the NMTP. Other areas of temporary disturbance in the upland commercial timber area could be replanted with harvestable timber if desired by the landowner. NWN states that poplar trees would be allowed to regrow over the NMTP in the agriculture region north of U.S. Highway 30.<sup>105</sup>

At all temporarily impacted areas, including within the ten-foot cleared area on top of the NMTP in the upland commercial timber portion of the site boundary, NWN proposes to remove noxious weeds and then reseed with a seed mix beneficial to wildlife species, which could include grasses, forbs, and shrubs.<sup>106</sup> NWN explains in Exhibit P that the ten-foot buffer is consistent with conditions in old-growth Douglas fir forests and conditions in typical commercial Douglas fir plantation forests, such as is found currently in the upland timber portion of the analysis area. NWN states that natural tree-spacing in old growth Douglas-fir forests as well as target spacing in commercial Douglas-fir timberlands is typically 10-12 feet.<sup>107</sup> Therefore, NWN considers this ten-foot buffer an area of temporary habitat impact that would

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<sup>104</sup> Habitat Mitigation Plan, Table 1, Section 2.0.

<sup>105</sup> RFA Exhibit P, Section 6.3.

<sup>106</sup> HMP, Attachment E.

<sup>107</sup> Id.

be restored using grasses, forbs, and shrubs but not Douglas-fir trees. ODFW did not comment on this analysis.

As included in Section IV.A.1 *General Standard of Review* of this order, Mandatory Condition 5 requires that NWN following completion of construction, to restore vegetation to the extent practicable and landscape all areas disturbed by construction in a manner compatible with the surrounding and proposed use. As described by NWN in Exhibit P of the RFA as well as in the Agriculture Impact Mitigation Plan (AIMP) (Attachment D of this order), this could include replanting of commercially harvestable trees in the upland commercial timberland area, forbs, grasses, and shrubs along the ten-foot buffer over the NMTP in the upland commercial timberland area, and agricultural activities including poplar tree plantations in the lowland agriculture area north of U.S. Highway 30. The AIMP includes a two-year monitoring period following completion of restoration activities.<sup>108</sup>

In order to ensure compliance with the representations made by NWN in its RFA regarding habitat categorization, the Council adopts Fish and Wildlife Condition 1, requiring NWN to conduct a pre-construction fish and wildlife habitat assessment survey and submit an associated report to ODOE and ODFW. The pre-construction survey report must include an updated Table FW-1, indicating the acres to be temporarily and permanently impacted by the Project by habitat category and type and sub-type. The survey report must include updated maps showing Project components and locations, and the habitat categories and types in the fish and wildlife habitat analysis area. Maps must be similar to Figures P-1.1 to P-1.36 as included in Exhibit P of the RFA. In order to mitigate for impacts to fish and wildlife habitat, NWN proposes to implement a HMP.<sup>109</sup> NWN's proposed HMP is included as Attachment E to this order, and further addressed below. The pre-construction survey results will inform the HMP and confirm that appropriate mitigation is provided.

NWN proposes to restrict work in certain areas in order to protect sensitive environmental features that are not proposed to be impacted during construction. These include wetlands, streams and riparian areas, and species listed as threatened or endangered (including species that are candidates for listing as threatened or endangered). NWN would protect these areas by flagging or otherwise marking the perimeters of the areas to be protected.<sup>110</sup> In order to ensure that sensitive environmental features are protected as planned by NWN, Council adopts Fish and Wildlife Condition 2, requiring the mapping, flagging/marking, and protection of sensitive environmental features not proposed to be impacted by the Project.

NWN also proposes to further protect sensitive habitats and species by providing a mandatory training for all workers prior to working on-site.<sup>111</sup> The Council adopts Fish and Wildlife Condition 3, requiring all workers that enter and work at the Project site first complete an

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<sup>108</sup> Soil Protection Condition 2 requires the certificate holder to implement the AIMP as provided in Exhibit K of the RFA.

<sup>109</sup> Impacts to category 6 habitat do not require compensatory mitigation under EFSC's Fish and Wildlife Habitat Standard and ODFW's mitigation policy.

<sup>110</sup> RFA Exhibit P, Section 7.1.2.4.

<sup>111</sup> RFA Exhibit P, Section 7.1.2.6

environmental awareness training course. The environmental awareness training course must include at a minimum the information as described in Exhibit P, Section 7.1.2.6, of the RFA including sensitive fish, wildlife, and plant species present or potentially in the site boundary and the purpose and requirements of protecting flagged/marked sensitive environmental features.

### *Short-duration Habitat Impacts*

In its comment letters dated June 8, 2015 and December 11, 2015, ODFW stated that short-duration or temporal habitat loss must be mitigated to ensure consistency with the ODFW Fish and Wildlife Habitat Mitigation Policy.<sup>112</sup> According to ODFW, short-duration habitat loss is the loss of habitat function and values from the time an impact occurs, to when the restored habitat provides a pre-impact level of habitat function.<sup>113</sup> ODFW suggested that the short-duration impact could be mitigated by NWN through the implementation of a project to remove noxious weeds and revegetate with seed mixes beneficial to fish and wildlife. ODFW also suggested that alternative mitigation projects may also provide adequate mitigation for the short-duration impact, such as expanding the proposed permanent impact compensatory mitigation project parcel.<sup>114</sup>

To mitigate for “short-duration” impacts as part of NWN’s comprehensive plan to address temporary impacts, NWN proposes to remove noxious weeds and reseed areas that are temporarily disturbed during construction within the 80-foot construction easement in commercial timberland. NWN proposes to undertake this weed removal and reseed project regardless of whether the timber company landowner has harvested the trees prior to the NMEP project construction.<sup>115</sup> This proposed mitigation is described in the HMP, Attachment E to this order.

As part of a December 18, 2015 comment package, NWN submitted a memo from its biological resources consultant, which explained that NWN’s proposed weed removal and reseed will provide an increase in habitat quality that is of longer duration than the temporary impacts from NMEP construction. The memo also discusses that the definition of mitigation in the ODFW Fish and Wildlife Habitat Mitigation Policy (OAR 635-415-0005) includes “rectifying the impact by repairing, rehabilitating, or restoring the affected environment,” and that NWN and its consultants believe that the proposed weed removal and revegetation project in temporarily

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<sup>112</sup> MSTAMD11Doc19 Art Martin ODFW and MSTAMD11Doc46 Susan Barnes ODFW.

<sup>113</sup> As discussed elsewhere in this section, Mandatory Condition 5 requires that NWN, following completion of construction, restore vegetation to the extent practicable and landscape all areas disturbed by construction in a manner compatible with the surrounding and proposed use.

<sup>114</sup> MSTAMD11Doc19 Art Martin ODFW and MSTAMD11Doc46 Susan Barnes ODFW.

<sup>115</sup> In its December 18, 2015 comment package, NWN states that the commercial timberland where the NMEP project is proposed has been heavily logged and is of relatively low value habitat, compared to other Habitat Category 4 western Oregon forests, and that the landowner has plans to harvest the timber throughout the NMEP project area. NWN also states that under commercial timber harvesting operations, the landowners are under no legal obligation to mitigate for temporal habitat loss following timber clearing, and that mitigation would not occur but for the NMEP project. NWN states that it disagrees with the legal basis of requiring mitigation for short-duration habitat impacts in commercial forestland. MSTAMD11Doc48 NWN.

impacted commercial timberland would mitigate for short-duration construction impacts to habitat.

In a comment letter on January 25, 2016, ODFW agreed with NWN's proposed approach for temporary habitat impacts and that the approach will meet the ODFW Fish and Wildlife Habitat Mitigation policy.<sup>116</sup>

Habitat mitigation and the HMP is further discussed below in the section regarding Habitat Mitigation and Monitoring.

### *Potential Impacts from Herbicides*

NWN states that it may use herbicides to control vegetation along the NMTP right of way. In a public comment received by the department, commenter expressed concern that herbicides used to manage vegetation could end up in waterways and cause an adverse impact. NWN explains in Exhibit P of the RFA that if used, herbicides would be applied in compliance with all regulations and would not be used in the vicinity of sensitive environments or sensitive species.<sup>117</sup>

In order to ensure that if used, herbicides are used in an appropriate and controlled fashion, the Council adopts Fish and Wildlife Condition 4, requiring that herbicides be applied by a trained professional according to all regulations and instructions, and that they not be used near sensitive environments such as wetlands or waterways, or near sensitive plant species.

### Potential Adverse Impacts to State Sensitive Species

As required by OAR 345-021-0010(1)(p), NWN identified and conducted surveys for State sensitive species that may occur in the analysis area. RFA Exhibit P, Table P-3, lists the State sensitive species with the potential to occur in the analysis area, as well as a summary of the results of the field surveys for the species. In addition to habitat impacts as discussed above, individual species can be affected by other aspects of a project, such as construction noise or other sensory disturbance, and direct mortality through vehicle collision, among other concerns.<sup>118</sup> NWN describes its anticipated impacts to State sensitive species in Exhibit P, Section 6.3, of the RFA. Species that are formally listed as threatened or endangered by either ODFW or the US Fish and Wildlife Service (USFWS) are discussed in Section IV.A.9, *Threatened and Endangered Species* section of this order.

In general, as noted above, the majority of the habitat in the analysis area has been previously disturbed through human activity, specifically commercial logging, agriculture, and development such as roads and houses. Commercial logging, agriculture, and other development activities would continue after the Project is constructed and operational. As

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<sup>116</sup> MSTAMD11Doc47 Susan Barnes ODFW.

<sup>117</sup> RFA Exhibit P, Section 7.1.3.

<sup>118</sup> RFA Exhibit P, Section 6.3.1.

shown on Table FW-1, *Potential Temporary and Permanent Impacts by Habitat Category and Type*, above, the majority of impacted habitat would be category 4.

### *State Sensitive Mammals*

NWN identified four state sensitive mammals that may occur in the analysis area, three species of bats and the Columbian white-tailed deer.<sup>119</sup> The Columbian white-tailed deer is listed as federally endangered and is therefore discussed in the Threatened and Endangered Species Standard section of this order. ODFW has not listed the Columbian white-tailed deer as threatened or endangered.

No bats were observed by NWN and its consultants during wildlife surveys. If present, NWN states that bats may be adversely affected by Project construction through habitat removal and habitat modification, and sensory disturbance. NWN describes in Section 6.3.1.2 of Exhibit P and Table P-6 of Exhibit that bats could be directly killed by tree-clearing, and disturbing bats during roosting could affect their energy conservation and temperature regulation, and increase their risk of predation. Overall, NWN concludes that construction impacts to bats would be minor due to the small area of impact within potential bat roosting habitat and that the habitat modification and resultant edge effect would be unlikely to impact species use of the area. NWN also concludes that the risk of collision by bats with Project equipment and infrastructure would be minor and negligible.<sup>120</sup>

During Project operation, NWN concludes that potential impacts to state sensitive bat species is anticipated to be minimal. Impacts could include sensory disturbance to bats during maintenance activities which could affect energy conservation and temperature regulation, and expose bats to increased predation.<sup>121</sup>

ODFW did not specifically comment or express concern with the Project's potential impacts to state sensitive bat species or other state sensitive mammals aside from the Columbian white-tailed deer, which is considered in Section IV.A.9, *Threatened and Endangered Species* of this order.

Impacts to state sensitive mammals would also be reduced by revegetation of temporarily impacted habitat (Mandatory Condition 5, described in Section IV.A.1 *General Standard of Review* of this order) and implementation of the HMP. In order to further reduce potential impacts to sensitive wildlife, including mammals, NWN proposes that to reduce the potential for vehicle collisions with wildlife, it would limit all vehicle speed to no more than 25 miles per hour within the site boundary.<sup>122</sup> To implement this policy, the Council adopts Fish and Wildlife Condition 5, requiring that NWN adopt a 25 mph maximum speed limit on roadways within the site boundary in order to minimize the potential for collisions with wildlife.

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<sup>119</sup> RFA Exhibit P, Section 4.1, Table P-3.

<sup>120</sup> RFA Exhibit P, Section 6.3.1.2.

<sup>121</sup> RFA Exhibit P, Section 6.3.2.2.

<sup>122</sup> RFA Exhibit P, Section 7.1.2.3.

### *State Sensitive Fish, Amphibians, and Reptiles*

NWN identified seven state sensitive fish species that may occur in the analysis area. Two of these species, Chinook salmon (lower Columbia River ESU, fall run) and Chum salmon (Columbia River ESU) are listed as federally threatened and are therefore considered in Section IV.A.9, *Threatened and Endangered Species* of this order. NWN identified six state sensitive reptile and amphibian species that may occur in the analysis area.<sup>123</sup>

As NWN explained in Exhibit P, construction impacts to fish, amphibians, and reptiles species could occur if drilling fluid was inadvertently released during the HDD process and the drilling fluid entered habitat for fish, amphibians, or reptiles. Construction could also impact fish, amphibian, and reptiles if Project-related erosion or chemical release causes an impact to the aquatic habitat. Impacts may also occur to amphibians and reptiles from direct mortality if they are impacted by Project equipment, and by temporary impacts to wetland habitat during construction.

NWN states that the use of HDD to install the NMTP in most of the lowland areas north of U.S. 30, including wetlands, the Clatskanie River, and Beaver Slough would reduce Project-related impacts to state sensitive fish, amphibians, and reptiles by boring under the Clatskanie River, Beaver Slough, and many wetlands.<sup>124</sup> The HDD would bore under the Clatskanie River and Beaver Slough at depths expected to be between 60 to 100 feet under these waterways.<sup>125</sup> NWN states in Exhibit P of the RFA that using HDD would reduce potential impacts to riparian vegetation along the riverbanks. Riparian vegetation provides shade which helps maintain cooler water temperatures in streams and waterways, and riparian vegetation can also provide direct habitat for many species. NWN also states that the use of HDD would reduce impacts to wetlands, and that all impacts to wetlands would be temporary.<sup>126</sup> A further assessment of potential Project impacts to wetlands is included in Section IV.D.2, *Removal-Fill Law* of this order.

As NWN notes, Project construction could cause direct mortality to amphibians and reptiles.<sup>127</sup> In order to mitigate this impact, ODFW recommended in its comment letter that if encountered during construction, NWN may need to relocate reptiles and amphibians out of the way of Project disturbance to minimize direct incidental mortality and that NWN utilize an ODFW Wildlife Capture, Holding, Transport, and Relocation permit.<sup>128</sup> The Council adopts Fish and Wildlife Habitat Condition 6, requiring NWN to receive and implement the procedures of an ODFW Wildlife Capture, Holding, Transport, and Relocation permit for amphibians and reptiles.

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<sup>123</sup> RFA Exhibit P, Section 4.1, Table P-3.

<sup>124</sup> RFA Exhibit P, Section 6.3 and Table P-6, and RFA Exhibit J, Section 4.0.

<sup>125</sup> RFA Exhibit J, Attachment C-2 of the Joint Permit Application.

<sup>126</sup> RFA Exhibit J, Section 4.3, Table J-2.

<sup>127</sup> RFP Exhibit P, Section 6.3.1.4.

<sup>128</sup> MSTAMD11Doc19 Art Martin ODFW, MSTAMD11Doc20 Art Martin ODFW.



Exhibit P also discusses the potential risk to aquatic species and the aquatic environment that could result from an inadvertent release of drilling fluid. NWN describes that the bentonite slurry proposed to be used as a drilling lubricant during the HDD process is non-hazardous but that if released into a waterway in substantial quantities, it could nonetheless impact aquatic organisms and the aquatic environment.<sup>129</sup>

In order to reduce the potential for an unanticipated release of drilling fluid that could impact state sensitive species and the aquatic environment, NWN proposes to implement an Inadvertent Return Response Plan (IRRP) and to use a monitor to watch for surface release of drilling fluid.<sup>130</sup> The IRRP is included as Attachment F to this order. The IRRP includes measures that NWN states would reduce the risk of an inadvertent return and reduce the significance of an inadvertent return, should one occur. Measures include staff training, a list of response materials and equipment, and operating procedures.

NWN describes in Exhibit P of the RFA that state sensitive fish, reptiles, and amphibians could be impacted by Project-related erosion.<sup>131</sup> In order to reduce erosion, NWN proposes to implement a number of mitigation measures as described in the Erosion and Sediment Control Plan (ESCP).<sup>132</sup> The ESCP is included as Attachment C to this order. A discussion of the specific measures and how the measures would reduce erosion are included in Section IV.A.4. *Soil Protection* of this order.

Public comments on the RFA expressed concern that the Project could impact aquatic habitat and threatened and endangered fish species, specifically salmon.<sup>133</sup> As NWN describes, HDD would minimize or avoid impacts to waterways, wetlands, and riparian vegetation, and thus fish and fish habitat.<sup>134</sup> Implementation of the IRRP and the erosion control measures from the ESCP would further mitigate potential impacts to fish and fish habitat. ODFW did not comment on the potential Project impacts to fish and fish habitat.<sup>135</sup>

During operation, NWN states that there would be no potential impacts to fish.<sup>136</sup> Areas of temporary disturbance would be revegetated (as required by Mandatory Condition 5 included in Section IV.A.1 *General Standard of Review*), and the Council adopts Soil Protection Condition 5 requiring NWN to develop and implement an operational Spill Prevention and Management

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<sup>129</sup> RFP Exhibit P, Section 6.3.1.5. NWN states in Exhibit I, Section 1.5.1.1 that it will not allow hazardous chemicals to be added to drilling fluid.

<sup>130</sup> The Council is adopting Soil Protection Condition 4, requiring NWN to implement the IRRP and to employ a monitor during HDD drilling to watch for surface fluid release.

<sup>131</sup> RFP Exhibit P, Section 6.3.1.4 and 6.3.1.5.

<sup>132</sup> The ESCP is a condition of approval of the National Pollutant Discharge Elimination System 1200-C construction permit. Management of this permit in Oregon has been delegated from the EPA to DEQ. Federally delegated permits are not governed by EFSC site certificates.

<sup>133</sup> MSTAMD11Doc22 Columbia Riverkeeper, MSTAMD11Doc23 Diana Peach, MSTAMD11Doc21 Hopville Farms.

<sup>134</sup> RFA Exhibit P, Section 6.3.1.5. NWN also describes in RFA Exhibit P, Section 7.1.2.2 that HDD activities would occur primarily during the ODFW designated in-water work periods, which for the Clatskanie River is July 15-September 15, though HDD activities may extend into early November. NWN is not proposing any in-water work at the Clatskanie River.

<sup>135</sup> MSTAMD11Doc19 and Doc20, Art Martin ODFW.

<sup>136</sup> RFA Exhibit P Section 6.3.2.5.

Plan (SPMP). The operational SPMP will include procedures and BMPs to be implemented during Project operation to reduce the likelihood of an accidental spill of chemical or other material that could enter waterways and impact fish and fish habitat, as well as procedures to follow in case of an accidental spill or release to reduce the significance of such a spill.

### *State Sensitive Birds*

NWN identified seven state sensitive bird species that may occur in the analysis area.<sup>137</sup> None of these species is listed as threatened or endangered under state or federal law. Three of the seven state sensitive bird species were observed by NWN in the analysis area during its biological field surveys.<sup>138</sup>

NWN states that state sensitive bird species could be impacted by habitat loss and modification, including the loss of foraging and breeding habitat, and habitat fragmentation and edge effects. NWN further describes that bird species could also be impacted by sensory disturbance as a result of construction activities, increased predation and competition, and collisions with construction equipment.<sup>139</sup> NWN states that the use of an HDD drill would minimize and avoid impacts to riparian habitat, which would help protect State sensitive bird species and their habitats.<sup>140</sup> Impacts to birds and bird habitats would also be mitigated through restoration of temporarily impacted areas (Mandatory Condition 5, included in Section IV.A.1 *General Standard of Review* of this order), and by implementation of the HMP. NWN's proposed compensatory mitigation project would provide bird habitat, further mitigating for Project impacts to birds (see mitigation section below).

ODFW recommends that EFSC condition the site certificate amendment to avoid and minimize direct mortality and disturbance to protected bird species and their active nests.<sup>141</sup> NWN proposes to conduct a pre-construction survey to identify and mark sensitive environmental resources, including threatened, endangered, and candidate species, and then protect these sensitive resources during construction.<sup>142</sup> The Council requires as part of Fish and Wildlife Condition 2 that these surveys and work restrictions include state sensitive bird species and their active nests.

### Habitat Mitigation

Following construction, as included in Section IV.A.1 *General Standard of Review* of this order, Mandatory Condition 5 requires NWN to restore vegetation at all areas temporarily impacted by the Project to the extent practicable and landscape all areas disturbed by construction in a manner compatible with the surroundings and proposed use. In order to mitigate for habitat

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<sup>137</sup> RFA Exhibit P, Section 4.1, Table P-3.

<sup>138</sup> Id.

<sup>139</sup> RFA Exhibit P, Section 6.3.1.1, 6.3.1.3, and Table P-6.

<sup>140</sup> RFA Exhibit P, Section 6.3.1.3.

<sup>141</sup> MSTAMD11Doc19 and Doc20, Art Martin ODFW.

<sup>142</sup> RFP Exhibit P, Section 7.1.2.4.

permanently impacted by the Project, NWN would provide compensatory mitigation at a parcel near the northern terminus of the NMTP, and would implement the provisions of the HMP (Attachment E to this order) including habitat enhancement actions at the compensatory mitigation parcel.

In response to the ODFW December 11, 2015 comment letter, on December 18, 2015 NWN submitted a revised HMP, which updated the HMP to address multiple questions and issues raised by ODFW in its December 11, 2015 comment letter.<sup>143</sup> The December HMP includes an updated implementation schedule, a monitoring and reporting program, revisions to the permanent impact mitigation parcel map, specific proposed habitat enhancement actions at the permanent impact mitigation parcel, and as discussed above, a mitigation project to account for short-duration impacts (i.e., removal of noxious weeds and reseeding with seed mix beneficial to wildlife species). Based on additional ODFW comments submitted January 25, 2016, NWN further revised the HMP and provided an updated version of the HMP in February 2016. This February 2016 version of the HMP is included as Attachment E to this order.

As shown in Table FW-1, *Potential Temporary and Permanent Impacts by Habitat Category and Type*, above, NWN expects to permanently impact approximately 10.57 acres of category 4 habitat, and 0.22 acres of category 6 habitat. As noted by NWN in the HMP, the 10.57 acres includes approximately three acres of land to be occupied by the well pad. The well pad is not governed by nor included in the site certificate and therefore NWN is not obligated to mitigate for impacts to habitat associated solely with the well pad.

The ODFW habitat mitigation goal for impacts to category 4 habitat is no net loss in either existing habitat quantity or quality. Mitigation for impacts to category 4 habitat can be accomplished through in-kind or out-of-kind, in-proximity or off-proximity habitat mitigation to achieve no net loss of pre-development habitat quantity or quality. The ODFW habitat mitigation goal for impacts to category 6 habitat is to minimize impacts, and no compensatory mitigation is required for impacts to category 6 habitat.<sup>144</sup> As described in the HMP, the proposed compensatory mitigation parcel and HMP would provide 10.79 acres of mitigation, and thus meet the ODFW habitat mitigation goal. NWN would establish a conservation easement on the mitigation parcel. As NWN describes in the HMP, the 10.79 acres would include mitigation as required to meet the Fish and Wildlife Standard for permanent habitat impacts associated with the NMEP EFSC jurisdictional features, as well as three additional acres of mitigation associated with the well pad.<sup>145</sup>

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<sup>143</sup> MSTAMD11Doc48 NWN.

<sup>144</sup> OAR 635-415-0025.

<sup>145</sup> Because the well pad is not governed by and subject to the site certificate, NWN notes in the HMP that the three additional acres of mitigation associated with the well pad is voluntary and in excess of what EFSC would otherwise be authorized to require for the Project.

The HMP includes specific habitat enhancement actions that NWN will implement at the permanent impact mitigation site. These actions include:

- Snag creation in the eastern habitat mitigation area to provide nesting and foraging opportunities for wildlife; and
- Planting of native species and placement of downed wood in ditch in the western habitat mitigation parcel to improve cover and forage habitat.
- Removal of Himalayan blackberry, a non-native species, in the eastern habitat mitigation parcel.

The HMP also includes an implementation schedule and a monitoring and reporting program. These features were added based on comments from ODFW in its December 11, 2015 letter.

In its comment letter submitted January 25, 2016, ODFW noted a few outstanding questions and issues with the HMP. Specifically, ODFW requested that NWN submit a more specific implementation and monitoring schedule, as well as specific performance criteria for measuring successful implementation of the compensatory mitigation projects. For the compensatory mitigation projects, ODFW requested specific detail regarding the timing of monitoring during growing season in the monitoring years one, three, and five. In the same comment letter, ODFW noted that NWN's proposed compensatory mitigation actions (snag creation, planting of native shrubs, and placement of downed wood) are likely to meet the ODFW mitigation policy. ODFW requested additional detail regarding the specifics of the compensatory mitigation actions, and included in its comment letter specifications for each of the three actions. These comments were addressed by NWN and a revised HMP was submitted in February 2016. This version is included as Attachment E to this order.

To implement the HMP as planned and meet the Fish and Wildlife Habitat Standard providing mitigation for Project impacts, the Council adopts Fish and Wildlife Condition 7 requiring that NWN finalize and implement the HMP, as approved by ODOE in consultation with ODFW.

### Monitoring

As described in the HMP, at temporary impact areas that are restored after construction, monitoring will occur during the growing season the year following reseeded. At the compensatory mitigation project area, monitoring will be conducted the first, third, and fifth years after implantation of the habitat enhancement actions.

In order to ensure permit compliance, oversee construction, and protect sensitive resources, NWN proposes to employ environmental inspectors to be onsite daily during construction. As well, NWN environmental personnel would monitor permit compliance and oversee construction.<sup>146</sup> To implement this action, the Council adopts Fish and Wildlife Condition Habitat 8, requiring that NWN employ environmental inspectors onsite daily during construction.

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<sup>146</sup> RFP Exhibit P, Section 7.1.2.5

### **Amendment 11 Fish and Wildlife Habitat Conditions**

The Council adopts the following conditions to ensure and maintain compliance with the Fish and Wildlife Standard:

**Fish and Wildlife Condition 1:** Prior to construction of components authorized by Amendment 11, the certificate holder shall conduct a field-based habitat, fish, and wildlife survey of the area within and extending to the site boundary of the Amendment 11 components. Following completion of the field survey, the certificate holder shall provide the department and the Oregon Department of Fish and Wildlife (ODFW) the report containing the results of the survey, including a map set of the components associated with Amendment 11, showing all project components, the habitat categories of all areas that will be affected by the project, and the locations of any sensitive resources such as active bird nests. The report shall also include an updated version of Table FW-1 *Potential Temporary and Permanent Impacts by Habitat Category and Type* of the final order, showing the acres of expected temporary and permanent impacts to each habitat category, type, and sub-type.

In classifying the affected habitat into habitat categories, the certificate holder shall consult with the department and ODFW. The certificate holder shall not begin construction of the components associated with Amendment 11 until the habitat assessment has been approved by the department, in consultation with ODFW. If the department and ODFW have not provided a response within 30 days following the site certificate holder's submission of the habitat assessment to the department and ODFW, the assessment will be considered approved. The certificate holder shall not construct any facility components within areas of Category 1 habitat and shall avoid temporary disturbance of Category 1 habitat.

**Fish and Wildlife Condition 2:** Prior to construction of Amendment 11 components, the certificate holder shall flag all environmentally sensitive areas as restricted work zones. Restricted work zones shall include but not be limited to areas with sensitive or protected plant species, including candidate species, wetlands and waterways that are not authorized for construction impacts, areas with seasonal restrictions, and active State sensitive species bird nests.

**Fish and Wildlife Condition 3:** During construction, all Project personnel shall attend an environmental awareness training session conducted by an environmental professional prior to working on the Project site. The training shall include, but not be limited to, the following topics: identification of approved Project boundaries and access roads including flagged exclusion areas; identification of sensitive wetland and waterbody resources; identification of sensitive and special status plant and wildlife species found in the analysis area; techniques regarding avoidance and minimization measures the certificate holder will implement; the notification process to be followed if new sensitive resources are identified; permit requirements; buffer distances from sensitive and protected resources; work timing

restrictions including seasonal restrictions; the role of the onsite environmental inspector(s) and NWN environmental personnel; and other topics as necessary. A copy of the training shall be provided to the department. Records of completed worker training shall be maintained onsite and made available to the department upon request.

**Fish and Wildlife Condition 4:** During construction and operation of components authorized by Amendment 11, the certificate holder may use herbicides to control noxious weeds, undesirable plant species, and vegetation within the site boundary. Herbicides shall be applied by an appropriately licensed person and according to all state and federal regulations. The certificate holder shall consult with landowners prior to applying herbicides on any land not owned by the certificate holder. If requested by a landowner, the certificate holder shall not use herbicides on that landowner's property. The certificate holder shall not allow herbicides to migrate onto nearby property from herbicide use on another parcel. Herbicides shall not be used in or near sensitive environments. Herbicides shall not be used within 100 feet of any occurrence of special status or otherwise sensitive plant species. Except where the product label applies more stringent requirements, when applied from the ground, herbicides shall not be used within 10 feet of any wetlands, stream, river, or other waterway except if specifically approved for use near aquatic environments.

**Fish and Wildlife Condition 5:** During construction and operation of Amendment 11 components, the certificate holder shall restrict vehicle speed on roadways within the site boundary to 25 miles per hour.

**Fish and Wildlife Condition 6:** Prior to construction of Amendment 11 components the certificate holder shall obtain an ODFW Wildlife Capture, Holding, Transport, and Relocation Permit specifically for reptiles and amphibians. The certificate holder shall implement all provisions of the permit. A copy of the permit shall be maintained on-site and shall be made available to the department upon request.

**Fish and Wildlife Condition 7:** Prior to construction of Amendment 11 components, the certificate holder shall finalize and implement the Habitat Mitigation Plan (HMP) provided in Attachment E of this final order, as approved by ODOE in consultation with ODFW. Provision 7(f) regarding impacted acreage calculations shall be completed and submitted to the department after construction is complete as described in the condition below.

- (a) The final HMP shall include an implementation schedule for all mitigation actions, including securing the conservation easement, conducting the ecological uplift actions at the compensatory mitigation parcel, revegetation and restoration of temporarily impacted areas, and monitoring. The mitigation actions shall be implemented according to the following schedule, as included in the HMP:
  - a. Restoration and revegetation of temporary construction-related impact area shall be conducted no later than the fall of the year of construction.
  - b. The habitat enhancement actions at the compensatory habitat mitigation site shall be implemented concurrent with construction. Plantings along the ditch shall occur in the fall of the year of construction.

- (b) The final HMP shall include a plan to remove noxious weeds and revegetate areas that are temporarily disturbed during construction within the 80-foot construction easement in the commercial timberland portion of the Project, south of U.S. Highway 30. Revegetation shall be with seed mixes and forbs beneficial to fish and wildlife as recommended by ODOE, in consultation with ODFW. NWN shall implement this condition regardless of whether the underlying landowner has conducted timber harvest prior to construction of Amendment 11 components.
- (c) The final HMP shall include a monitoring and reporting program for evaluating the effectiveness of all mitigation actions, including restoration of temporarily impacted areas and ecological uplift actions at the compensatory mitigation parcel. Monitoring of the weed removal and revegetation per condition 7(b) shall be for one year following implementation. Monitoring of the compensatory mitigation parcel shall be during years one, three, and five following implementation.
- (d) The final HMP shall be submitted and ODOE's concurrence received prior to beginning construction. ODOE shall consult with ODFW on the final HMP. If ODOE and ODFW have not provided a response within 30 days following the site certificate holder's submission of the final HMP, the HMP will be considered approved.
- (e) The HMP may be amended from time to time by agreement of the certificate holder and the department. Such amendments may be made without amendment to the site certificate. The Council authorizes the department to agree to amendments of this plan and to mitigation actions that may be required under this plan; however, the Council retains the authority to approve, reject or modify any amendment of this plan agreed to by the department.
- (f) Within 30 days of completion of construction, the certificate holder shall submit to the department and ODFW an updated HMP Table 1, providing the finalized acreage numbers for both temporary and permanent impacts by habitat category and type. Mitigation shall be commensurate with the final acreage numbers, the approved HMP, and the EFSC Fish and Wildlife Habitat Standard.

**Fish and Wildlife Condition 8:** During construction of Amendment 11 components, NWN shall employ at a minimum one environmental inspector to be onsite daily. The environmental inspector shall oversee permit compliance and construction, and ensure that known sensitive environmental resources are protected. The environmental inspector shall prepare a weekly report during construction, documenting permit compliance and documenting any corrective actions taken. Reports shall be kept on file and available for inspection by the department upon request.

### **Conclusions of Law**

Based on the foregoing findings of facts and conclusions, and subject to compliance with the site certificate conditions listed above, the Council finds that the Project complies with the Council's Fish and Wildlife Habitat Standard.

#### **IV.A.9. Threatened and Endangered Species: OAR 345-022-0070**

*To issue a site certificate, the Council, after consultation with appropriate state agencies, must find that:*

- (1) For plant species that the Oregon Department of Agriculture has listed as threatened or endangered under ORS 564.105(2), the design, construction and operation of the proposed facility, taking into account mitigation:
  - (a) Are consistent with the protection and conservation program, if any, that the Oregon Department of Agriculture has adopted under ORS 564.105(3); or*
  - (b) If the Oregon Department of Agriculture has not adopted a protection and conservation program, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species; and**
- (2) For wildlife species that the Oregon Fish and Wildlife Commission has listed as threatened or endangered under ORS 496.172(2), the design, construction and operation of the proposed facility, taking into account mitigation, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species.*

#### **Findings of Fact**

The Threatened and Endangered Species Standard requires the Council to find that the design, construction, and operation of the Project is not likely to cause a significant reduction in the likelihood of survival or recovery of a fish, wildlife, or plant species listed as threatened or endangered by Oregon Department of Fish and Wildlife (ODFW) or Oregon Department of Agriculture (ODA). For threatened and endangered plant species, the Council must also find that the Project is consistent with an adopted protection and conservation program from ODA. Threatened and endangered species are those listed under ORS 564.105(2) for plant species, or ORS 496.172(2) for fish and wildlife species. The threatened and endangered species study area for the Project and for all surface facilities related to an underground gas storage reservoir is the site boundary.<sup>147</sup>

NWN's assessment of the Project's compliance with the Threatened and Endangered Species Standard is included as Exhibit Q of the RFA. As required by OAR 345-021-0010(1)(q), NWN included an assessment of species that are listed by ODFW or ODA, as well as species listed by the federal government as threatened or endangered. Some species are listed by both state and federal agencies. Under the Threatened and Endangered Species Standard<sup>148</sup> the Council has jurisdiction only over impacts related to species listed by ODFW at ORS 496.172(2) or ODA at ORS 564.105(2), and does not have jurisdiction over species listed only by the federal government and not by ODFW or ODA. However, NWN has included in its RFA a discussion of

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<sup>147</sup> See footnote 94 Fish and Wildlife Standard section for discussion of study area and analysis area for site certificate amendments. For assessing the Threatened and Endangered Species Standard for the Project, NWN proposed to use the site boundary as the analysis area. The department agreed with this approach.

<sup>148</sup> OAR 345-022-0070



species listed by the federal government but not by ODFW or ODA. Therefore, this order includes an assessment of the federally listed species identified by NWN.

NWN also included a review and assessment of candidate species in Exhibit Q of the RFA. Candidate species are those species that are being monitored and assessed for potential listing as threatened or endangered. While candidate species have the potential to be listed as threatened or endangered in the future, they are not currently listed and are therefore NWN is not required to demonstrate that the Project meets the Threatened and Endangered Species Standard for candidate species. However, because NWN has included candidate species in its assessment in Exhibit Q of the RFA, this order considers the Project's potential impacts to candidate species.

ODFW provided comment on the Project's potential impact to threatened and endangered species and included recommended conditions in its June 8, 2015 comment letter.<sup>149</sup> ODA did not provide comment on the RFA. Public comment letters raised concern regarding the Project's potential adverse impact to threatened and endangered salmon species.<sup>150</sup>

### Surveys and Results

NWN first conducted a desktop and literature review to determine which threatened, endangered, and candidate species have the potential to occur in the analysis area.<sup>151</sup> Following the desktop review, NWN conducted two separate series of field surveys; one survey was conducted for general biological resources, habitat type, and habitat categorization, and the other survey was focused on plant species.<sup>152</sup> Both surveys were conducted over two years, in 2013 and 2014. In 2015, NWN completed the botanical survey in areas where site access was not previously allowed. The general biological resources survey and habitat categorization report is included in RFA Exhibit P, Attachment P-2, and the botany survey report is included in RFA Exhibit P, Attachment P-3.

NWN's initial desktop and literature review identified fifteen federal and/or state listed threatened, endangered, and candidate species with the potential to occur in the analysis area. These species are listed on Table Q-1 of Exhibit Q. The list includes one mammal, three fish, and 11 plant species.<sup>153</sup> The one mammal species is the Columbian white-tailed deer, and the three fish species are Lower Columbia River Chinook salmon, Lower Columbia River coho salmon, and Columbia River chum salmon. The Columbian white-tailed deer is listed by the US Fish and Wildlife Service (USFWS) as endangered but is not listed by ODFW as threatened or

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<sup>149</sup> MSTAMD11Doc19 and Doc20, Art Martin ODFW.

<sup>150</sup> MSTAMD11Doc22 Columbia Riverkeeper, Public Comment; MSTAMD11Doc23 Diana Peach, Public Comment.

<sup>151</sup> RFA Exhibit Q, Section 2.1.

<sup>152</sup> RFA Exhibit Q, Section 2.2.

<sup>153</sup> MSTAMD11Doc7 Herman Biederbeck, ODFW. In a comment letter received from ODFW, the Project was identified as being within the geographic range of the northern spotted owl, a state and federally-listed threatened species. As explained on page 3 of Exhibit Q of the RFA, the northern spotted owl was excluded from the impact analysis due to a lack of suitable habitat within the analysis area and distance from the analysis area to a single territory identified in ORBIC that represents three times the territorial home range radius of the species (4.2 miles).

endangered. Lower Columbia River coho salmon are listed as threatened by the National Marine Fisheries Service (NMFS) and as endangered by ODFW; Lower Columbia River Chinook salmon and Columbia River chum salmon are both listed as threatened by NMFS but not listed as threatened or endangered by ODFW. Of the 11 plant species, three are listed by ODA as threatened and the others are candidate species.<sup>154</sup>

As reported in Exhibit Q, one Columbian white-tailed deer was seen by NWN and its consultant during field surveys.<sup>155</sup> Specific surveys for the listed fish species were not conducted by NWN because, as explained in Exhibit Q, the species are assumed to be present in the analysis area (Clatskanie River). One candidate plant species, tall bugbane, was found during NWN's botanical surveys.<sup>156</sup> According to NWN and stated in Exhibit Q of the RFA, no other threatened, endangered, or candidate plant or wildlife species were observed during field surveys. Field survey results are described in Exhibit Q, and Figures Q-3 to Q-6 are maps of known habitat in the analysis area and field survey results.

### Impact Assessment

#### *Columbian white-tailed deer*

The Columbian white-tailed deer is listed as endangered by the USFWS but is not listed as threatened or endangered by ODFW. ODFW considers the Columbian white-tailed deer a state sensitive species.<sup>157</sup> As described above, the EFSC Threatened and Endangered Species Standard applies only to species listed as threatened or endangered by ODFW or ODA, though because NWN has included in their RFA a discussion of the Columbian white-tailed deer, this order includes an assessment of this species.

As shown in Exhibit Q, Figure Q-3, the analysis area north of the Clatskanie River is considered suitable habitat for and within the range of the Columbian white-tailed deer. As described in Exhibit Q of the RFA, Columbian white-tailed deer are most active during dawn and dusk, and the species is assumed by NWN to be most sensitive to disturbance during fawning season, which NWN states is June 1 to July 31.<sup>158</sup> Columbian white-tailed deer could be adversely affected by the Project through temporary habitat removal and modification, direct injury or death from vehicle collisions, or sensory disturbance such as construction noise.<sup>159</sup>

As NWN describes in Exhibit Q, riparian habitat is known to be important to the Columbian white-tailed deer. NWN states that it would avoid impacts to riparian vegetation by using HDD techniques in Columbian white-tailed deer habitat.<sup>160</sup> In addition, as included in Section IV.A.1 *General Standard of Review* of this order, Mandatory Condition 5 requires NWN, following

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<sup>154</sup> RFA Exhibit Q, Section 2.1, Table Q-1.

<sup>155</sup> RFA Exhibit Q, Section 3.1.1.1.

<sup>156</sup> RFA Exhibit Q, Section 3.3.1.

<sup>157</sup> RFA Exhibit P, Table P-3.

<sup>158</sup> RFA Exhibit Q, Section 3.1.1.2.

<sup>159</sup> Id.

<sup>160</sup> RFA Exhibit Q, Section 4.1.1.

completion of construction, to restore vegetation to the extent practicable and landscape all areas disturbed by construction in a manner compatible with the surrounding and proposed use. Following restoration, the Columbian white-tailed deer would be able to use the habitat as it would prior to Project construction.

Direct mortality of the Columbian white-tailed deer could occur from collision with construction and operations and maintenance vehicles. In order to reduce this risk, NWN proposes to limit vehicles speeds to no more than 25 miles per hour when operating off public roads and on roadways in the site boundary. As assessed and discussed in the Fish and Wildlife Standard section, the Council is implementing the 25 mph speed limit in Fish and Wildlife Condition 5, in order to reduce the risk of vehicle collision with all species.

NWN states that Columbian white-tailed deer are most active during dawn and dusk, and to minimize impacts to the species during construction, operation, and maintenance, NWN proposes to restrict most activities to daylight hours, outside of dawn and dusk, though HDD boring may occur over 24 hour periods.<sup>161</sup> Because it is proposed by NWN, the Council adopts Threatened and Endangered Species Condition 1,<sup>162</sup> implementing NWN's proposed work timing restriction to limit construction, operation and maintenance activities in Columbian white-tailed deer habitat to daylight hours outside of dawn and dusk to the extent practicable.

As described above, NWN notes that the Columbian white-tailed deer is assumed to be most sensitive during fawning season, which NWN states in Exhibit Q to be June 1 to July 31. In order to reduce potential impacts to the deer during fawning, NWN proposes to restrict construction activities to the extent practicable during fawning season in Columbian white-tailed deer habitat, though NWN notes that HDD would likely begin mid-July.<sup>163</sup> Because it is proposed by NWN, the Council adopts Threatened and Endangered Species Condition 2, requiring NWN to restrict work to the extent practicable during June 1 to July 31 in Columbian white-tailed deer habitat, though HDD boring may begin July 15.

ODFW commented that based on its understanding of the species, the fawning season for Columbian white-tailed deer actually begins mid-May.<sup>164</sup> Because the Columbian white-tailed deer is not listed by ODFW as threatened or endangered, seasonal work restrictions that exceed the commitment made by NWN in its request for an amendment are voluntary unless required by federal regulation, and EFSC cannot condition the site certificate amendment to require additional seasonal work restrictions specific to the Columbian white-tailed deer. The Council encourages NWN to consult with the USFWS and staff at the Julia Butler Hansen Wildlife Refuge, and to extend its work restrictions in the Columbian white-tailed deer habitat as appropriate to reduce impacts to the species during fawning season.

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<sup>161</sup> RFA Exhibit Q, Section 4.1.1.2.

<sup>162</sup> Pursuant to OAR 345-027-0020(10), the Council must "include as conditions in the site certificate all representations in the site certificate application and supporting record the Council deems to be binding commitments made by the applicant." The Council finds that NWN's recommended condition related to work timing restrictions constitutes a binding commitment, and is including the representation as a condition in the site certificate.

<sup>163</sup> RFA Exhibit Q, Section 3.1.1.2 and 4.1.1.2.

<sup>164</sup> MSTAMD11Doc19 and Doc20, Art Martin ODFW.

NWN explains in Exhibit Q that while most of the construction in the Columbian white-tailed deer habitat would be constructed using HDD, trenching is expected to be used in short sections and that if deep enough and left exposed, open trenches can be a hazard to deer and other species.<sup>165</sup> In order to minimize this impact, NWN proposes to construct deer escape ramps during open trenching, and to minimize the time when trenches are left open and uncovered.<sup>166</sup> Because it is proposed by NWN, the Council adopts Threatened and Endangered Species Condition 3, requiring that NWN install deer escape ramps when open trenching and minimize the time the trench is left open to the extent practicable.

In order to reduce potential impacts to Columbian white-tailed deer, ODFW recommends that all workers be trained in identification and responsibility to protect the Columbian white-tailed deer.<sup>167</sup> As discussed in Section IV.A.8 Fish and Wildlife, in order to reduce potential Project impacts to all species and habitats, the Council adopts Fish and Wildlife Condition 3, which requires all Project personnel to take an environmental awareness training course prior to working at the Project site. The environmental training course was proposed by NWN in Exhibit P of the RFA. As proposed by NWN, the environmental awareness training course would cover all state sensitive species, including the Columbian white-tailed deer.

### *Fish*

NWN identified three listed fish species with the potential to occur in the analysis area: Lower Columbia River Chinook salmon, Lower Columbia River coho salmon, and Columbia River chum salmon.<sup>168</sup> Lower Columbia River coho salmon is listed as endangered by ODFW. Lower Columbia River Chinook salmon and Columbia River chum salmon are listed as sensitive by ODFW but not threatened or endangered. All three species are listed as threatened by the US Fish and Wildlife Service. NWN states in Exhibit Q that the Clatskanie River is the only waterway in the analysis area where the three species are expected to occur.<sup>169</sup> Exhibit Q further explains that the NMFS has classified the Clatskanie River as critical habitat for Lower Columbia River Chinook salmon, and NMFS has proposed the Clatskanie River as critical habitat for the Lower Columbia River coho salmon. There is no NMFS designated or proposed critical habitat for Columbia River chum salmon in the analysis area.<sup>170</sup>

Public comments received on the RFA noted concern of the Project's potential impact to listed fish species, particularly salmon species.<sup>171</sup> ODFW did not provide comment on the Project's potential impact to listed fish species.<sup>172</sup> Public comment letters expressed concern that fish could be impacted by an inadvertent release of drilling fluid, by herbicides entering waterways, by removal of riparian vegetation, and by direct impacts to waterways.

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<sup>165</sup> RFA Exhibit Q, Section 3.1.1.2.

<sup>166</sup> RFA Exhibit Q, Section 3.1.1.2 and 4.1.1.2.

<sup>167</sup> *Id.*

<sup>168</sup> RFA Exhibit Q, Table Q-1.

<sup>169</sup> RFA Exhibit Q, Section 3.2.1.5, Section 3.2.2.5, and Section 3.2.3.5.

<sup>170</sup> RFA Exhibit Q, Section 3.2.1.3, Section 3.2.2.3, and Section 3.2.3.3.

<sup>171</sup> MSTAMD11Doc22 Columbia Riverkeeper, Public Comment; MSTAMD11Doc23 Diana Peach, Public Comment.

<sup>172</sup> MSTAMD11Doc19 and Doc20, Art Martin ODFW.

NWN states in Exhibit Q that impacts to listed fish species could occur from an inadvertent release of drilling fluid during HDD boring, removal of riparian vegetation, soil erosion that migrates into waterways, and spills or releases of chemicals or hazardous materials, including herbicides, which enter waterways.<sup>173</sup>

As described in Exhibit Q, NWN expects to avoid impacts to listed fish species and habitat, including riparian vegetation, through the use of HDD boring.<sup>174</sup> The NMTP is planned to be installed more than 60 feet below the bottom of the Clatskanie River.<sup>175</sup> NWN states that because the Project would use HDD to avoid impacts to fish habitat and riparian vegetation, adverse impacts such as increased turbidity, increased sediment, and changes in stream temperature associated with vegetation clearing would be avoided.<sup>176</sup>

NWN discusses in Exhibits Q and P that fish and fish habitat could be adversely impacted by an inadvertent release of bentonite drilling fluid during HDD, either through a direct release into a waterway or a release onto land that migrates into a waterway. NWN states that the bentonite slurry used in HDD is non-toxic but that if released into waterways, it can smother fish, fish eggs, and other aquatic organisms.<sup>177</sup> In order to reduce the risk of releasing drilling fluid into waterways, NWN proposes a number of mitigation measures and BMPs.<sup>178</sup> These measures include:

- Adhering to the Inadvertent Return Response Plan (Soil Protection Condition 4), which is included as Attachment F to this order;
- Consulting with ODFW prior to carrying out HDD or other boring work associated with fish-bearing streams with listed fish potentially present;
- Conducting HDD at streams with listed fish potentially present primarily during the in-water work periods to avoid impacting fish during critical life stages. For the Clatskanie River the in-water work period is from July 15 to September 15. NWN states that boring may extend into November, depending on rainfall.
- Positioning HDD entry and exit points to avoid impacts to riparian vegetation.

NWN describes in Exhibit Q that if not properly managed, Project-related erosion and sedimentation could affect listed fish species and habitat.<sup>179</sup> In order to properly reduce and manage erosion issues, NWN would be required to implement a number of erosion control BMPs as conditions of its NPDES 1200-C construction stormwater control permit. As a component of the 1200-C permit, NWN is required to prepare and implement an erosion and sediment control plan (ESCP, included as Attachment C to this order). Implementing the provisions of the ESCP and the 1200-C permit would reduce erosion and sedimentation impacts

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<sup>173</sup> RFA Exhibit Q, Section 3.2, Section 3.2.1.6, Section 3.2.2.6, Section 3.2.3.6, and Section 4.2.2.

<sup>174</sup> RFA Exhibit Q, Section 3.2, Section 3.2.1.6, Section 3.2.2.6, and Section 3.2.3.6.

<sup>175</sup> RFA Exhibit J, Attachment J-3, Joint Permit Application, Attachment C-2, construction cross sections.

<sup>176</sup> RFA Exhibit Q, Section 3.2.1.6, Section 3.2.2.6, and Section 3.2.3.6.

<sup>177</sup> RFA Exhibit Q, Section 3.2.

<sup>178</sup> RFA Exhibit Q, Section 4.2.2.

<sup>179</sup> RFA Exhibit Q, Section 3.2.1.6, Section 3.2.2.6, and Section 3.2.3.6.

to waterways. Soil Protection Condition 1 requires that NWN conduct all construction work in compliance with a final ESCP.

In order to reduce the potential impact to listed fish and habitat from spills or releases of chemicals or other hazardous materials, NWN proposes to implement a construction Spill Prevention and Management Plan (SPMP) and an operational SPMP. Both plans would contain measures to reduce the risk of potential spills or releases, and measures to contain and minimize the impact of any accidental spills or releases that occur. Soil Protection Conditions 3 and 5 (see Section IV.A.4 Soil Protection) require NWN to implement the construction and operation SPMPs.

To provide further protection to listed fish species and habitats, NWN would minimize the use of herbicides and avoid use of herbicides near sensitive environments including waterways.<sup>180</sup> To ensure that herbicides are properly applied in order to protect fish and wildlife habitat, as well as listed fish and wildlife species, in Section IV.A.8 Fish and Wildlife, Fish and Wildlife Condition 4, requires herbicides to only be applied by a licensed person and restricting the use of herbicides near sensitive environments.

As described above and in the RFA, the Project has a potential to cause adverse impacts to listed fish species. However, considering the Project design, proposed mitigation, and site certificate conditions, the Council finds that the Project is not likely to cause a significant reduction in the likelihood of survival or recovery of listed fish species.

### *Plants*

NWN's investigation and field surveys identified 11 listed or candidate for listing plant species that may occur in the analysis area.<sup>181</sup> This includes plant species listed as threatened endangered, as well as candidates for listing, by the federal government and by ODA. As discussed above, the Council's Threatened and Endangered Species Standard only applies to plant species listed by ODA as threatened or endangered under ORS 564.105(2). The standard excludes species only listed by the federal government but not by the ODA, and also excludes candidate species that have not yet been formally listed. Of the 11 identified species, three are listed as threatened by ODA: Coast Range fawn-lily, howellia, and Nelson's sidalcea (also known as Nelson's checkermallow). The other eight plant species are candidates for listing by ODA. Two species, howellia and Nelson's sidalcea, are also listed as threatened by the USFWS, and six of the 11 plant species are noted as species of concern by USFWS.<sup>182</sup>

Candidate species are those that may become threatened or endangered in the future but are not yet formally listed, and while the Threatened and Endangered Species Standard does not apply to candidate species, NWN included an assessment in Exhibit Q of the potential

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<sup>180</sup> RFA Exhibit P, Section 7.1.3 and Exhibit Q Section 4.2.2.

<sup>181</sup> Exhibit Q, Section 2.1 and Table Q-1.

<sup>182</sup> Exhibit Q, Table Q-1.

occurrence and expected impact of the Project on candidate plant species. As such, this order includes an analysis of potential Project effects to candidate plant species.<sup>183</sup>

As described above, NWN conducted botanical surveys in the analysis area in 2013 and 2014. A 2015 field survey was conducted in areas where site access was not previously allowed during the 2013 and 2014 surveys.<sup>184</sup> The botanical survey report (Attachment P-3 to Exhibit P of the RFA) did not identify any threatened or endangered plant species in the analysis area. One candidate plant species, the tall bugbane, was identified during the surveys.<sup>185</sup>

The tall bugbane populations are located along Palm Hill Road, as shown on Figure 1 in the botanical survey report. At this location, NWN describes that the NMTP would be installed using HDD boring, and thus avoiding direct impacts to the tall bugbane. Additionally, NWN proposes to conduct a pre-construction field survey for tall bugbane and to mark all identified populations of the species and to install a safety fence or similar barrier around the species to protect it from harm during construction.<sup>186</sup> Because NWN made a commitment to take the identified actions, the Council adopts Threatened and Endangered Species Condition 4, requiring NWN to implement the tall bugbane survey, identification, and protection as described here and in Exhibit Q.

In order to protect threatened and endangered plant species that may not have been previously discovered or identified, the Council adopts Threatened and Endangered Species Condition 5, requiring that as part of the pre-construction field survey, NWN look for plant species listed as threatened or endangered by ODA; and if any such species are found, the Council requires that NWN not commence construction activities that could impact those species and that NWN consult with ODOE and ODA to assess the potential impacts and identify appropriate mitigation measures.<sup>187</sup>

In addition to the measures discussed here, in Section IV.A.8 Fish and Wildlife, the Council has included Fish and Wildlife Condition 3 requiring that all construction personnel undergo environmental awareness training prior to working on the Project site, and a component of this training would be to teach workers of their obligation to avoid impacts to restricted work areas including fenced-off sensitive environmental features not proposed to be impacted by the Project, such as the tall bugbane population. This will provide additional protections for threatened and endangered plant species, as well as candidate species.

Considering the Project design, proposed mitigation, and site certificate conditions, the Council finds that the Project is not likely to cause a significant reduction in the likelihood of survival or recovery of listed plant species.

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<sup>183</sup> ODA was unable to provide formal comment regarding the Project and its potential effects to listed and candidate plant species. The ODA is a reviewing agency under ORS 469.350(2) and OAR 345-001-0010(52) and was provided with the RFA and reviewing agency memo (see MSTAMD11Doc027 ODOE Reviewing Agency Memo).

<sup>184</sup> RFA Exhibit Q, Section 2.2.2.

<sup>185</sup> RFA Exhibit Q, Section 3.3.

<sup>186</sup> RFA Exhibit Q, Section 4.3.1.

<sup>187</sup> In Section IV.A.8 Fish and Wildlife, the Council adopts Fish and Wildlife Condition 1, requiring NWN to conduct a pre-construction field survey and identify sensitive resources in the site boundary.

### **Amendment 11 Threatened and Endangered Species Conditions**

The Council adopts the following conditions to reduce potential Project-related adverse impacts to threatened and endangered species.

**Threatened and Endangered Species Condition 1:** To the extent practicable, the certificate holder shall conduct construction, operation, and maintenance activities of Amendment 11 components during daylight hours outside of dawn and dusk in Columbian white-tailed deer habitat. Dawn is assumed to be 30 minutes prior to sunrise and dusk is assumed to be 30 minutes after sunset. HDD boring may occur throughout a 24-hour period.

**Threatened and Endangered Species Condition 2:** To the extent practicable, the certificate holder shall avoid construction activities within the range of the Columbian white-tailed deer during fawning season of June 1 to July 31. Except that HDD boring activities may begin or recommence on July 15 rather than August 1.

**Threatened and Endangered Species Condition 3:** During construction of Amendment 11 components in Columbia white-tailed deer habitat, the certificate holder shall install deer escape ramps at all open trenches and to the extent practicable, minimize the time the trench is left open.

**Threatened and Endangered Species Condition 4:** Prior to construction of Amendment 11 components, the certificate holder shall conduct a pre-construction survey for tall bugbane in the vicinity of the population identified during the 2013-2014 botanical survey. Areas with tall bugbane will be flagged and those plants that occur in the vicinity of proposed construction activities will be protected using construction safety fencing or similar visual and physical barrier to protect from construction-related impacts. Results of the pre-construction survey shall be reported to the department.

**Threatened and Endangered Species Condition 5:** Prior to construction of amendment 11 components, if any previously unidentified state-listed threatened or endangered species (listed under ORS 564.105(2) or ORS 496.172(2)) is discovered during the pre-construction survey (see Fish and Wildlife Condition 1), the certificate holder shall consult with ODFW or ODA and the department to develop a protection plan for that species and to maintain continued compliance with the Threatened and Endangered Species Standard (OAR 345-022-0070).

### **Conclusions of Law**

Based on the foregoing findings of facts and conclusions, and subject to compliance with the site certificate conditions listed above, the Council finds that the Project complies with the Council's Threatened and Endangered Species Standard.



**IV.A.10. Scenic Resources: OAR 345-022-0080**

*(1) Except for facilities described in section (2), to issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources and values identified as significant or important in local land use plans, tribal land management plans and federal land management plans for any lands located within the analysis area described in the project order.*

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**Findings of Fact**

The Scenic Resources Standard requires the Council to find that the Project would not cause a significant adverse impact to identified scenic resources and values. To be considered under the standard, scenic resources and values must be identified as significant or important in local land use plans, tribal land management plans, and/or federal land management plans.

The analysis area for scenic resources includes the area within and extending 10 miles from the Project site boundary. The analysis area for the Project encompasses portions of two Oregon counties, Columbia and Clatsop; and portions of two Washington counties, Cowlitz and Wahkiakum. There are no lands administered by tribal governments within the analysis area. The Julia Butler Hansen National Wildlife Refuge is in the analysis area, and is administrated by the U.S. Fish and Wildlife Service.

NWN included its assessment of scenic resources in Exhibit R of the RFA, with additional information included in Project Description and OAR Division 27 Compliance section of the RFA.

**Applicable Land Use Plans**

The applicable land use plans evaluated by NWN to determine presence of significant or important scenic resources are presented in Table SR-1, *Summary of Applicable Land Use Plans and Scenic Resources within the Analysis Area* below.

**Table SR-1: Summary of Applicable Land Use Plans and Scenic Resources within the Analysis Area**

Applicable Land Use Plans for Analysis Area	Important or Significant Resource Identified within Analysis Area (Y//N)
Columbia County Comprehensive Plan (Columbia County 2011)	Yes
Clatsop County Comprehensive Plan (Clatsop County 2012)	Yes
Cowlitz County Comprehensive Plan (Cowlitz County 1981)	Yes
Wahkiakum County Comprehensive Plan (Cowlitz-Wahkiakum Governmental Conference 1984)	No

**Table SR-1: Summary of Applicable Land Use Plans and Scenic Resources within the Analysis Area**

Applicable Land Use Plans for Analysis Area	Important or Significant Resource Identified within Analysis Area (Y//N)
Wahkiakum County Shoreline Management Master Program (Wahkiakum County Planning Commission 1980)	No
City of Clatskanie Comprehensive Plan (City of Clatskanie 2004)	No
City of Longview Comprehensive Plan (Jones & Stokes et al. 2006)	No
Town of Cathlamet Comprehensive Plan (CWCOG 2002)	No
Comprehensive Conservation Plan for the Lewis and Clark and Julia Butler Hansen National Wildlife Refuges (USFWS 2010)	No

Scenic resources identified within the analysis area as significant or important in the land use plans are further described below.

### Scenic Resources

As presented in Table SR-1, *Summary of Applicable Land Use Plans and Scenic Resources within the Analysis Area* three County Comprehensive Plans identified important or significant scenic resources within the analysis area. The Columbia County Comprehensive Plan identified the following six scenic resources within the analysis area: Beaver Creek Falls, Carcus Creek Falls, Lava Creek Falls, a segment of the Clatskanie River between Apiary Falls and Carcus Creek, a “state designated scenic segment” of Oregon Highway 47 between Pittsburg and Clatskanie, and a scenic viewpoint on U.S. 30. The Clatsop County Comprehensive Plan identified the following three scenic resources within the analysis area: Gnat Creek Falls, Plympton Creek Falls, and a portion of Oregon Department of Forestry (ODF) lands near Westport designated as a scenic conservancy. The Cowlitz County Comprehensive Plan identified one scenic resource that is a segment of the Ocean Beach Highway (State Route 4 [SR-4]) between Coal Creek (near the western edge of Longview) and Cathlamet. A detailed description and distance from the Project site boundary for each of the aforementioned scenic resources was provided by NWN in Exhibit R of the RFA.

### Impact Assessment

NWN’s scenic resource impact evaluation considered Project-related loss of vegetation or alteration of landscape, and visual impacts of facility structures or plumes from each identified scenic resource location during construction and operation, pursuant to OAR 345-021-0010(r)(C). NWN states that after construction, most Project features would be underground and areas of temporary impact would be revegetated, so potential impacts to scenic resources are limited. Based on NWN’s evaluation, only one scenic resource, Ocean Beach Highway (State Route 4 [SR-4]) between Coal Creek (near the western edge of Longview) and Cathlamet, could

be impacted by Project construction and operation. An evaluation of potentially adverse impacts from Project construction and operation to this important scenic resource is provided below.<sup>188</sup> NWN describes in Exhibit R that while it is possible that the compressor station may be somewhat visible from some specific vantage points along highway OR-47, if ongoing forest management activities have cleared trees along the highway, it is likely that the compressor station would be hidden from view at all potential highway vantage points by trees maintained around the compressor station.<sup>189</sup>

### *Construction and Operation*

As discussed in Exhibit R, the loss of vegetation during grading of the NMTP 80-foot easement would likely be visible from a segment of the Ocean Beach Highway (State Route 4 along the Lewis and Clark Trail Scenic Byway). However, NWN proposes to revegetate and allow for regrowth within the NMTP ROW, with the exception of a 10-foot corridor in the upland forested portion of the site boundary, following the temporary loss of vegetation during construction. As explained in Exhibit R, the existing viewshed from SR-4 includes commercial timberland, a network of logging roads, clear-cut areas and forest stands. Therefore, while visible, the temporary loss of vegetation during Project construction activities would not likely result in a substantial change in the existing viewshed from the scenic segment of SR-4. While NWN proposes to maintain a clearance of 10-feet for safety and access purposes, this spacing is consistent with natural tree-spacing in old-growth Douglas-fir stands.

As presented in Exhibit R, Project operation would result in loss of vegetation, landscape changes, and new above-ground structures but due to the steep terrain and existing mature trees shielding or blocking views of the NMCS, above-ground portions of the gathering pipelines, and 80-foot lattice steel communication tower, visual impacts would not be expected from the scenic segment of SR-4.

Considering the Project design and anticipated impacts, the Council finds that the design, construction and operation of the Project are not likely to result in significant adverse visual impacts to the important scenic resource identified within the analysis area and values identified as significant or important in applicable land use plans or federal land management plans.

### **Conclusions of Law**

Based on the foregoing findings, the Council finds that the design, construction and operation of the Project complies with the Council's Scenic Resources Standard.

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<sup>188</sup> RFA Exhibit R, Section 4.0.

<sup>189</sup> RFA Exhibit R, Section 4.0, Table R-2.

**IV.A.11. Historic, Cultural and Archaeological Resources: OAR 345-022-0090**

*(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impacts to:*

*(a) Historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places;*

*(b) For a facility on private land, archaeological objects, as defined in ORS 358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1); and*

*(c) For a facility on public land, archaeological sites, as defined in ORS 358.905(1)(c).*

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**Findings of Fact**

The Historic, Cultural, and Archaeological Resources Standard requires the Council to find that Project construction and operation would not cause a significant adverse impact to resources that have been or are likely to be listed on the National Register of Historic Places (NRHP), archaeological sites, and archaeological objects. The Historic, Cultural, and Archaeological Resources Standard allows for mitigation measures to be considered in the assessment.

NWN included its assessment of historic, cultural, and archaeological resources in Exhibit S of the RFA, with additional information included in the Project Description and OAR Chapter 345, Division 27 Compliance sections of the RFA. As is allowed under EFSC rule, NWN also submitted a confidential report of its archaeological investigation to both ODOE and SHPO.<sup>190</sup> The assessment includes a records review and pedestrian-level survey within the analysis area. For the evaluation of impacts to historic, cultural, and archeological resources, the analysis area is the site boundary.

NWN, through its consultant, Historical Research Associates (HRA), conducted a review of reports, forms and historical studies available at the State Historic Preservation Office (SHPO); regional and local environmental histories; ethnographic studies; and, documents pertaining to local Euroamerican history. Results of the records review included five previous surveys within the analysis area and 18 previous surveys within one-mile of the analysis area. There were no historic, cultural, or archeological resources recorded during previous surveys within the analysis area; there were five archeological resources and eight historic-era buildings and structures previously recorded within one-mile of the analysis area.<sup>191</sup>

Following the records search, HRA conducted field surveys between May 19 and 29, 2014 and February 12, 2015. Field surveys included 10 to 20 meter pedestrian transects, subsurface

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<sup>190</sup> OAR 345-021-0010(1)(s).

<sup>191</sup> RFA Exhibit S, Section 5.1.1.

sampling in areas with high probability for potential archeological resources, and inspection of soil exposures. No archaeological resources were identified by HRA during the field surveys. HRA identified three historic-era buildings and structures, two of which are outside of the analysis area but located on parcels crossed by the analysis area. The third structure is the Burlington Northern railroad. None of these three resources are currently listed on the NRHP. HRA and NWN determined that the two buildings are not likely to be eligible for listing on the NRHP. HRA and NWN did not evaluate the Burlington Northern railroad for eligibility on the NRHP, but NWN states that the Project would not impact the railroad as the NMTP will be installed under the railroad using HDD.<sup>192</sup>

SHPO provided a comment letter disagreeing with NWN's conclusions regarding two of the historic-era buildings and structures (Burlington Northern railroad and a building located at 77434 Palm Hill Road).<sup>193</sup> SHPO stated that the Burlington Northern railroad should be evaluated for NRHP listing eligibility and should be considered eligible for listing, and that the building at 77434 Palm Hill Road should be considered eligible for listing. Therefore, for purposes of this order, these two resources are considered as having a "likelihood" for NRHP listing. SHPO also provided a separate comment letter concurring with the survey results for archaeological resources, agreeing that based on the information provided, the Project is likely to have no effect on any significant archaeological sites or objects.<sup>194</sup>

SHPO also provided concurrence that its review of the information provided in the RFA satisfied Section 106 of the National Historic Preservation Act (per 36 CFR Part 800) consultation requirements for the Project components associated with this RFA.<sup>195</sup>

## Impact Assessment

### *Construction*

As explained by NWN in the RFA, the Project would not impact the three identified historical above-ground resources. HDD would be used to install the NMTP under the Burlington Northern railroad and would not impact above-ground sections of the railroad.<sup>196</sup> NWN states that construction of the Project would also not impact the two buildings that were evaluated for NRHP listing eligibility as both buildings are outside of the analysis area and site boundary.<sup>197</sup> SHPO agreed with the assessment, and that as described in the NWN documentation, the Project will not adversely affect historic properties.<sup>198</sup>

As presented in Exhibit S, there were no archeological resources identified during field surveys. In addition, as noted above, the SHPO concurred that a good faith effort had been

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<sup>192</sup> RFA Exhibit S, Sections 5.1.2 and 5.2.

<sup>193</sup> MSTAMD11Doc11 Jason Allen, SHPO.

<sup>194</sup> MSTAMD11Doc10 Ross Curtis, SHPO Archaeology.

<sup>195</sup> MSTAMD11Doc11 Jason Allen, SHPO.

<sup>196</sup> RFA Exhibit S, Section 2.0.

<sup>197</sup> RFA Exhibit S, Section 5.2 and Attachment S-1, Confidential Cultural Resources Investigation Report.

<sup>198</sup> MSTAMD11Doc11, Jason Allen, SHPO.

implemented to identify archaeological resources, and that the Project would not likely have an effect on any significant archeological objects or sites.<sup>199</sup> In the same comment letter SHPO recommended that in the unlikely event that unanticipated archeological resources are identified during construction all ground disturbance at that site should cease until the resource can be evaluated by a professional archaeologist. In order to ensure that the Project does not impact currently unidentified significant archaeological objects or sites, in compliance with the EFSC Historic, Cultural, and Archaeological Standard, the Council adopts Condition Historic, Cultural and Archeological Condition 1, requiring that if an archaeological object or site is discovered during Project construction, all ground-disturbing activities must cease until the archaeological object or site can be evaluated by a professional archaeologist in coordination with SHPO and the department.

NWN has proposed to implement a worker environmental awareness training program, and require all workers to take the course prior to working on-site.<sup>200</sup> In order to ensure that workers on-site understand the obligations to protect archaeological resources in compliance with the EFSC standard, the Council requires that, as part of Historic, Cultural, and Archaeological Condition 1, NWN include in the worker environmental awareness training course a discussion of archaeological resources, requirements to protect such resources, and the conditions of the amended site certificate that would require ground-disturbing activities to cease upon discovery of a previously unidentified archaeological object or site.

### *Operation*

As explained in Exhibit S, operations of the Project are stationary and would not result in ground-disturbing activities. Operations and maintenance of the NMTP corridor would include vegetation maintenance for clearing of fire and safety hazards; however, NWN states that vegetation maintenance would not result in substantial ground-disturbing activities beyond trimming of overgrown vegetation. Once construction is completed, the NMTP would be entirely underground and not visible at the Burlington Northern railroad crossing or the property as 77434 Palm Hill Road. Therefore, Project operation would not likely result in significant adverse impacts to historic, cultural or archeological resources.

Based on the above analysis, the Council finds that the construction and operation of the Project are not likely to result in significant adverse impacts to historic, cultural, or archaeological resources.

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<sup>199</sup> MSTAMD11Doc10 Ross Curtis, SHPO. In a comment letter received from SHPO, concurrence with the results of field surveys was provided in addition to a proposed condition requiring cessation of work and evaluation of resource significance in the event of archeological resource discovery which is included in this order as Historic, Cultural and Archeological Resources Condition 1.

<sup>200</sup> The worker environmental awareness training is discussed in Section IV.A.8, Fish and Wildlife, and site certificate condition Fish and Wildlife Condition 3 makes the training mandatory.

### **Amendment 11 Historic, Cultural, and Archaeological Condition**

The Council adopts the following condition to reduce potential Project-related adverse impacts to historic, cultural and archeological resources and maintain compliance with the Historic, Cultural, and Archaeological Resources Standard.

**Historic, Cultural and Archeological Condition 1:** During construction related ground-disturbing activities of components authorized by Amendment 11, if any artifacts or other cultural materials that might qualify as “archaeological objects” as defined at ORS 358.905(1)(a) or “archaeological sites” as defined at ORS 358.905(1)(c) are identified, ground disturbing activities will cease until a professional archeologist can evaluate its potential significance. The certificate holder shall flag or mark the area and shall notify the department and the SHPO of the find immediately.

If SHPO determines that the resource is significant, the certificate holder shall make recommendations to the Council for mitigation, including avoidance, field documentation, and data recovery, in consultation with the department, SHPO, interested tribes and other impacted parties. The certificate holder shall not restart work in the affected area until the certificate holder has demonstrated to the Council that it has complied with the archaeological resource protection regulations.

In accordance with Fish and Wildlife Condition 3, the worker training shall include a section describing this permit condition, how to identify archaeological objects, and the certificate holder’s requirement to avoid impacting significant historic, cultural, and archaeological resources.

### **Conclusions of Law**

Based on the foregoing findings, and subject to compliance with the site certificate condition listed above, the Council finds that the Project complies with the Council’s historic, cultural, and archaeological resources standard.

### **IV.A.12. Recreation: OAR 345-022-0100**

- (1) Except for facilities described in section (2), to issue a site certificate, the Council must find that the design, construction and operation of a facility, taking into account mitigation, are not likely to result in a significant adverse impact to important recreational opportunities in the analysis area as described in the project order. The Council shall consider the following factors in judging the importance of a recreational opportunity:*
- (a) Any special designation or management of the location;*
  - (b) The degree of demand;*
  - (c) Outstanding or unusual qualities;*

*(d) Availability or rareness;*

*(e) Irreplaceability or irretrievability of the opportunity.*

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### **Findings of Fact**

The Recreation Standard requires the Council to find that the Project would not cause a significant adverse impact to important recreational opportunities in the analysis area. The importance of recreational opportunities is assessed based on five factors outlined in the standard: special designation or management, degree of demand, outstanding or unusual qualities, availability or rareness, and irreplaceability or irretrievability of the recreational opportunity. NWN evaluated impacts to important recreational opportunities based on the potential of Project construction or operation to result in any of the following: direct or indirect loss of a recreational opportunity, excessive noise, increased traffic, and visual impacts of Project structures or plumes.

OAR 345-001-0010(59)(d) establishes study area boundaries to be used by an applicant to evaluate potentially significant adverse impacts to recreational opportunities under EFSC's Recreation Standard. The study area and analysis area can be, but are not necessarily equivalent. The analysis area can differ from the study area if a reviewing agency or ODOE determines boundaries of a study area are not sufficient to adequately characterize potential project related impacts. For EFSC's Recreation Standard, NWN proposes to apply the boundary established for the study area, pursuant to OAR 345-001-0010(59)(d), as the analysis area. However, as presented in Exhibit T of the RFA, NWN proposes differing analysis areas for the non-linear (NMCS) and linear (NMTP) components of the Project based on its interpretation of OAR 345-001-0010(59)(g). The study area for impacts to recreation opportunities, as stated in OAR 345-001-0010(59)(d), is the area within and extending five miles from the site boundary. OAR 345-001-0010(59)(g) states that subsection (d), the five mile study area from the site boundary, does not apply to pipelines. Accordingly, NWN interprets the rule to exempt the NMTP from the five mile study area and proposes that the study area for the NMTP be the area within the site boundary. However, as established in the Final Declaratory Ruling issued by EFSC in June 2013, the NMTP is a "related and supporting facility" for the Project.<sup>201</sup> Therefore, the Council finds that the study area exemption for pipelines under OAR 345-001-0010(59)(g) does not apply because the energy facility in this case is the Mist Facility, and the NMTP is a related and supporting facility to the underground storage facility. As such, the Council defines the analysis area to evaluate potential impacts to recreational opportunities from the Project as the area within and extending five miles from the site boundary.

### **Recreational Opportunities within the Analysis Area**

As presented in Exhibit T of the RFA, NWN conducted a review of published and unpublished resources including maps, GIS files, comprehensive plans, park and recreation plans, park

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<sup>201</sup> MSTOPSDoc7. MST Declaratory Ruling Final Order, 2013-06-21.



master plans, and internet sites to identify existing recreational opportunities within the analysis area. As presented in Table RO-1, *Summary of Recreational Opportunities within the Analysis Area* below, NWN identified the following recreation opportunities: Julie Butler Hansen Refuge for Columbia White-tailed Deer, the Lower Columbia River Water Trail, and Vernonia to Astoria bike route.<sup>202</sup> Based on the department’s recommended analysis area, which includes the area within and extending five miles from the site boundary for the Project, including the NMTP, the department, as staff to the Council, identified the following additional recreation opportunities within the analysis area: County Line Park and Beaver Boat Ramp and Park.

**Table RO-1: Summary of Recreational Opportunities within the Analysis Area**

Recreational Opportunity	Approximate Distance from Site Boundary (miles)	Important Recreational Resources (Yes/No)? <sup>1</sup>
Julia Butler Hansen Refuge for Columbia White-tailed Deer	0.05	Yes
Lower Columbia River Water Trail	0	Yes
Vernonia to Astoria bike route	1.5	No
County Line Park	1.3	No
Beaver Boat Ramp and Park	1.5	No
<p>Notes:</p> <ol style="list-style-type: none"> <li>1. The determination of importance for JBHR and the Lower Columbia River Water Trail, as presented in Table RO-1, <i>Summary of Recreational Opportunities within the Analysis Area</i> differs from the determination provided by NWN in Exhibit T of the RFA. Based on the analysis area, as recommended by the department, and evaluation of criteria, the department recommended that the Council find these areas to be important and that the Council evaluate potential impacts from Project construction and operation.</li> </ol>		

NWN states in Exhibit T of the RFA that none of the recreation opportunities within the analysis area would be characterized as important. Based on the evaluation presented below, the department, working on behalf of the Council, identified two specially-designated recreational opportunities with unusual, rare, and irreplaceable qualities. Each of the recreational opportunities identified in Table RO-1, *Summary of Recreational Opportunities within the Analysis Area*, are described below along with an assessment of its importance.

*Julia Butler Hansen Refuge*

As presented in Exhibit T of the RFA, the Julia Butler Hansen Refuge (JBHR) is designated as a national wildlife refuge and is managed by the United States Fish and Wildlife Service (USFWS) under a Comprehensive Conservation Plan (CCP) for protection of the endangered Columbian White-tailed Deer.<sup>203</sup> The CCP includes goals to provide and enhance opportunities to

<sup>202</sup> RFA Exhibit T, Table T-1.

<sup>203</sup> RFA Exhibit T, Section 2.4.1.

participate in compatible wildlife-dependent recreation including hunting, fishing, wildlife observation and photography, environmental education and interpretation.<sup>204</sup>

The refuge is divided into seven management units covering over 6,000 acres of pastures, forested tidal swamps, brushy wood lots, marshes and sloughs. Of the seven management units, three are located within or partially within the analysis area, including Crims-Gull Island, Wallace Island (which includes 60-acres of Anunde Island) and Westport Unit. The Wallace Island Unit has been designated as a wilderness study area and is managed to retain its wilderness characteristics.

The management units located within or partially within the analysis area are islands or peninsulas and consist of intertidal swamps and meadowlands. The management units are managed as a refuge for the protection of Columbia white-tailed deer; the refuge also provides habitat for species such as wintering waterfowl, bald eagles, and great blue herons. The geography of an island in conjunction with the wildlife-dependent recreational opportunities including hunting, fishing, wildlife observation and photography, environmental education and interpretation within these management units would be relatively unusual, uncommon and irreplaceable. As explained in Exhibit T of the RFA, most of the refuge is accessible only by boat, and only foot traffic is permitted outside of the few developed areas in the Mainland Unit, located northwest of Cathlamet, Washington, and over seven miles outside of the analysis area. NWN indicates that the degree of demand is considered relatively low due to access limitations and dense vegetation. Although the demand may be low, the Council finds that the JBHR is an important recreational opportunity as defined in OAR 345-022-0100(1) because it is operated under a special designation by a management plan, which includes goals for enhancing wildlife-dependent recreational opportunities, and includes irreplaceable islands with unique and unusual wildlife-dependent recreational opportunities including hunting, fishing, wildlife observation and photography, environmental education and interpretation.

#### *Lower Columbia River Water Trail*

As presented in Exhibit T of the RFA, the Lower Columbia River Water Trail is a 146-mile, bi-state water trail spanning tidally-influenced river waters from the Bonneville Dam to the Pacific Ocean, managed by the Lower Columbia Estuary Partnership under the Lower Columbia River Estuary Comprehensive Conservation and Management Plan.<sup>205</sup> Oregon Parks and Recreation Department defines water trails as “corridors between specific locations on a lake, river or ocean.” The geography of the water trail and aquatic ecosystems along and within the water trail would be considered relatively unusual, uncommon and irreplaceable. As Exhibit T of the RFA explains, the water trail is recognized by the Oregon Parks and Recreation Department as having met the state’s guidelines for trail planning and management and includes an affiliation of businesses, parks, and boat launch sites but is not a designated state or local trail route. NWN indicates that the degree of demand is considered moderate due to the number of

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<sup>204</sup> Lewis and Clark and Julia Butler Hansen National Wildlife Refuges CCP/EIS. Available at: <http://www.fws.gov/pacific/planning/main/docs/WA/jbh-lc/Final%20CCP%20EIS/LAC%20JBH%20Final%20CCPEIS.pdf>

<sup>205</sup> RFA Exhibit T, Section 2.4.2.

opportunities for camping and boating along and within the water trail, and dining, within the analysis area. Considering its location, management of the location, and its irreplaceable and unusual qualities, the Council finds that the Lower Columbia River Water Trail is an important recreational opportunity as defined in OAR 345-022-0100(1).

#### *Vernonia to Astoria Bike Route*

As presented in Exhibit T of the RFA, the Vernonia to Astoria Bike Route is a route from Vernonia to Astoria via Oregon Route (OR)-47 and OR-202. As explained in Exhibit T of the RFA, the bike route is not a state- or county-designated bike route and there are no bike lanes or bike-specific infrastructure on any of the roads on which the route runs. NWN indicates that the demand for use of the bike route within the analysis area is considered low. For these reasons, the bike route within the analysis area would not be considered rare or replaceable. Moreover, the bike route has not been identified by the state or county as having unique scenic, historic, natural or cultural characteristics and does not have any special designation. Therefore, the Council finds that the Vernonia to Astoria Bike Route is not an important recreation opportunity as defined in OAR 345-022-0100(1).

#### *County Line Park*

County Line Park is a 5.5-acre site located along the banks of the Columbia River with opportunities for overnight recreational vehicle (RV) camping, tent camping and day use areas. The park includes paved areas with RV-hookups and shaded areas for camping, which would not be considered rare, unique or irreplaceable. Based on its location, day-use, and overnight camping opportunities, the degree of demand would be considered high. The park is jointly owned and managed by Wahkiakum County and Port District No. 2, but is not operated under a special designation. Although the demand may be high, given that its qualities are not rare, unique or irreplaceable in the area, and the Council finds that County Line Park is not an important recreation opportunity as defined in OAR 345-022-0100(1).

#### *Beaver Boat Ramp and Park*

Beaver Boat Ramp and Park is a day-use park and offers paved parking, boarding floats, restrooms and barbeque grills, which would not be considered rare, unique or irreplaceable. Based on its location along the banks of the Clatskanie River and opportunities for boat launching, the degree of demand would be considered high. The park is managed by Columbia County, but is not operated under a special designation. Similar to the County Line Park, although the demand may be considered high, the qualities are not rare, unique and irreplaceable and, therefore, the Council finds that Beaver Boat Ramp and Park is not an important recreation opportunity as defined in OAR 345-022-0100(1).

## Evaluation of Potential Impacts to Important Recreation Opportunities

As described above, the Council finds that JBHR and the Lower Columbia River Water Trail are important recreational opportunities. Under the Council's Recreation Standard, the Council must find that, taking into account mitigation, the Project is not likely to result in a significant adverse impact to those identified important recreational opportunities. On behalf of the Council, the department evaluated potential impacts to those important recreational opportunities based on potential loss, noise, traffic, and visual impacts from Project construction and operation.

### *Potential Direct or Indirect Loss of Recreational Opportunity*

Based on the location of the Project in relation to the JBHR and the Lower Columbia River Water Trail, the Project would not physically disturb, or result in ground disturbance, to those recreational opportunities. The Project would also not require any temporary or permanent closure or removal of the important recreation opportunities to public use. Therefore, the Council finds that the Project would not be expected to result in indirect impact, or indirect loss, to the important recreational opportunities.

### *Potential Noise Impacts*

#### *Construction*

Construction-related noise impacts were evaluated based on calculated noise levels and measures proposed by NWN to reduce potential noise impacts. Based on the location of Project construction activities, incremental increases in ambient noise levels could be heard from portions of the JBHR and Lower Columbia River Water Trail located within and near the analysis area. Construction activities near these important recreational opportunities would primarily include pipeline installation using horizontal directional drilling (HDD); HDD requires continuous operation of an HDD drill rig during pipe pull-back, with the potential for nighttime operations for short periods. The closest part of the JBHR to the site boundary is called Kinnunen Cut Island, a portion of the Anunde Island Unit of the JBHR. As presented in Exhibit X of the RFA, calculated noise levels at or near Kinnunen Cut Island during HDD activities range between 35 dBA on the north end of the island to as high as 55 dBA on the south end of the island. The Columbia River Water Trail is located at similar distances as the JBHR to Project-related construction noise; therefore, noise impacts of 35 dBA to 55 dBA would also be expected at this recreational opportunity.

NWN proposes to minimize temporary noise impacts by turning off idling equipment, driving equipment forward instead of backwards whenever possible, lifting instead of dragging materials, using equipment with properly sized and maintained mufflers, and using engine intake silencers.<sup>206</sup> With implementation of NWN's proposed measures, noise levels during

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<sup>206</sup> RFA Exhibit X, Section 6.1.

construction would generally be expected to be lower than noise levels caused by periodic field preparation and harvesting agricultural activities that currently occur in the area. Therefore, Council finds that short-term, temporary noise impacts generated during Project construction would not be expected to result in significant adverse impacts at any important recreational areas.

### *Operation*

The JBHR and Lower Columbia River Water Trail are both located approximately two miles from the proposed mainline block valve and greater than six miles from the NMCS. As explained in Exhibit X of the RFA, operation of the NMTP would not generate noise. Although the mainline block valve could result in loud noises during venting, these noise levels would not be expected to be audible at the JBHR or Lower Columbia River Water Trail based on the distance between the noise source and important recreational opportunity. Moreover, noise generated during operation and maintenance of the mainline block valve, which is considered emergency equipment, would occur infrequently and for short periods of time.

As explained in Exhibit X, NWN evaluated potential operational noise impacts at identified noise sensitive properties, located approximately two and three miles from the NMCS and NWN's existing Miller Station. From those locations, the maximum incremental increase in existing noise levels from concurrent operation of the NMCS and existing Miller Station was calculated at 26 dBA. This noise level would be barely perceivable by humans at 50-feet (from the source). As stated above, the JBHR and Lower Columbia River Water Trail would be located greater than six miles from the NMCS and therefore noise impacts generated from the concurrent operation of the NMCS and NWN's existing Miller Station would not be audible at these important recreational opportunities. Therefore, the Council finds that these noise levels would not be expected to result in significant adverse impacts at either of the important recreational opportunities.

### *Potential Traffic Impacts*

As described in Exhibit T of the RFA, access to the JBHR and Lower Columbia River Water Trail is primarily water access; however, access to boat launch sites within those important recreation areas is provided via local roads from U.S. 30. Therefore, potential temporary traffic impacts on U.S. 30 from the Project are evaluated below.

NWN evaluated potential temporary traffic impacts to the JBHR and Lower Columbia River Water Trail based on the estimated peak level of daily roundtrips from workers and trucks on U.S. 30. NWN calculated the estimated traffic increase using the expected peak number of construction workers, 317. The peak number of construction workers, and associated traffic, is expected to occur over a short duration in month four of Project construction.<sup>207</sup> As presented in Exhibit U of the RFA, U.S. 30 currently operates under capacity with a volume to capacity

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<sup>207</sup> RFA Exhibit U, Section 3.3.3.5.

ratio less than 0.60. As stated in Exhibit U, the temporary increase in AADT from Project construction would not be anticipated to result in significant adverse impacts at either of the important recreational opportunities because the roadways have sufficient capacity to support existing traffic levels and estimated worst-case or peak Project-construction traffic. Therefore, the Council finds that construction-related traffic impacts associated with the Project would not be expected to result in significant adverse impacts to any important recreational opportunities.

As discussed in Exhibit U, operation of the Project would result in two new, fulltime employees, or four roundtrips per day, and would not be likely to have any impact on either the JBHR or the Lower Columbia River Water Trail.

### *Potential Visual Impacts*

The JBHR and Lower Columbia River Water Trail, identified as important recreational opportunities within the analysis area, would be located over seven miles from any above-ground structures associated with the Project including the 80-foot communication tower and NMCS. The existing topography and geography between the above-ground Project components and the JBHR and Lower Columbia River Water Trail includes steep terrain and existing mature trees. Based on the seven-mile distance of the Project structures to any important recreational opportunity, along with the geography and topography which would shield or block views, Project structures would not be visible from any important recreational opportunity. Moreover, the Project would not generate emissions or plumes. Therefore, the Council finds that visual impacts of Project structures would not result in a significant adverse impact at any important recreational opportunity.

Considering the Project design and anticipated impacts, the Council finds that the design, construction and operation of the Project would not be likely to result in significant adverse impacts to the important recreation opportunities in the analysis area.

### **Conclusions of Law**

Based on the foregoing findings, the Council finds that the Project would comply with the Recreation Standard.

### **IV.A.13. Public Services: OAR 345-022-0110**

- (1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to the ability of public and private providers within the analysis area described in the project order to provide:*

*sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.*

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### **Findings of Fact**

The Council's Public Services Standard requires the Council to identify likely significant adverse impacts to the ability of public and private service providers to supply sewer and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care, and schools.

The analysis area for the Project is defined as the area within and extending 10-miles from the site boundary. The analysis area encompasses portions of two Oregon counties: Columbia and Clatsop; and portions of two Washington counties: Cowlitz and Wahkiakum. The analysis area also encompasses portions of two incorporated cities, Clatskanie, Oregon and Longview, Washington; one town, Cathlamet, Washington; and, a number of unincorporated rural communities including Mist, Mayger, and Westport, Oregon. NWN evaluated impacts to public services based on the potential of Project construction or operation to impact the ability of public and private providers within the analysis area to provide: sewers and sewage treatment; water; stormwater drainage; solid waste management; housing; traffic safety; police and fire protection; health services; and schools.

Potential impacts to public services from Project construction and operation are described below.

### **Sewers and Sewage Treatment**

As explained in Exhibit U, Project construction would not require any publically provided sewer service. However, NWN proposes to provide onsite, temporary portable toilets for workers which would require offsite sewage treatment from a public or private provider. As explained in Exhibit U, NWN proposes to utilize a supplying agent to bring portable toilets to the site, manage, and transport sewage for offsite disposal on a weekly basis. NWN proposes to locate any potential sewer lines that could be crossed by the NMTP prior to construction to ensure avoidance and impact minimization. As further explained in Exhibit U, operational facilities associated with the Project would be unmanned and would not require sewer and sewage treatment services. The existing Miller Station is served by its own on-site sewage treatment system, which would not be impacted by the Project.<sup>208</sup> Therefore, the Council finds that the Project would not impact the ability of public or private utilities to provide sewer and sewage treatment services.

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<sup>208</sup> RFA Exhibit U, Section 3.3.3.1.

## Water

As explained in Exhibit U, Project construction would not require any publically provided water services. NWN proposes to utilize a 25,000-gallon water tank to supply water for construction activities at the NMCS site. Water for NMCS construction would be purchased by NWN from local purveyors and would not impact the ability of public or private utilities to provide water services.<sup>209</sup> As further explained in Exhibit U, the NMTP route would cross four public water systems. DEQ and a public commenter noted that construction activities, and particularly stormwater runoff events during construction, could impact turbidity levels at a drinking water intake, specifically the Midland Water Association intake on Graham Creek.<sup>210</sup> In its response to an information request from the department, NWN explained that the Project would not directly impact Graham Creek or its tributaries, or Fishhawk Creek, another source of drinking water in the region. As stated by NWN, the NMTP will cross two tributaries of Graham Creek, and at these locations the pipeline will be placed under an existing culvert in a logging road. NWN states that a third tributary of Graham Creek is avoided by trenching above the creek headwaters. NWN further states that impacts to tributaries of Fishhawk Creek will also be avoided by installing the NMTP in the Mainline Road (an existing logging and access road), at locations with existing culverts.<sup>211</sup> Furthermore, NWN will be required to obtain a 1200-C National Pollutant Discharge Elimination System Permit (NPDES) and implement an associated Erosion and Sediment Control Plan including various best management practice to reduce potential erosion and stormwater runoff that if not controlled, could impact waterways.

In addition, as explained in Exhibit U, Project operation would not require any publically provided water services. Therefore, Project operation would not result in impacts to the public or private water service providers.

Based on this analysis, the Council finds that the Project would not impact the ability of public or private utilities to provide water services.

## Stormwater Drainage

As explained in Exhibit I of the RFA, NWN proposes to retain stormwater onsite during construction through use of small diversion berms and implementation of best management practices in accordance with its NPDES 1200-C permit. During operation, some stormwater would be shed from graveled surfaces and structures during rain events. However, NWN indicates that there would be no land application of liquid waste and no hazardous materials produced during operation. Moreover, public drainages would not be crossed or used to divert stormwater discharge during Project construction or operation.

Based on this analysis, the Council finds that the Project would not impact the ability of public or private utilities to provide stormwater drainage services.

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<sup>209</sup> Id.

<sup>210</sup> MSTAMD11Doc23 Diana Peach, Public Comment; MSTAMD11Doc5 Jennifer Purcell, ODEQ.

<sup>211</sup> MSTAMD11Doc37 NWN AIR Response 2015-7-10.



### Solid Waste Management

NWN proposes to minimize solid waste generated during construction and to recycle materials such as insulation, nails, electrical wiring, and rebar, as well as waste originating from site preparation such as dredging materials, tree stumps, and rubble. However, for solid waste that cannot be recycled, NWN proposes to utilize a licensed solid waste collector to transport solid waste to the Coffin Butte Landfill located in Corvallis, Oregon, in coordination with Columbia County, and in compliance with Columbia County's Solid Waste Management Ordinance. Total solid waste generated during construction is estimated at approximately 1,700 cubic yards; of the estimated total solid waste, NWN proposes to recycle over 1,000 cubic yards of scrap material and transport less than 700 cubic yards to Coffin Butte Landfill. Based upon the relatively minimal amount of non-recyclable solid waste estimated for the construction duration and the letter obtained from Columbia County Department of Land Services by NWN, Project construction is not anticipated to impact the ability of solid waste management providers to provide services.<sup>212</sup> As explained in Exhibit U of the RFA, Project operation would not generate either hazardous or non-hazardous solid waste.

Based on this analysis, the Council finds that the Project would not impact the ability of solid waste management providers to provide services.

### Housing

As explained in Exhibit U, Table U-1, of the RFA, NWN estimates construction activities would be completed within approximately 18 months from commencement. NWN proposes to utilize a predominately local workforce, which would not require temporary housing. The peak number of workers, and worker family members, that would require temporary housing during construction would peak (in month 4) at 178. Based upon the information provided in Exhibit U of the RFA, there is adequate availability of rental housing units, hotel and motel accommodations, and temporary accommodations (campsites and recreational vehicle parking areas) within the analysis area to provide temporary housing to workers during Project construction. As also discussed in Exhibit U of the RFA, Project operation would result in two new, fulltime employees. Based upon the availability of rental housing units and vacancy rates (as of 2010 U.S. Census Bureau data), there is adequate housing available for new fulltime employees and their families.

Based on this analysis, the Council finds that the Project would not impact the ability of housing providers to provide services.

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<sup>212</sup> Exhibit U, Attachment U-2, of the RFA contains a July 7, 2015 letter from Columbia County Department of Land Development Services confirming that the Columbia County Transfer Station in St. Helens, Oregon and Coffin Butte Landfill have the capacity and confirmed that the estimated quantity of refuse generated during Project construction could be transported and disposed through their Transfer Station to the Coffin Butte Landfill.

### Traffic Safety

As explained in Exhibit U, Table U-1, of the RFA, the Project would result in short-term, temporary increases in traffic levels for approximately 18 months during construction activities, with a peak level of 128-317 workers. Access to the Project would be via US-30, OR-47, and OR-202.

As presented in Exhibit U of the RFA, construction vehicle traffic on US-30 could result in an estimated 4 to 8 percent increase in annual average daily traffic (AADT) volumes compared to AADT compiled by the Oregon Department of Transportation for 2013. A short term, temporary increase of 4 to 8 percent in AADT would not be expected to substantially impact traffic safety, traffic flow or access for existing roadway operations. As also discussed in Exhibit U, Project operation would result in two new, fulltime employees, or four roundtrips per day, and would therefore not be expected to result in substantial adverse traffic safety or roadway operation impacts.

Based on this analysis, the Council finds that the Project would not impact the ability of local traffic safety providers to provide traffic safety.

### Police Services

As presented in Exhibit U, Table U-5, there are 23 police and sheriff's departments located within the analysis area. The primary law enforcement agency within the analysis area is the Columbia County Sheriff's Office, which includes 5 full-time employees and trained volunteers.

As previously described, the duration of construction activities is estimated at 18 months. Temporary, non-local workers, and worker family members, during Project construction would peak (in month 4) at 178. Based upon the information provided in Exhibit U, including a comment letter from the Columbia County Sheriff's office, the short-term population increase would not result in a significant adverse impacts on police services.<sup>213</sup> As presented in Exhibit U, the peak population increase during Project construction would represent 0.1 percent of the population within the analysis area and would not result in a significant increase in demand for police services or facilities.

Exhibit U also explains that Project operation would result in two new, fulltime employees and their families. Based upon the 23 existing police departments within the analysis area, and letter received from the Columbia County Sheriff's office, the permanent population increase associated with Project operation is assumed to be negligible and would not result in a significant increase in demand for police services or facilities.

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<sup>213</sup> Exhibit U, Attachment U-2, includes an April 2, 2015 letter from the Columbia County Sheriff's Office which confirms that Project construction and operation would not be expected to result in substantial, adverse impacts to the ability of the Sheriff's officer to provide law enforcement services.

Based on this analysis, the Council finds that the Project would not result in a significant adverse impact on the ability of police departments to deliver police protection services.

### Fire Protection

As explained in Exhibit U, potential fire hazards during typical construction activities generally include equipment refueling, cutting and welding activities, electrical work, and accidental leakage and spills. During Project operation, NWN indicates that the proposed NMCS would contain more than 1,000 cubic feet of flammable gas at standard atmospheric pressure within containers and therefore would be classified as a Hazardous Structure per the 2014 Oregon Structural Specialist Code, Section 307.

As a classified Hazardous Structure, NWN would be required to implement additional fire control measures and implement an explosion relief measure that complies with Fire Code provisions. As explained in Exhibit U, fire detection and suppression systems would be installed within the proposed NMCS. In addition, NWN proposes to provide 24-hour remote monitoring of the proposed NMCS during operations.<sup>214</sup> Public comment expressed concern regarding the risk of fire or other hazardous scenarios from the Project.<sup>215</sup> Consistent with the mandatory condition established in OAR 345-027-0023(3)(a) and included as existing site certificate conditions VII(C)(1)(b) and IV(C)(2), which would apply to the Project, NWN states that the NMTP would be designed, constructed and maintained in accordance with applicable requirements of the U.S. Department of Transportation as set forth in 49 CFR 192.<sup>216</sup> The proposed NMTP route would avoid, where feasible, geotechnical hazards such as areas prone to landslides. In addition, the NMTP would have safety features including automatic shut-off valves and blowdown valves. As stated in Exhibit H, the proposed NMTP would also be inspected annually to ensure risks and hazards along the route are minimized.

As shown on Table U-5, there are 28 fire departments located within the analysis area. The primary fire departments with jurisdiction of the Project include the Clatskanie Rural Fire Protection District (RFPD) and the Mist-Birkenfeld RFPD. The Clatskanie RFPD includes three full-time firefighters and volunteer staff of approximately 3.6 volunteers per call per emergency. The Mist-Birkenfeld RFPD has one full-time firefighter and 43 volunteer firefighters.<sup>217</sup>

NWN contacted both the Clatskanie RFPD and Mist-Birkenfeld RFPD to understand the potential Project construction and operation-related impacts on the ability of both fire districts

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<sup>214</sup> RFA, Exhibit E, Attachment E-1, p.12.

<sup>215</sup> MSTAMD11Doc23 Diana Peach, Public Comment. A comment submitted in response to the RFA raised concern with fire hazard from pipelines. As described in this section, conditions in the site certificate include fire protection and safety plans that would reduce and avoid fire hazards from construction and operation and would require personnel training. Moreover, the local fire departments with jurisdiction over the Project include the Clatskanie RFPD and the Mist-Birkenfeld RFPD which have both confirmed that following review of the description of Project construction and operation, they do not expect there to be a significant adverse impact to their ability to provide fire protection services. (see Exhibit U, Attachment U-2).

<sup>216</sup> RFA, Exhibit H, Appendix H-C, p.1.

<sup>217</sup> RFA Exhibit U, Section 3.3.2.7.

to provide fire protection services. Copies of the response letters from Clatskanie RFPD and Mist-Birkenfeld RFPD are provided in Attachment U-2 of Exhibit U. The Mist-Birkenfeld RFPD, which would have jurisdiction for fire protection services over the southern portion of the Project including the proposed NMCS, provided written confirmation that Project construction and operation would not be expected to result in substantial, adverse impacts to the ability of Mist-Birkenfeld RFPD to provide fire protection services to the community. The Clatskanie RFPD, which would have jurisdiction for fire protection services over the northern portion of the Project, also provided written confirmation that Project would not be expected to result in substantial, adverse impacts to the ability of the Clatskanie RFPD to provide fire protection services to the community. However, as stated in Exhibit U, due to limited staff and resources, NWN indicates that Project construction could result in adverse impacts to the ability of the Clatskanie RFPD to provide fire protection services to the community if fire-related emergencies were frequent.

NWN proposes several measures to reduce the potential for fires and other emergencies and avoid the need for responses from local fire protection agencies. In addition to the required hazard control regulatory measures described above, proposed measures include implementing site and regulatory training for all Project personnel and development of fire protection and safety plans for both the proposed NMCS and NMTP. In addition, as an existing operating facility, the Mist Facility is equipped with existing fire protection equipment including a fire suppression truck, foam fire pumper/fire extinguisher, and wildland fire tools. To ensure NWN implements measures to reduce potential impacts to fire protection service providers during Project construction, the Council adopts Public Services Condition 1, requiring the certificate holder to develop specific safety plans during both Project construction and operation; and, requires the certificate holder to consult with and obtain written concurrence from the Mist-Birkenfeld Fire Marshal and Clatskanie RFPD Fire Marshal to confirm construction and operational activities comply with all applicable requirements.

Subject to compliance with this condition, the Council finds that Project would not be likely to result in a significant adverse impact on the ability of fire districts to deliver fire protection services.

### Health Care

As explained in Exhibit U, the peak number of temporary, non-local workers and non-local worker family members that could require health care services during Project construction would peak at 178. Based upon the information provided in Exhibit U, there is adequate capacity (346 bed capacity, with an average of 155 inactive beds), and services available (level 3 trauma center) at PeaceHealth St. John Medical Center located in Longview, Washington, to respond to the temporary incremental increase in potential needed health care services during Project construction. Once completed, Project operation would result in two new, fulltime employees and their families. Based upon the patient capacity at PeaceHealth St. John Medical

Center, there is adequate health care services to accommodate this minimal, long-term increase in potential needed health care services.

Based on this analysis, the Council finds that the Project would not likely result in a significant adverse impact on the ability of health care providers to deliver services.

### Schools

As presented in Exhibit U, the number of school-age children that could enter local public schools during Project construction within the analysis area, based on the peak number of 178 non-local workers, ranges from 6 to 25. Project operation would result in two new, fulltime employees and approximately two school-age children. Based upon the information provided in Exhibit U, there is adequate capacity within the Clatskanie, Longview, and Kelso School districts to support the temporary incremental increase in students associated with Project construction and during operation.

Based on this analysis, the Council finds that Project would not likely result in a significant adverse impact on the ability of public school systems to deliver educational services.

### **Amendment 11 Public Services Condition**

The Council adopts the following condition to reduce potential Project-related adverse impacts to public services and maintain compliance with the Public Services Standard.

**Public Services Condition 1:** Prior to construction, the certificate holder shall develop a fire protection and safety plan for the construction and operation of the NMCS and NMTP. The fire protection and safety plans shall include personnel training requirements, training materials, and accident prevention measures and plans. The certificate holder shall consult with and shall obtain written concurrence from the Mist-Birkenfeld Fire Marshal and Clatskanie RFPD Fire Marshal to confirm construction and operational activities comply with all applicable requirements. The certificate holder shall submit a copy of the NMCS and NMTP fire protection and safety plans to the department.

### **Conclusions of Law**

Based on the foregoing findings, and subject to compliance with the site certificate condition listed above, the Council finds that the Project complies with the Council's Public Services Standard.

**IV.A.14. Waste Minimization: OAR 345-022-0120**

*(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that, to the extent reasonably practicable:*

*(a) The applicant's solid waste and wastewater plans are likely to minimize generation of solid waste and wastewater in the construction and operation of the facility, and when solid waste or wastewater is generated, to result in recycling and reuse of such wastes;*

*(b) The applicant's plans to manage the accumulation, storage, disposal and transportation of waste generated by the construction and operation of the facility are likely to result in minimal adverse impact on surrounding and adjacent areas.*

*\*\*\**

**Findings of Fact**

The Waste Minimization Standard requires the Council to find that the certificate holder will minimize the generation of solid waste and wastewater, and that the waste generated will be managed to result in minimal adverse impacts on surrounding and adjacent areas. Compliance with the Waste Minimization Standard was evaluated based on NWN's proposed measures to minimize the generation of solid waste, wastewater, and to reuse or recycle solid waste and wastewater to reduce potential adverse impacts on surrounding and adjacent areas during Project construction and operation. NWN addresses compliance with the Waste Minimization Standard in the RFA Project Description and Division 27 Compliance section, as well as Exhibit V. Estimated quantities of solid waste and wastewater generated, recycled or reused, and disposed of during construction and operation are presented in Exhibit V-1 of the RFA.

**Solid Waste**

*Construction*

As explained in Exhibit V of the RFA, Project construction would result in the generation of non-hazardous solid waste including temporary structures; materials resulting from land clearing activities (timber, brush, refuse and flammable or combustible materials); scrap steel and welding rod; erosion control materials (silt fencing, straw bales, grinding chips, bio-bags); bentonite used during HDD construction; and concrete wash-out materials (i.e. eco-bucket or similar material).<sup>218</sup> As presented in Exhibit V-1, NWN estimates that approximately 650 cubic yards of non-recyclable scrap material would be generated during construction, which would be transported to the Coffin Butte Landfill in Corvallis, Oregon. Other scrap materials would be collected and transported to a recycling facility or reused where practicable.

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<sup>218</sup> RFA Project Description and Division 27 Compliance, Section VII.M Waste Minimization.

NWN indicates that bentonite slurry used as drilling fluid during HDD can be reused a number of times. At the end of its useful lifespan, bentonite may be land-applied in the Project area if permission is received from landowners. Bentonite is a non-toxic material, but NWN must receive landowner approval before application. In the event land-owner authorization is not received, NWN would dispose of bentonite at a local landfill. To ensure NWN implement waste minimization measures during HDD construction, the Council adopts Waste Minimization Condition 1, requiring NWN to comply with its proposal for bentonite disposal.

NWN indicates that solid waste generated during the concrete wash-out process (i.e. eco-buckets or similar) would be disposed of at a disposal site; however, NWN proposes to minimize concrete waste materials by transporting excess concrete generated during construction to batch plant sites for recycle. Concrete wash-out wastewater is discussed below.

NWN's existing site certificate contains conditions that address the Waste Minimization standard and require that construction waste materials be recycled or transported to an approved sanitary landfill; that non-hazardous wastes such as oil/water separator oils be collected and recycled as bunker fuel; and that pressure testing water be disposed of consistent with approved permits. These conditions would also apply to Project components proposed in this amendment. These conditions are Site Certificate Conditions VII(C)(1)(b)(1), VII(C)(1)(b)(2), and VII(C)(1)(b)(3).

### *Operation*

As explained in the RFA, NWN would continue to operate with essentially the same type of equipment as currently used at or by the existing Mist Facility. Any incremental increase in solid waste produced during operation would be managed in accordance with the facility's existing waste reduction and sustainability program. However, as explained in Exhibit V, there would be no continual generation of either hazardous or non-hazardous solid waste during operation. Therefore, NWN has not proposed additional measures or plans for the reduction, recycling, or reuse of solid waste produced during operations.<sup>219</sup>

### Wastewater

#### *Construction*

NWN describes that Project construction would result in the generation of wastewater during concrete wash-out and preliminary hydrostatic testing. Concrete wash-out wastewater would be generated during construction when concrete mix trucks and other equipment are cleaned. Concrete wash-out wastewater would be managed and disposed by NWN's construction contractors at an approved off-site facility. NWN indicates that, to the extent feasible, wastewater would be reused during HDD construction for mixing of drilling fluids and dust abatement. As described in the RFA, wastewater generated during hydrostatic testing that is

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<sup>219</sup> Id.

not reused would be transported in a water truck for treatment and disposal at PGE's Beaver Generating Station wastewater facility, in accordance with PGE's NPDES permit.<sup>220</sup>

### *Operation*

NWN states in the RFA that Project operation would generate wastewater during storage reservoir injection/withdrawal (I/W) cycles and the gas separation process. In addition, NWN indicates that operation of the NMCS would generate minimal amounts of oily water. As explained in the RFA, wastewater generated during I/W cycles would be reduced to a *de minimus* amount over time; however, short-term operations could generate up to 35,000 gallons of saline wastewater over a 75-day I/W cycle. NWN indicates that wastewater produced during I/W cycles would be disposed of in an EPA Class II Injection Well authorized by a Water Pollution Control Facility permit with Enerfin Resources or the municipal treatment plant located in the town of St. Helens.<sup>221</sup> NWN states that having two potential disposal methods for wastewater will provide NWN with redundancy and a back-up option, should, for example, the injection well not be able to handle additional wastewater on a certain day. If it is used, wastewater would be transported to the St. Helens municipal treatment plant via tanker truck.<sup>222</sup> As stated in Exhibit V, following the initial I/W cycles, minimal amounts of produced wastewater would be generated from the gas separation process, which would be collected in a holding tank and transferred to NWN's Miller Station to be processed through an evaporator. NWN indicates that oily water generated during NMCS operation would be stored onsite in a tank, collected by a recycling vendor and hauled to a recycling facility in accordance with existing site certificate condition VII(C)(1)(b)(2).

As described in Section IV.A.2 Organizational Expertise, both the NPDES and WPCF permits are federally-delegated third party permits and outside the jurisdiction of EFSC. NWN provided evidence that DEQ will allow the Project to use the PGE Beaver Generating Station NPDES permit without modification, though DEQ authorization must be requested by PGE and NWN and obtained before hydrostatic test water discharge.<sup>223</sup> In addition, DEQ approval of a permit modification for Enerfin Resource's WPCF would be required to allow disposal of saline process water produced during gas withdrawal from the Adams reservoir. NWN requested the required modification on June 30, 2015. DEQ has confirmed the complete request in a letter sent to NWN on June 30, 2015, and submitted by NWN in Exhibit E.<sup>224</sup> Because NWN is relying upon access to the PGE Beaver NPDES permit and the Enerfin WPCF permit to discharge wastewater in compliance with the EFSC Waste Minimization Standard (particularly OAR 345-022-0120(1)(b)), the Council adopts Waste Minimization Conditions 2 and 3, requiring NWN to

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<sup>220</sup> Id. In Oregon, NPDES permits are federally delegated by EPA to DEQ. As such, the permits are considered outside of the jurisdiction of EFSC and are not included in nor governed by the site certificate.

<sup>221</sup> RFA Project Description and Division 27 Compliance Section VII.M Waste Minimization. In Oregon, Water Pollution Control Facilities permits are federally delegated by EPA to DEQ. As such, the permits are considered outside of the jurisdiction of EFSC and are not included in nor governed by the site certificate. Third-party permits are discussed in section IV.A.2 Organizational Expertise.

<sup>222</sup> RFA Project Description and Division 27 Compliance Section VII.M Waste Minimization.

<sup>223</sup> MSTAMD11Doc41 Jennifer Purcell, DEQ.

<sup>224</sup> RFA, Exhibit E, Attachment E-3.



provide written confirmation that it has secured the ability to use the PGE Beaver Generating Station NPDES permit for wastewater discharge, and the Enerfin WPCF permit for discharge of saline wastewater at the Enerfin injection well.

Based on the above information, the Council finds that NWN's plans to manage the accumulation, storage, disposal and transportation of waste generated by the construction and operation of the Project would likely result in minimal adverse impact on surrounding and adjacent areas.

### **Amendment 11 Waste Minimization Conditions**

The Council adopts the following conditions to ensure NWN implement measures intended to reduce the generation of waste and wastewater during Project construction and maintain compliance with the Waste Minimization Standard.

**Waste Minimization Condition 1:** Prior to construction of the North Mist Transmission Pipeline associated with Amendment 11, the certificate holder shall seek land-owner authorization for bentonite land application and shall provide to the department the following information:

- (a) List of land-owners contacted for authorization of bentonite application including first and last name, address and tax lot identification number, and
- (b) Written consent letters obtained from land-owners authorizing bentonite application, and
- (c) Estimated quantity of bentonite to be applied to each land owner whom provided consent per (b).

In the event land-owner authorization for bentonite land application is not received for all or a portion of the quantities generated during HDD construction, the site certificate holder shall provide to the department the information requested in (a), estimated total quantity of bentonite to be transported to a disposal facility, and name of disposal facility where bentonite will be transferred.

**Waste Minimization Condition 2:** Before beginning construction of components authorized by Amendment 11, the certificate holder shall provide confirmation in writing to the department that the third parties have obtained all necessary permits or approvals for receiving and discharging hydrostatic test water and shall provide to the department proof of agreement between the certificate holder and the third parties regarding access to the resources or services secured by the permits or approvals.

**Waste Minimization Condition 3:** Before beginning operation of components authorized by Amendment 11, the certificate holder shall provide confirmation in writing to the department that the third parties have obtained all necessary permits or approvals for disposing of produced saline process water from the Adams reservoir and shall provide to

the department proof of agreement between the certificate holder and the third parties regarding access to the resources or services secured by the permits or approvals.

### **Conclusions of Law**

Based on the foregoing findings, and subject to compliance with the site certificate conditions listed above, the Council finds that the design, construction and operation of the Project complies with the Council's Waste Minimization Standard.

### **IV.B. Division 23 Standards**

#### **IV.B.1. Need for a Facility: 345-023-0005**

*This division applies to nongenerating facilities as defined in ORS 469.503(2), except nongenerating facilities that are related or supporting facilities. To issue a site certificate for a facility described in sections (1) through (3), the Council must find that the applicant has demonstrated the need for the facility. The Council may adopt need standards for other nongenerating facilities. This division describes the methods the applicant shall use to demonstrate need. In accordance with ORS 469.501(1)(L), the Council has no standard requiring a showing of need or cost-effectiveness for generating facilities. The applicant shall demonstrate need:*

- (1) For electric transmission lines under the least-cost plan rule, OAR 345-023-0020(1), or the system reliability rule for transmission lines, OAR 345-023-0030, or by demonstrating that the transmission line is proposed to be located within a "National Interest Electric Transmission Corridor" designated by the U.S. Department of Energy under Section 216 of the Federal Power Act;*
- (2) For natural gas pipelines under the least-cost plan rule, OAR 345-023-0020(1), or the economically reasonable rule for natural gas pipelines, OAR 345-023-0040;*
- (3) For storage facilities for liquefied natural gas with storage capacity of three million gallons or greater under the least-cost plan rule, OAR 345-023-0020(1), or the economically reasonable rule for liquefied natural gas storage facilities, OAR 345-023-0040.*

### **Findings of Fact**

The energy facility under the existing Mist Facility site certificate and the request for amendment, a surface facility related to an underground natural gas storage reservoir under ORS 469.300(11)(a)(I), is a nongenerating facility as that term is defined at ORS 469.503. The Project also includes pipelines as related or supporting facilities that meet the definition of a nongenerating facility.

Pursuant to ORS 469.501(1)(I) the Council has the authority to adopt a standard addressing the "need for proposed nongenerating facilities as defined in ORS 469.503." The Council exercised its authority by adopting the Need Standard for Nongenerating Facilities at OAR Chapter 345, Division 23. The Council's Need for a Facility rule at OAR 345-023-0005, however, only requires

the applicant of three specific types of nongenerating facilities to demonstrate a need for the facility.<sup>225</sup> The rule does not include a need standard for surface facilities related to an underground natural gas storage reservoir. Consequently, NWN is not required to demonstrate need for the surface facilities related to an underground natural gas storage reservoir proposed through this amendment; nor is the Council required to make a finding of need in order to grant the requested amended site certificate. OAR 345-023-0005 further states that the division does not apply to “nongenerating facilities that are related or supporting facilities.” Therefore, the Need Standard does not apply to the NMTP or any other related or supporting facility proposed as part of the Project.

Three public comment letters received in response to the RFA included a request for the Council to evaluate and demonstrate need for the Project in accordance with OAR 345-023-0005.<sup>226</sup> However, as stated above, the Council has not adopted a Need Standard for surface facilities related to an underground natural gas storage reservoir. Furthermore, nongenerating facilities that are related or supporting facilities, such as the NMTP, are expressly exempt from the Need Standard.

### **Conclusions of Law**

Based on the foregoing findings of fact, the Council finds that the Division 23 Need Standard does not apply to the Project.

### **IV.C. Division 24 Standards**

The Council’s Division 24 standards include specific standards for siting facilities including wind, underground gas storage reservoirs, transmission lines and facilities that emit carbon dioxide.

#### **IV.C.1. Public Health and Safety Standards for Surface Facilities Related to Underground Gas Storage Reservoirs: OAR 345-024-0030**

*To issue a site certificate for a proposed surface facility related to an underground gas storage reservoir, the Council must make the following findings:*

- (1) The proposed facility is located at distances in accordance with the schedule below from any existing permanent habitable dwelling:*
  - (a) Major facilities, such as compressor stations, stripping plants and main line dehydration stations – 700 feet.*
  - (b) Minor facilities, such as offices, warehouses, equipment shops and odorant storage and injection equipment – 50 feet.*

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<sup>225</sup> Pursuant to Oar 345-023-0005(1) – (3), the Council has adopted Need Standards for electric transmission lines, natural gas pipelines, and storage facilities for liquefied natural gas. While the rule states that “[t]he Council may adopt need standards for other nongenerating facilities,” the Council has not yet done so.

<sup>226</sup> MSTAMD11Doc23 Diana Peach, Public Comment; MSTAMD11Doc21 Meriel Darzen, Public Comment; MSTAMD11Doc22 Miles Johnson, Columbia Riverkeeper, Public Comment.

- (c) Compressors rated less than 1,000 horsepower – 350 feet.
- (d) Roads and road maintenance equipment housing – 50 feet.
- (2) The applicant has developed a program using technology that is both practicable and reliable to monitor the facility to ensure the public health and safety

### **Findings of Fact**

The Public Health and Safety Standards for Surface Facilities Related to Underground Gas Storage Reservoirs requires the Council to find that the Project complies with the required setbacks from permanent habitable dwellings and that the applicant has proposed a monitoring plan to protect public health and safety.

NWN evaluates public health and safety of underground gas storage reservoir surface facilities in the RFA, *Project Description and OAR Division 27 Compliance*, to demonstrate compliance with OAR 345-024-0030 based on the distance of the proposed facilities including the NMCS and dehydration unit to the nearest, existing permanent habitable dwelling and NWN’s proposed measures and monitoring plan to ensure public health and safety during Project operation.<sup>227</sup>

As explained in the *Project Description and OAR Division 27 Compliance* of the RFA, the proposed NMCS and dehydration unit would be located approximately 9,100 feet from the closest permanent habitable dwelling, in accordance with the 700-foot minimum distance parameter identified in the standard.<sup>228</sup>

NWN proposes to conduct remote monitoring of Project operations on a 24-hour basis by trained operators at NWN’s existing Miller Station and NWN Gas Control located in Portland, Oregon.<sup>229</sup> Additional measures proposed to ensure public health and safety during Project operation include installation and ongoing maintenance of a fire and gas detection system, isolation valves, fire prevention and suppression equipment, and blowdowns within the NMCS and along the NMTP route. As presented in the *Project Description and OAR Division 27 Compliance* document of the RFA, the NMCS would be enclosed with security fencing and yard lighting for security purposes, in compliance with the monitoring requirements.

### **Conclusions of Law**

Based on the foregoing findings, the Council finds that the proposed surface facilities related to an underground gas storage reservoir, including the NMCS and dehydration unit, complies with

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<sup>227</sup> The Project includes two triethylene glycol gas dehydration systems which, following withdrawal from the underground storage reservoir, would process wet natural gas through contact towers and dehydrate the gas with lean glycol for pipeline distribution of dry gas (RFA, Exhibit E, Attachment E-1).

<sup>228</sup> The minimum distance to existing permanent habitable dwellings for stripping plants, warehouses, equipment shops, and odorant storage and injection equipment does not apply to this request because NWN’s requested amendment does not propose this type of equipment.

<sup>229</sup> RFA, Exhibit E, Attachment E-1, p.12.

the Council's Public Health and Safety Standards for Surface Facilities Related to Underground Gas Storage Reservoirs.

**IV.C.2. Standards for Nongenerating Energy Facilities (that Emit Carbon Dioxide): OAR 345-024-0620**

*To issue a site certificate for a nongenerating energy facility that emits carbon dioxide, the Council must find that the net carbon dioxide emissions rate of the proposed facility does not exceed 0.504 pounds of carbon dioxide per horsepower hour. The Council shall determine whether the carbon dioxide emissions standard is met as follows:*

- (1) The Council shall determine the gross carbon dioxide emissions that are reasonably likely to result from the operation of the proposed energy facility. The Council shall base such determination on the proposed design of the energy facility. In determining gross carbon dioxide emissions for a nongenerating facility, the Council shall calculate carbon dioxide emissions for a 30-year period unless the applicant requests, and the Council adopts in the site certificate, a different period. The Council shall determine gross carbon dioxide emissions based on its findings of the reasonably likely operation of the energy facility. The Council shall use a rate of 117 pounds of carbon dioxide per million Btu of natural gas fuel (higher heating value) and a rate of 161 pounds of carbon dioxide per million Btu of distillate fuel (higher heating value), if the applicant proposes to use such fuel. If the applicant proposes to use any other fossil fuel, the Council shall adopt by rule an appropriate carbon dioxide content rate for the fuel.*
  
- (2) For any remaining emissions reduction necessary to meet the applicable standard, the applicant may elect to use any of the means described in OAR 345-024-0630 or any combination thereof. The Council shall determine the amount of carbon dioxide or other greenhouse gas emissions reduction that is reasonably likely to result from the applicant's offsets and whether the resulting net carbon dioxide emissions meet the applicable carbon dioxide emissions standard. The amount of greenhouse gas emissions means the pounds of carbon dioxide and the carbon dioxide equivalent of other greenhouse gases. For methane, one pound of methane is equivalent to 23 pounds of carbon dioxide. For nitrous oxide, one pound of nitrous oxide is equivalent to 296 pounds of carbon dioxide.*  
*\*\*\**
  
- (4) Before beginning construction, the certificate holder shall notify the Department of Energy in writing of its final selection of an equipment manufacturer and shall submit a written design information report to the Department sufficient to verify the facility's designed rate of fuel use and its nominal capacity for each fuel type. In the site certificate, the Council may specify other information to be included in the report. The Department shall use the information the certificate holder provides in the report as the basis for calculating, according to the site certificate, the amount of greenhouse gas emissions reductions the certificate holder must provide under OAR 345-024-0630.*

(5) In the site certificate, the Council shall specify the schedule by which the certificate holder shall provide offsets. In the schedule, the Council shall specify the amount and timing of offsets the certificate holder must provide to an offset credit account. In determining the amount and timing of offsets, the Council may consider the estimate of total offsets that may be required for the facility and the minimum amount of offsets needed for effective offset projects. The Department shall maintain the record of the offset credit account.

**Findings of Fact**

NWN proposes to construct and operate two natural-gas fired, internal combustion engine-driven compressors. Operation of this equipment would result in emissions of carbon dioxide.

The gross carbon dioxide emission rate from the proposed engine-driven compressors is estimated at 0.940 pounds of carbon dioxide per horsepower hour (lb CO<sub>2</sub>/HP-hr), as presented in Table CD-1, *CO<sub>2</sub> Rate Calculation*.<sup>230</sup>

**Table CD-1: CO<sub>2</sub> Rate Calculation**

Maximum Hourly Fuel Usage <sup>1</sup> (MMBtu/hr)	'New and Clean' CO <sub>2</sub> Emission Factor <sup>2</sup> (lb/MMBtu)	Maximum Hourly CO <sub>2</sub> Emissions <sup>3</sup> (lb/hr)	Single Engine Load Adjusted Power Output (HP) <sup>4</sup>	Gross CO <sub>2</sub> Emission Rate (lb/HP-hr) <sup>5</sup>
9.5	117	1,111.5	1,182	0.940

Acronyms: lb/hr = pounds per hour; lb/HP-hr = pounds per horsepower-hour; lb/MMBtu = pounds per million British thermal units; MMBtu/hr = million British thermal units per hour

Notes:

1. Maximum hourly fuel usage is based on operation of a single engine-driven compressor, load adjusted to 1,182 HP, and higher heating value of fuel (see RFA, Project Description and OAR Division 27 Compliance Document, p.57).
2. New and clean CO<sub>2</sub> emission factor obtained from OAR 345-001-0010(38)l.
3. Maximum hourly CO<sub>2</sub> emissions calculated as follows: maximum hourly fuel usage x CO<sub>2</sub> emission factor obtained from OAR 345-001-0010(38)l.
4. Power output obtained from RFA, Project Description and OAR Division 27 Compliance Document, Section VIII.B.
5. Gross CO<sub>2</sub> emission rate calculated as follows: maximum hourly CO<sub>2</sub> emissions / single engine load adjusted power output

The Council must determine the rate of excess carbon dioxide emissions based on the difference between the applicant’s estimated gross carbon dioxide emission rate (lb CO<sub>2</sub>/HP-hr) and the Council’s carbon dioxide emission rate equal to 0.504 lb CO<sub>2</sub>/HP-hr. Based on this approach, the excess carbon dioxide emission rate from the Project is estimated at 0.436 lb CO<sub>2</sub>/HP-hr, as presented in Table CD-2, *Rate of Excess CO<sub>2</sub> Emissions*.

<sup>230</sup> MSTAMD11Doc21 Meriel Darzen, Public Comment. A comment submitted in response to the RFA requests information on gross CO<sub>2</sub> emissions. The calculation of gross CO<sub>2</sub> emissions was provided by the site certificate holder in the Project Description and OAR Division 27 Compliance, Section VIII.B; the gross CO<sub>2</sub> emission rate was calculated by the department based on the information provided by the site certificate holder and is presented in Table 1.

**Table CD-2: Rate of Excess CO<sub>2</sub> Emissions**

Description	Value	Unit
Project Gross CO <sub>2</sub> Emission Rate	0.940	lb CO <sub>2</sub> /HP-hr
EFSC CO <sub>2</sub> Emission Rate Standard	0.504	lb CO <sub>2</sub> /HP-hr
Rate of Excess CO <sub>2</sub> Emissions	0.436	lb CO <sub>2</sub> /HP-hr
Acronyms: lb CO <sub>2</sub> /HP-hr = pounds of carbon dioxide per horsepower-hour		

As presented in the *Project Description and OAR Division 27 Compliance* of the RFA, the excess carbon dioxide emissions for the assumed 30-year operational lifetime of the Project, based on total annual operation of both engine-driven compressors equal to 5,740 hours per year, were estimated to be approximately 45 thousand tons of carbon dioxide. Factors included in the calculation of excess carbon dioxide emissions are presented in Table CD-3, *Total 30-Year Excess CO<sub>2</sub> Emissions*, including the excess emission rate, estimated hours of operation, and load adjusted power output.

**Table CD-3: Total 30-Year Excess CO<sub>2</sub> Emissions**

Description	Value	Units
Statutory Life of Plant	30	Years
Excess CO <sub>2</sub> Emission Rate	0.436	lb CO <sub>2</sub> /HP-hr
Annual Average Hours of Operation <sup>1</sup>	5,740	Hr/yr
Load Adjusted Power Output	1,182	HP
Annual Excess CO <sub>2</sub> Emissions <sup>2</sup>	1,479	Ton CO <sub>2</sub> /Yr
30-Year Total Excess CO <sub>2</sub> Emissions <sup>3</sup>	44,372	Total Tons, CO <sub>2</sub>
Acronyms: Hr/yr = hours per year; HP = horsepower; Ton CO <sub>2</sub> /Yr = tons of carbon dioxide per year		
Notes:		
1. Annual average hours of operation represent estimated total hours for both engine-driven compressors.		
2. Calculations are provided in the RFA, Project Description and OAR Division 27 Compliance Document, Section VIII.B.		
3. Calculations were validated by the department. Due to rounding, the 30-year total excess CO <sub>2</sub> emissions differ slightly from the amount, 44,747, presented in the RFA.		

NWN has elected to comply with the Council's Standards for Energy Facilities That Emit Carbon Dioxide by providing the required monetary payment to The Climate Trust, a qualified organization, for the amount of offsets required to reduce excess emissions generated from operation of the NMCS. On behalf of the Council, the department evaluated NWN's proposed means of compliance in the subsection below.

Because the equipment has not yet been purchased and design parameters related to fuel consumption rate, power output and load adjustment factors are not yet finalized, the calculation of excess carbon dioxide emissions and monetary path payment must be updated

prior to commencement of construction. To maintain accuracy of excess emission and monetary path payment calculations, the Council adopts Carbon Dioxide Emissions Condition 1.

### **Amendment 11 Carbon Dioxide Emissions Condition**

The Council adopts the following condition to ensure ongoing compliance with the Carbon Dioxide Emissions Standard during Project operation.

#### **Carbon Dioxide Emissions Condition 1**

- (1) Prior to construction of Project components authorized by Amendment 11, the site certificate holder shall submit a written equipment design and estimated emissions report to the department, including the following information:
  - (a) Manufacturer specifications for the selected natural gas-fired engine-driven compressors
  - (b) Fuel consumption rate (Btu/HP-hr), based on higher heating value of fuel, and rated engine capacity (HP), based on manufacturer specifications
  - (c) Engine load factor and adjusted HP
  - (d) Estimated annual hours of operation (hr/yr) for both engine-driven compressors
  - (e) Carbon dioxide emission calculations including: gross carbon dioxide emission rate, net carbon dioxide emission rate based on Council emission rate standard equal to 0.504 lb CO<sub>2</sub>/HP-hr, and estimated excess carbon dioxide emissions for the assumed 30-year operational lifetime. Calculations shall be based on information provide in (1)(a) – (1)(d) of this condition and consistent with OAR 345-024-0620(1).

### **Conclusions of Law**

NWN has provided information necessary to estimate excess emissions for the 30-year operational lifetime of the NMCS and has identified a proposed means of compliance, as described below, consistent with OAR 345-024-0630 requirements. The Council finds that, subject to compliance with the Site Certificate condition listed above, that the certificate holder complies with the Council's Carbon Dioxide Standard for Nongenerating Energy Facilities.

### **Means of Compliance for Nongenerating Energy Facilities: OAR 345-024-0630**

*The applicant may elect to use any of the following means, or any combination thereof, to comply with the carbon dioxide emissions standard for nongenerating energy facilities:*

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- (2) *Providing offset funds, directly or through a third party, in an amount deemed sufficient to produce the reduction in greenhouse gas emissions necessary to meet the applicable carbon dioxide emissions standard according to the schedule set forth pursuant to OAR 345-024-0620(5). The applicant or third party shall use the funds as specified in OAR 345-024-0710. The Council shall deem the payment of the monetary offset rate, pursuant to OAR 345-024-0580, to result in a reduction of one ton of carbon dioxide emissions. The Council shall*



*determine the offset funds using the monetary offset rate and the level of emissions reduction required to meet the applicable standard. If the Council issues a site certificate based on this section, the Council may not adjust the amount of the offset funds based on the actual performance of offsets.*

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- (4) Each year after beginning commercial operation, the certificate holder shall report to the Department of Energy data showing the amount and type of fossil fuels used by the facility and its horsepower-hours of operation. The Council shall specify in the site certificate how the Department shall use those data to calculate the gross carbon dioxide emissions from the facility during the report year and the net emissions in excess of the carbon dioxide emissions standard. The Department shall then subtract excess emissions from the offset credit account. The Council shall specify in the site certificate the minimum amount of offset credits that a certificate holder shall provide to establish the offset credit account. The Council may specify an amount of offset credits equal to the total offsets required for the facility. The Council shall specify the minimum amount of offset credits that a certificate holder must maintain in the account and the minimum amount of offset credits the certificate holder shall provide to replenish the account. The Department shall notify the certificate holder when it must replenish its offset credit account according to the conditions in the site certificate. The certificate holder shall maintain a positive balance in the offset credit account for 30 years, unless the Council specifies a different period in the site certificate.*
- (5) If the certificate holder is replenishing its offset credit account by meeting the monetary path payment requirement described in OAR 345-024-710, the certificate holder may replenish its offset credit account without amending the site certificate by using the calculation methodology detailed in conditions that the Council adopts in the site certificate.*
- (6) If the certificate holder proposes to replenish the offset credit account under OAR 345-024-0630(1), the Council may amend the site certificate conditions to ensure that the proposed offset projects are implemented.*
- (7) If the Council or a court on judicial review concludes that the applicant has not demonstrated compliance with the applicable carbon dioxide emissions standard under sections (1), (3) or (6) of this rule, or any combination thereof, and the applicant agrees to meet the requirements of section (2) for any deficiency, the Council or a court shall find compliance based on such agreement.*

### **Findings of Fact**

NWN has elected to comply with the Council's Means of Compliance for Nongenerating Energy Facilities Standard by providing the required monetary payment to The Climate Trust, a qualified organization, for the amount of offsets required to reduce excess emissions generated from operation of the NMCS. The monetary path payment required to offset excess emissions,

based on a 30-year operational lifetime of the proposed NMCS, is estimated at \$61,987, as presented in Table CD-4, *Monetary Path Requirement*.<sup>231</sup>

**Table CD-4: Monetary Path Requirement**

Description	Value
Offset Fund Rate (\$/ton CO <sub>2</sub> )	\$1.27 <sup>1</sup>
30-Year Total Excess CO <sub>2</sub> Emissions	44,372
Offset Funds Required	\$56,352
Contracting and Selection Funds <sup>2</sup>	\$5,635
Total Estimated Offset Cost =	\$61,987
Notes:	
1. \$1.27 is the monetary offset rate per ton of carbon dioxide emission set at OAR 345-024-0580.	
2. Contracting and selection funds are based on an amount equal to 10 percent of the first \$500,000 of offset funds.	

As described above, the calculation of excess carbon dioxide emissions and monetary path payment must be updated prior to commencement of construction. To ensure ongoing accuracy of excess emission and monetary path payment calculations, the Council adopts Carbon Dioxide Emissions Condition 2.

**Amendment 11 Carbon Dioxide Emissions Condition**

The Council adopts the following condition to ensure compliance with the monetary path requirement of the Carbon Dioxide Emission Standard during Project operation.

**Carbon Dioxide Emissions Condition 2**

- (1) Following receipt of written validation by the department of monetary path payment calculations, and before beginning construction, the site certificate holder shall remit payment to The Climate Trust in the full amount of the monetary path payment requirement as determined by the calculations set forth in Carbon Dioxide Emissions Condition 1. Monetary path payment requirements shall be calculated using an offset rate of \$1.27 per ton of excess carbon dioxide emissions, adjusted from the year in which the Council issues the final order for Amendment 11, to present value dollars of the year in which payment is made to the Climate Trust. Present value shall be calculated using the US Gross Domestic Product Implicit Price Deflator, as published by the US Department of Commerce, Bureau of Economic Analysis, or any successor agency

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<sup>231</sup> MSTAMD11Doc21 Meriel Darzen, Public Comment. A comment submitted in response to the RFA requests information on the site certificate holder’s proposed means of compliance for achieving the EFSC Carbon Dioxide Standard for Nongenerating Facilities. As explained above, NWN agrees to provide offset funds to The Climate Trust, a qualified organization, to comply with the EFSC Carbon Dioxide Standard of 0.504 lb CO<sub>2</sub>/HP-hr; and Carbon Dioxide Emission Conditions 1 and 2 would ensure compliance with the standard.

("the index"). As part of the monetary path payment, the certificate holder shall also pay selection and contracting funds in an amount equal to 10 percent of the first \$500,000 of the offset funds and 4.286 percent of any offset funds in excess of \$500,000.

- (2) The department shall establish an "offset credit account" for Amendment 11. The initial offset credit account shall be the total carbon dioxide offsets for which the site certificate holder has provided offset funds to The Climate Trust, pursuant to Carbon Dioxide Emissions Condition 2.
- (3) Each year after beginning commercial operation of the North Mist Compressor Station ("annual carbon dioxide reporting period"), the site certificate holder shall report to the department the annual hours of operation (hr/yr) and annual fuel consumption (MMBtu/yr) for each of the two natural gas-fired, engine-driven compressors. The site certificate holder shall provide the annual report to the department consistent with the annual reporting date for all Mist Facility components.
  - (a) The department shall calculate the excess carbon dioxide emissions during each annual carbon dioxide reporting period and subtract those emissions from the offset credit account annually.
  - (b) The offset credit account shall maintain a minimum of 4,500 tons of carbon dioxide credits unless the department determines that based on the calculations conducted in (3)(a) that the balance in the carbon dioxide offset credit account is adequate to cover the estimated future emission of the NMCS over the expected 30-year life span of the NMCS. If the department determines that based on calculations conducted in (3)(a) that the offset credit account is unlikely to contain adequate credits to offset the NMCS carbon dioxide emissions over the estimated 30-year life of the NMCS, the site certificate holder shall replenish the offset credit account. The site certificate holder shall replenish the offset credit account equivalent to the full amount of the estimated future excess emissions. The department shall estimate excess emissions for the remaining period of the deemed 30-year life of the NMCS, based on the average annual excess carbon dioxide emissions in the prior three years. The department shall calculate the estimated future excess emissions of the new compressors and notify the site certificate holder of the amount of payment required, using the monetary path offset rate as described in (c) below.
  - (c) For any additional future payments related to the carbon dioxide offset credit account as described in this condition, the carbon dioxide offset rate of \$1.27 shall be adjusted for inflation to present value from the date the Council issues the final order for Amendment 11, using the US Gross Domestic Product Implicit Price Deflator, as published by the US Department of Commerce, Bureau of Economic Analysis, or any successor agency.
  - (d) The department shall calculate and the certificate holder shall pay additional contracting and selection funds to the qualified organization pursuant to Carbon Dioxide Emissions Condition 2(1).
  - (e) The certificate holder shall remit payment of the additional monetary path payment requirement to replenish the offset credit account to The Climate Trust

or other qualified organization (as defined in OAR 345-024-0720) within 30 days after notification by the department of the amount that the certificate holder owes.

- (4) The two engine-driven compressors operated at the North Mist Compressor Station shall be fueled solely with pipeline quality natural gas or with synthetic gas with a carbon content per million Btu no greater than pipeline quality natural gas. The department shall use a rate of 117 pounds of carbon dioxide per million Btu of natural gas fuel to calculate carbon dioxide emissions.

### **Conclusions of Law**

NWN has identified a proposed means of compliance consistent with OAR 345-024-0630 requirements necessary to comply with the Council's established Standard for Nongenerating Energy Facilities. The Council finds that, subject to compliance with the Site Certificate conditions, the certificate holder complies with the Council's Means of Compliance Standard for Nongenerating Energy Facilities.

### **IV.D. Other Applicable Regulatory Requirements Under Council Jurisdiction**

Under ORS 469.503(3) and under the Council's General Standard of Review (OAR 345-022-0000), the Council must determine whether the Project complies with "all other Oregon statutes and administrative rules \* \* \*, as applicable to the issuance of a site certificate for the proposed facility." This section addresses the applicable Oregon statutes and administrative rules that are not otherwise addressed in Council standards, including noise control regulations, regulations for removal or fill of material affecting waters of the state, and regulations for appropriating ground water.

#### **IV.D.1. Noise Control Regulations: OAR 340-035-0035**

*(1) Standards and Regulations:*

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*(b) New Noise Sources:*

*(B) New Sources Located on Previously Unused Sites.*

*(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, L10 or L50, by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule, except as specified in subparagraph (1)(b)(B)(iii).*

*(ii) The ambient statistical noise level of a new industrial or commercial noise source on a previously unused industrial or commercial site shall include all noises generated or indirectly caused by or attributable to that source including all of its related activities. Sources exempted from the requirements of section (1) of this rule, which are identified in subsections (5)(b) – (f), (j), and (k) of this rule, shall not be excluded from this ambient measurement.*

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## **Findings of Fact**

NWN evaluates compliance with applicable noise control regulations based on the potential of Project operation to exceed daytime and nighttime noise standards for “new noise sources on previously unused sites” at a noise sensitive property, defined as “real property normally used for sleeping, or normally used as schools, churches, hospitals or public libraries.” NWN also compares the potential increase in L<sub>10</sub> and L<sub>50</sub> one-hour sound levels during Project operation to existing (or baseline) noise levels. Short-term, temporary noise impacts generated during Project construction are exempt from DEQ and Columbia County noise restrictions.<sup>232</sup>

## **Noise Sources**

Noise sources during Project operation would include the NMCS and the mainline block valve (or stack). The mainline block valve would be located on the NMTP and would be used to vent gas in case of an emergency, maintenance or repair. Emergency equipment, defined as “noise emitting devices required to avoid or reduce the severity of accidents” such as safety valves and other unregulated pressure relief devices, is exempt from the maximum allowable noise levels presented below.<sup>233</sup> Therefore, the analysis of potential noise impacts during Project operation is based on new noise sources associated with the NMCS and cumulative noise impacts from noise sources operating at the Mist Facility’s existing Miller Station and at the proposed NMCS.

## **Maximum Allowable Noise Levels (during facility operation)**

The Oregon Noise Control Regulations limit the allowable sound emissions of industrial and commercial noise sources by establishing allowable statistical sounds levels, allowable octave band sound pressure levels, and allowable impulsive sound levels. In addition, new sources on previously unused sites must not increase ambient statistical noise levels, L<sub>10</sub> or L<sub>50</sub>, by more than 10 dBA in any single hour pursuant to OAR 340-035-0035(1)(b).

The applicable allowable statistical sound level and allowable octave band sound pressure levels, as established in Table 8 of OAR 340-035-0035, are presented in Table NC-1, *Standards for New Industrial and Commercial Noise Sources* and Table NC-2, *Allowable Nighttime Octave Band Sound Pressure* below. While DEQ established allowable statistical sound level and

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<sup>232</sup> Increases in baseline noise levels during Project construction are described in Exhibit X of the RFA, but because they are exempt under the Noise Standard, they are not evaluated or described further in this section of the order.

<sup>233</sup> OAR 340-035-0035(5)(a).

allowable octave band source pressure levels for both daytime and nighttime noise levels, the more restrictive nighttime levels were utilized to evaluate potential noise impacts during facility operation, as presented below.

**Table NC- 1: Standards for New Industrial and Commercial Noise Sources**

Parameter	Allowable (Nighttime) Level (dBA)
L <sub>1</sub>	60
L <sub>10</sub>	55
L <sub>50</sub>	50

Source: OAR 340-0035, Table 8. Available at:  
[http://arcweb.sos.state.or.us/pages/rules/oars\\_300/oar\\_340/340\\_035.html](http://arcweb.sos.state.or.us/pages/rules/oars_300/oar_340/340_035.html)

**Table NC-2: Allowable Nighttime Octave Band Sound Pressure Levels**

Octave Band Center Frequency, Hertz	Allowable (Nighttime) Level (dB)
31.5	65
63	62
125	56
250	50
500	46
1000	43
2000	40
4000	37
8000	34

Compliance with the DEQ noise standards must be measured pursuant to OAR 340-035-0035(3) on “noise sensitive property.” The “appropriate measurement point,” as defined by OAR 340-035-0035(3)(b), is “25 feet toward the noise source from that point on the noise sensitive building nearest the noise source” or “that point on the noise sensitive property line nearest the noise source,” whichever is farther from the source.

As presented in Exhibit X of the RFA, Columbia County’s noise control ordinance establishes noise standards of 50 dBA for nighttime hours and 60 dBA for daytime hours. The noise standard would be exceeded if operational noise levels exceeded the standard for more than 10 percent of any 20-minute period.<sup>234</sup>

<sup>234</sup> RFA Exhibit X, Section 2.2.

Impact Assessment

NWN evaluates noise impacts from Project operation based on the incremental increase in potential noise levels compared to existing, baseline noise levels. NWN conducted noise monitoring<sup>235</sup> at two noise sensitive properties<sup>236</sup> in close proximity to the Project to establish baseline noise levels. The noise monitoring locations are shown on Figure X-1, Exhibit X. Results of NWN's noise monitoring activities are presented in Table NC-3, *Measured Baseline Noise Levels* below.

**Table NC-3: Measured Baseline Noise Levels**

Parameter	Average Nighttime Levels (dBA)		Nighttime Range (dBA)	
	Site A <sup>1</sup>	Site B <sup>2</sup>	Site A	Site B
L <sub>1</sub>	37	50	24 – 45	28 – 57
L <sub>10</sub>	31	41	23 – 43	22 – 47
L <sub>50</sub>	27	27	22 – 37	21 – 35

Notes:

1. Site A is located on Fishhawk Road, approximately 2 miles from the proposed NMCS site.
2. Site B is located on Lonquist Road, approximately 3 miles from the proposed NMCS site.

Source: Table X-3 of Exhibit X of the RFA

As presented in Exhibit X, maximum increases in cumulative noise levels from the potential concurrent operation of the NMCS and existing Miller Station at the nearest residence were modeled to be 3 to 5 dBA, representing a noise level that would not exceed the 10 dBA 1-hour statistical ambient noise level limit, allowable nighttime noise level limits, or the allowable octave band sound levels as presented above.<sup>237</sup> As NWN explains, the evaluation of cumulative noise impacts from the concurrent operation of the proposed NMCS and existing Miller Station is conservative as it is unlikely that all equipment would operate simultaneously. However, even assuming simultaneous operation, based on the information provided in Exhibit X, the potential noise impacts from Project operation would not exceed established noise limits and standards.

In order to maintain compliance with noise level requirements, NWN proposes measures to manage potential noise complaints during Project operation to reduce and control potential noise impacts. Based on those representations, the Council adopts Noise Control Conditions 1 and 2.<sup>238</sup>

<sup>235</sup> NWN conducted noise monitoring on August 18-19, 2014 from 10pm to 6am and August 19-20, 2014 from 10pm to 5:50am.

<sup>236</sup> Noise monitoring activities were conducted at the following two noise sensitive properties: Fishhawk Road (Site A) and Lonquist Road (Site B). Locations of the two sites are shown on Figure X-1, Exhibit X.

<sup>237</sup> As described in Exhibit X of the RFA, NWN utilized the Computer Aided Noise Abatement industrial noise model to evaluate potential noise impacts from operation of the proposed NMCS.

<sup>238</sup> MSTAMD11Doc25 Olin Younger and Elizabeth d'Aubigne, Public Comment. A comment letter received raised concern regarding increased industrial noise levels during Project operation. As discussed above, the noise levels are not expected to exceed established noise limits or standards. Furthermore, the Noise Control Conditions 1 and 2 establish protocols for noise monitoring and response in the event of noise complaints resulting from Project Operation.

### **Amendment 11 Noise Control Conditions**

The Council adopts the following conditions as binding commitments from NWN to implement a program and protocols to respond to potential noise complaints during Project operation.

**Noise Control Condition 1:** Prior to operation of the Amendment 11 components, the certificate holder shall submit an Operational Complaint-Based Noise Monitoring Protocol (protocol) to the department for review and approval. The protocol shall provide for testing at houses whose owners or occupants submit a complaint to EFSC or the department. The protocol shall include a schedule for completion of noise testing following complaints and when testing results will be transmitted to the department and EFSC.

**Noise Control Condition 2:** During operation of the Amendment 11 components, public complaints received by the certificate holder of noise generated from operation of the Amendment 11 components shall be documented, responded to, and reported to the department within 72-hours of complaint receipt. NWN shall provide to the department a report summarizing the noise complaint, date complaint received, proposed noise monitoring activities, or other action deemed appropriate to respond to the noise complaint, and results (in dBA) of noise monitoring to determine compliance with the DEQ noise control regulation.

### **Conclusions of Law**

Based on the foregoing findings, and subject to compliance with the site certificate conditions listed above, the Council finds that the Project complies with the Noise Control Regulations in OAR 340-035-0035(1)(b)(B).

### **IV.D.2. Removal-Fill Law ORS 196.795 – 990**

The Oregon Removal-Fill Law (ORS 196.795 through .990) and Oregon Department of State Lands (DSL) regulations, OAR 141-085-0500 through 141-085-0785, require a Removal/Fill Permit if 50 cubic yards or more of material is removed, filled or altered within any “waters of the state.”<sup>239</sup> The Council must determine whether a permit is needed and whether NWN has demonstrated that the Project is consistent with the protection, conservation and best use of the water resources of the state; and, to the extent the Project is on state-owned lands, would not unreasonably interfere with the paramount policy of this state to preserve the use of its waters for navigation, fishing and public recreation.<sup>240</sup>

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<sup>239</sup> OAR 141-085-0010(225) defines “Waters of this State.” The term includes wetlands and certain other water bodies

<sup>240</sup> Federal law may require a Nationwide or Individual fill permit for the Project if waters of the United States (U.S.) are affected. The U.S. Army Corps of Engineers administers Section 404 of the Clean Water Act, which regulates the discharge of fill into waters of the U.S. (including wetlands), and Section 10 of the Rivers and Harbors Appropriation Act of 1899, which regulates placement of fill in navigable waters. A single application form (a Joint Permit Application Form) is used to apply for both the State and Federal permits. NWN’s Joint Permit Application for the Project was included in the RFA, Exhibit J, Attachment J-3. The lateral extent of federal jurisdiction of waterbodies under Section 404 of the Clean Water Act is delineated



NWN provides information about wetlands and other waters of the state in Exhibit J of the RFA. The analysis area for potential impacts to wetlands and waters of the state is defined as the area within the site boundary.

## **Findings of Fact**

### **Delineation of Waters of the State**

As described above, a Removal/Fill Permit is required if 50 cubic yards or more of material is removed, filled or altered within any “waters of the state” at the Project site. Therefore, NWN conducted a desktop study and several field investigations to delineate potential locations of wetlands and waters of the state located within the site boundary.<sup>241</sup> The desktop study of potentially jurisdictional wetlands and other waters of the state included an evaluation of multiple existing data sources including Natural Resources Conservation Service Soil Surveys of Columbia County, National Wetland Inventory maps, U.S. Geological Survey (USGS) 7.5-minute quadrangle maps for the proposed NMTP, and USGS National Hydrography Dataset. Field investigations were conducted utilizing techniques published in the 1987 USACE *Wetlands Delineation Manual*, the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region*, OARs for Wetland Delineations 141-090-0005 through 141-090-0055, and DSL’s guidelines *Delineations for Large Linear Projects*.<sup>242</sup> NWN and its consultant Tetra Tech conducted field investigations in 2013, 2014, and 2015.<sup>243</sup>

As presented in Exhibit J, NWN delineated 39 wetlands and 67 other water features within the site boundary.<sup>244</sup> Consistent with information presented in Exhibit J, Table RF-1, *Summary of Delineated Wetlands and Other Water Features* presents wetlands and other waters of the state delineated within the site boundary by water type and classification.

**Table RF-1: Summary of Delineated Wetlands and Other Water Features**

<b>Type of Water</b>	<b>Number of Features</b>	<b>Acres</b>
Wetland: Palustrine Emergent (PEM) <sup>1</sup>	32	31.09
Wetland: PEM-Palustrine Forested (PFO) <sup>2</sup>	5	5.59
Wetland: PFO-PEM	2	0.40
Ephemeral stream	14	0.13
Intermittent stream	10	0.07

by the ordinary high water mark (OHWM). The Council does not have jurisdiction over the federal permits that may be required for the Project, and federal permits are not included in or governed by the site certificate.

<sup>241</sup> NWN conducted field investigations on the following dates: May 13-31, 2013; July 15-18, 2013; April 7-11, 2014; May 27-29, 2014; and, February 12, 2015.

<sup>242</sup> RFA Exhibit J, Section 3.3 and 3.4.

<sup>243</sup> RFA Exhibit J, Section 4.0.

<sup>244</sup> NWN provided an updated Wetland Delineation Report and responses to DSL comments, as provided in MSTAMD11Doc034, on June 22, 2015 (see MSTAMD11Doc038) which have been incorporated into this section by reference.

**Table RF-1: Summary of Delineated Wetlands and Other Water Features**

Type of Water	Number of Features	Acres
Perennial stream	36	7.08
Pond	4	0.44
Seep/spring	3	0.02
Notes:		
1. Palustrine Emergent Wetlands (PEM) include roadside ditch wetlands and wetlands associated with clear-cuts that may have been rivers prior to forest practices (RFA, Exhibit J, Section 5.1).		
2. PFO wetlands are located in the poplar plantations, which are crop not native forest (RFA, Exhibit J, Section 5.1).		
Source: See Table J-1: Summary of Delineated Wetlands and Other Water Features, Exhibit J of the RFA		

Permanent and Temporary Impacts

As presented in Exhibit J of the RFA, NWN estimates that no wetlands and other waters of the state would be permanently impacted as a result of Project construction and operation. NWN estimates the Project to result in approximately 6.394 acres of temporary impacts during Project construction, with 1.894 acres of removal and fill impact areas. Wetlands impacts are summarized in Table RF-2, *Summary of Impacts to Wetlands and other Waters of the State* below.

**Table RF- 2: Summary of Impacts to Wetlands and other Waters of the State**

Type of Water	Number of Permanent Impact Sites	Permanent (acres)	Number of Temporary Impact Sites	Temporary (acres)	Number of Features Impacted
PEM Wetland	0	0	25	4.626	16
PEM PFO Wetland	0	0	6	1.697	4
PFO-PEM	0	0	1	0.051	1
Intermittent stream	0	0	4	0.008	3
Perennial stream	0	0	1	0.012	1
<b>Total Impacts (Acres)</b>					
	<b>Permanent =</b>	<b>0</b>	<b>Temporary =</b>	<b>6.394</b>	
Notes:					
1. PFO wetlands are located in poplar plantation areas and not considered agriculture, nor native forest habitat.					
Source: Table J-2, RFA Exhibit J					

In areas where HDD construction methods are proposed for pipeline installation, ground-disturbing impacts and associated impacts to wetlands and waters of the state typically resulting from pipeline installation activities involving trenching would be avoided. In areas

where trenching would be utilized for pipeline installation, NWN estimates that a total of 23,609.79 cubic yards would be removed during excavation; an equivalent amount would be replaced during backfilling activities. As described in Exhibit J, indirect impacts to wetlands and other waters of the state would be avoided and minimized by employing Best Management Practices for erosion and sediment control as listed in the National Pollutant Discharge Elimination System (NPDES) permit required for the Project along with measures established in the Erosion and Sediment Control Plan (ESCP). In addition to the measures established in the NPDES permit and ESCP, NWN proposes to implement additional measures to reduce and avoid potential temporary impacts to wetlands and other waters of the state during Project construction including:

- Restoration of site hydrology at each wetland and stream crossing;
- Preservation and restoration of the native seed bank at each impacted site;
- Replacement of nonnative vegetation removed during construction with native seeds;
- Restoration of site topography and grade to preconstruction elevations; and,
- Construction of water breaks in the pipeline trench to avoid disruption of site hydrology.

Additionally, NWN has committed to restoring temporary impacts to wetlands per its draft Site Rehabilitation of Temporary Impacts Plan (included as Attachment G to this order). This plan lays out the steps and methods that NWN will undertake to restore wetlands. The plan includes a proposed monitoring program that NWN will undertake to document the restoration of temporarily impacted and restored wetlands. To ensure NWN implements measures to reduce potential temporary impacts to wetlands and waters of the state during Project construction and operation, the Council adopts Removal-Fill Condition 1, requiring NWN to finalize and implement the Site Rehabilitation of Temporary Impacts Plan, and Removal-Fill Condition 2, requiring NWN to monitor and report on the restoration of temporarily impacted wetlands for three years.

#### Removal-Fill Permit

A removal-fill permit is required for the Project because 50 cubic yards or more of material would be removed, filled or altered within waters of the state. The removal-fill permit is a state permit within the Council's jurisdiction. Pursuant to ORS 469.503(3) and ORS 469.401(3), the Council must determine whether DSL should issue the removal-fill permit and, if so, the Council must determine the conditions of that permit.<sup>245</sup> DSL would have continuing enforcement authority over the permit.

The applicant submitted a Joint Permit Application (JPA) to DSL and U.S. Army Corp of Engineers on April 21, 2015. On June 23, 2015, DSL provided a comment letter to the department, which stated that the JPA was complete and that additional information was not required for DSL's review.<sup>246</sup> Under ORS 196.825(1)(a), a removal of material from waters of the state must "be

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<sup>245</sup> See also OAR 345-021-0010(1)(j)(E).

<sup>246</sup> MSTAMD11Doc32 Dan Cary, ODSL.

consistent with the protection, conservation and best use of the water resources of this State as specified in ORS 196.600 to 196.905.” Similarly, ORS 196.825(1)(b) allows fill to be placed in a water of the state if the proposed fill “would not unreasonably interfere with the paramount policy of this State to preserve the use of its waters for navigation, fishing and public recreation.” The criteria applicable to the issuance of a removal-fill permit are outlined in ORS 196.825(2).

For the following reasons, the Council finds that the proposed wetland removal and fill associated with the Project, resulting in 1.894 acres of temporary impact would meet the criteria described above:

- The impacted wetlands do not currently offer significant values related to navigation, fishing, and recreation;
- The proposed route of the NMTP and construction methods proposed for the NMTP would avoid or minimize wetland impacts; and,
- There are no permanent impacts to wetlands or waters of the state, and less than two acres of temporary wetland impacts as a result of the proposed removal-fill activity.

OAR 141-085-0565 implements the requirements of ORS 196.825 and establishes criteria for DSL’s determinations and considerations in evaluating individual JPAs. Pursuant to OAR 141-085-0565(7), projects resulting in less than two acres of fill impacts to wetlands do not require written findings related to the criteria for determinations and considerations in evaluating an individual JPA; therefore, additional evaluation has not been included in this order. As described above, the Council finds that the proposed removal-fill activity complies with the statutory standards pursuant to ORS 196.825. In written comments on the RFA and JPA, DSL provided recommended conditions for the removal-fill permit, to be included with the site certificate amendment.<sup>247</sup> These conditions are included as Attachment H to this order. The Council adopts Removal-Fill Condition 3, requiring NWN to obtain a removal-fill permit from DSL which includes the conditions included in Attachment H to this order, as recommended by DSL.

Based on this analysis, the Council finds that a removal-fill permit is necessary for the construction and operation of the Project and that the applicant has demonstrated that the Project is consistent with the protection, conservation and best use of water resources of this State.

### **Amendment 11 Removal-Fill Conditions**

The Council adopts the following conditions to ensure compliance with requirements established in the removal-fill law and removal-fill permit to be issued by DSL for Project construction.

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<sup>247</sup> MSTAMD11Doc33, Dan Cary ODSL.

**Removal-Fill Condition 1:** Prior to construction of the Amendment 11 components, the certificate holder shall submit to the department and DSL the final Site Rehabilitation of Temporary Impacts Plan consistent with the draft plan provided in Attachment G of this order. The certificate holder shall obtain written concurrence from the department and DSL that the final plan demonstrates compliance with and is consistent with all applicable rules and requirements. If the department and DSL have not provided a response within 30 days following the site certificate holder's submission of the final Site Rehabilitation of Temporary Impacts Plan, the Plan will be considered approved.

**Removal-Fill Condition 2:** During operation of the Amendment 11 components, the certificate holder shall monitor temporarily impacted and restored wetland sites for three years following the year of construction completion. Annual monitoring shall occur during the growing season and shall include visual surveys to estimate the coverage area of native versus nonnative species. The certificate holder shall provide an annual report with the methodology and results of the surveys on an annual basis to USACE, DSL, and the department.

**Removal-Fill Condition 3:** Before beginning construction of the Amendment 11 components, the certificate holder must obtain and provide proof to the department that a removal-fill permit from DSL was obtained and that it includes the conditions recommended in Attachment H of this order. The certificate holder must comply with all conditions of the removal-fill permit.

### **Conclusions of Law**

Based on the foregoing findings of fact and conclusions, and subject to compliance with the site certificate conditions listed above, the Council finds that the Project complies with the removal-fill law and that DSL should issue a removal-fill permit that includes recommended conditions contained in this order.

### **IV.D.3. Water Rights**

Under ORS Chapters 537 and 540 and OAR Chapter 690, the Oregon Water Resources Department (OWRD) administers appropriation water rights and regulates the use of the water resources of the state. NWN is requesting two limited water use licenses for use during construction. Issuance of limited water use licenses for EFSC-jurisdictional facilities is included in and governed by the site certificate and amended site certificate. Under OAR 345-022-0000(1), the Council must determine whether the proposed project should receive a limited use license. NWN is not requesting a groundwater permit or a water rights transfer for the Project.

## **Findings of Fact**

NWN states that it will require water during construction for multiple purposes, including HDD, hydrostatic testing of the NMTP, dust abatement, as well as potable water for consumption by construction workers.<sup>248</sup> During operations, NWN states that the Project will not require substantial quantities of water.<sup>249</sup> As part of the RFA, NWN has submitted applications for two limited water use licenses. The applications were also submitted to the OWRD. The applications are included as Attachment O-1 to Exhibit O. Water obtained via the limited water use licenses would only be used for non-potable construction purposes.

NWN states in Exhibit O and in the limited water use license applications that it would withdraw water from two sources: 1) Beaver Slough, a waterway that is within the Beaver Drainage Improvement Company's (BDIC) levee system; and 2) Bradbury Slough, via Portland General Electric's Beaver Generating Station's intake. Maps showing the specific locations of the proposed water sources are included in Exhibit O, Attachment O-1. NWN states that water would be reused multiple times during construction.<sup>250</sup> NWN describes in Exhibit O that water used for final hydrostatic testing would be discharged at PGE's Beaver Generating Station outfall according to the terms of PGE's Beaver Generating Station's DEQ NPDES permit.<sup>251</sup>

As described in Exhibit O, section 4.0, NWN estimates that it will need a maximum of 4.46 million gallons of water during construction of the proposed project. The limited water use license from Beaver Slough would allow for usage of 4.46 million gallons of water, and the limited water use license from Bradbury Slough/PGE Beaver Generating Station would allow for 2.2 million gallons of water. NWN states that it is requesting both limited water use licenses and an allowance of up to 6.66 million gallons of water in total to provide redundancy and assurance of adequate supply.<sup>252</sup>

As presented in Attachment O-1 of Exhibit O, both limited water use licenses applications are accompanied by water availability statements from the local Watermaster. In these statements, the Watermaster represents that he believes adequate water is available and at the times needed to supply NWN's proposed use. On the water availability statement for Beaver Slough, the Watermaster requested that a totalizing flow meter be installed on the water outtake at Beaver Slough. The OWRD reviewed the limited water use license applications and Exhibit O and did not have any comment.<sup>253</sup> As noted in the limited water use license application, a limited water use license is subordinate to all other authorized uses that rely upon the same source, and may be revoked at any time it is determined that the use causes injury to any other water right or perennial stream flow.

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<sup>248</sup> RFA Exhibit O, Section 2.0.

<sup>249</sup> RFA Exhibit O, Section 4.0.

<sup>250</sup> RFA Exhibit O, Section 7.0.

<sup>251</sup> Id. See also RFA Exhibit E and Section IV.A.2 Organizational Expertise for additional information and discussion related to the NPDES discharge permit requirements.

<sup>252</sup> RFA Exhibit O, Section 4.0.

<sup>253</sup> MSTAMD11Doc9 Jerry Sauter, OWRD.

The director of the BDIC provided a letter to NWN stating that the BDIC has no objections to the proposed water diversion from Beaver Slough for the Project. This letter is included in the limited water use license application for Beaver Slough.<sup>254</sup>

A number of standard conditions are normally applied to limited water use licenses. In addition, NWN has proposed that it will use an ODFW-approved fish screen on the intake hose at Beaver Slough. To maintain compliance with the limited water use license requirements, as well as include the proposed condition by NWN to use a fish screen on the intake hose in Beaver Slough, the Council adopts Limited Water Use License Condition 1.

### **Amendment 11 Limited Water Use License Condition**

The Council adopts the following condition to ensure and maintain compliance with the requirements of the Limited Waste Use License during Project construction.

#### **Limited Water Use License Condition 1:**

1. The use of water under a limited license shall not have priority over any water right exercised according to a permit or certificate and shall be subordinate to all other authorized uses that rely upon the same source.
2. The certificate holder shall give notice to the Watermaster at least 15 days in advance of using water under the limited water use licenses.
3. At each diversion from which the certificate holder withdraws water, the certificate holder shall install a totalizing flow meter and maintain a record of use, including the period of use, and the categories of beneficial use to which the water is applied. The record of use shall be supplied to the Watermaster on request.
4. Both licenses are effective for the requested use between June 1, 2017 and November 30, 2018. Upon completion of the Project, the certificate holder shall submit the record of use to the OWRD and the department.
5. At the Beaver Slough outtake, certificate holder shall install an ODFW-approved fish screen on the suction hose.

### **Conclusions of Law**

Based on the foregoing findings and the evidence in the record, and subject to compliance with the site certificate condition listed above, the Council finds that the Project complies with the requirements to receive a limited water use license from Oregon Water Resources Department, and that the Oregon Water Resources Department should issue two limited water use licenses: one limited water use license for 4.46 million gallons from Beaver Slough; and one limited water use license for 2.2 million gallons from Bradbury Slough via the current PGE Beaver Generating Station's diversion.

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<sup>254</sup> RFA Exhibit O, Attachment O-1.

## **V. GENERAL APPLICATION OF CONDITIONS**

In addition to the site certificate conditions required to ensure and maintain compliance with specific Council Standards in OAR 345, Divisions 22, 23 and 24, the conditions referenced in this order are specifically required by: OAR 345-027-0020 (Mandatory Conditions in Site Certificates), including representations in the RFA and the supporting record, which the Council deems as binding commitments made by the certificate holder under OAR 345-027-0020(10); OAR 345-027-0023 (Site Specific Conditions); OAR 345-027-0028 (Monitoring Conditions); OAR Chapter 345; Division 26 (Construction and Operation Rules for Facilities).

The Council recognizes that many specific tasks related to the design, construction, operation and retirement of the facility would be undertaken by the certificate holder's agents or contractors. Nevertheless, the certificate holder is responsible for ensuring that all agents and contractors comply with all provisions of the site certificate.

## **VI. GENERAL CONCLUSIONS AND FINAL ORDER**

The requested Amendment 11 to the Mist Facility Site Certificate would (1) expand the current site boundary by 2,644 acres to accommodate up to five underground storage areas; 2) develop one of the five underground storage areas (Adams Reservoir); 3) increase the maximum combined deliverability of natural gas from 515 to 635 MMscfd; 4) construct and operate a new gas-driven compressor station and associated related and supporting facilities; 5) construct and operate underground utility services including electricity and communication to connect the new compressor station to existing Miller Station, and 6) construct and operate, as a related and supporting facility to the Mist Facility, an underground pipeline to transport natural gas from the proposed compressor station to the Port Westward Industrial Park.

Based on the findings and conclusions included in this order, the Council makes the following conclusions of law:

1. The request for contested case does not raise a significant issue of fact or law that may affect the Council's determination that Amendment 11 to the Mist Facility Site Certificate meets an applicable standard.
2. Request for Amendment 11 to the Mist Facility Site Certificate complies with the requirements of the Oregon Energy Facility Siting statutes, ORS 469.300 to ORS 469.570 and ORS 469.590 to ORS 469.619.
3. Request for Amendment 11 to the Mist Facility Site Certificate complies with the applicable standards adopted by the Council pursuant to ORS 469.501.
4. Request for Amendment 11 to the Mist Facility Site Certificate complies with all other Oregon statutes and administrative rules that were included in and governed by the original site certificate and are applicable to the amendment of the Mist Facility Site Certificate.



Accordingly, the Council finds that the issues identified in the request for a contested case do not justify a contested case proceeding. The Council finds that the proposed amendment would comply with the General Standard of Review (OAR 345-022-0000), and that based on a preponderance of the evidence on the record, that the Site Certificate may be amended as requested.

**Final Order**

The Council denies the request for a contested case, approves Amendment No. 11 and issues an amended Site Certificate for the Mist Facility, subject to the terms and conditions set forth in this order.

Issued this 21<sup>st</sup> Day of April, 2016

Energy Facility Siting Council

By:   
Barry Beyeler  
Chair, Energy Facility Siting Council

**Attachments:**

- Attachment A: Amended Site Certificate
- Attachment B: Public and Reviewing Agency Comment on the Request for Amendment Summary Table
- Attachment C: Draft Erosion and Sediment Control Plan
- Attachment D: Agricultural Impact Mitigation Plan
- Attachment E: Draft Habitat Mitigation Plan
- Attachment F: Inadvertent Return Response Plan
- Attachment G: Draft Site Rehabilitation of Temporary Impacts Plan
- Attachment H: Recommended Removal-Fill Permit Conditions

**Notice of the Right to Appeal**

The right to appeal this order approving an amendment to a site certificate is provided in ORS 469.403. Pursuant to ORS 469.403, any party to a contested case proceeding on an amended site certificate application may appeal the Council's approval or rejection of the amended site certificate application to the Oregon Supreme Court. To appeal you must file a petition for judicial review with the Supreme Court within 60 days from the day this order was served on you. If this order was personally delivered to you, the date of service is the date you received this order. If this order was mailed to you, the date of service is the date it was mailed, not the date you received it. If you do not file a petition for judicial review within the 60-day time period, you lose your right to appeal.

**Attachment A: Proposed Amended Site Certificate**

**Attachment B: Public and Reviewing Agency Comment on the Request for Amendment  
Summary Table**

**Attachment C: Draft Erosion and Sediment Control Plan**

**Attachment D: Agricultural Impact Mitigation Plan**

**Attachment E: Draft Habitat Mitigation Plan**

**Attachment F: Inadvertent Return Response Plan**



**Attachment G: Draft Site Rehabilitation of Temporary Impacts Plan**

**Attachment H: Recommended Removal-Fill Permit Conditions**