

Exhibit T

Recreational Opportunities

Mist Resiliency Project
March 2024

Prepared for



Northwest Natural Gas

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Acronyms and Abbreviations

JBHR	Julia Butler Hansen Wildlife Refuge for the Columbian White-Tailed Deer
LCNWR	Lewis and Clark National Wildlife Refuge
NMCS	North Mist Compressor Station
NWN	Northwest Natural
OAR	Oregon Administrative Rules
ODFW	Oregon Department of Fish and Wildlife
OPRD	Oregon Parks and Recreation Department
Project	Mist Resiliency Project
RFA	Request for Amendment
USFWS	U.S. Fish and Wildlife Service

1.0 Introduction

Northwest Natural Gas (NWN), the Certificate Holder, proposes to amend the Site Certificate for its underground natural gas storage facility at the Mist Resiliency Project (Project) in Columbia County, Oregon. Exhibit T contains information pertaining to potential adverse impacts of construction and operation of the Project on important recreational opportunities, as required to meet the submittal requirements in Oregon Administrative Rules (OAR) 345-021-0010(1)(t) paragraphs (A) through (F). This exhibit demonstrates that the Project can comply with the approval requirements found in OAR 345-022-0100:

(1) 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.

(2) The Council must 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.

(3) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 without making the findings described in section (1). In issuing such a site certificate, the Council may impose conditions of approval to minimize the potential significant adverse impacts from the design, construction, and operation of the facility on important recreational opportunities.

(4) The Council must apply the version of this rule adopted under Administrative Order EFSC 1-2002, filed and effective April 3, 2002, to the review of any Request for Amendment to Site Certificate or Request for Amendment that was determined to be complete under OAR 345-015-0190 or 345-027-0363 before the effective date of this rule. Nothing in this section waives the obligations of the certificate holder and Council to abide by local ordinances, state law, and other rules of the Council for the construction and operation of energy facilities in effect on the date the site certificate or amended site certificate is executed.

2.0 Analysis Area

The Analysis Area is the area for which NWN must describe the impacts of the proposed Project changes in this Request for Amendment (RFA) 13. The Analysis Area is the same as the recreational opportunities study area, defined in OAR 345-001-0010(35)(d) as the area within and extending 5 miles from the Site Boundary. The Site Boundary is defined in the Project Description section of this RFA 13 that reflects the information pursuant to OAR 345-021-0010(1)(a) and (b). The Recreational Opportunities Analysis Area is shown on Figure T-1.

3.0 Recreational Opportunities Inventory – OAR 345-021-0010(1)(t)(A)(E)

OAR 345-021-0010(1)(t) Information about the impacts the proposed facility would have on important recreational opportunities in the analysis area, providing evidence to support a finding by the Council as required by OAR 345-022-0100, including:

OAR 345-021-0010(1)(t)(A) A description of the recreational opportunities in the analysis area that includes information on the factors listed in OAR 345-022-0100(1) as a basis for identifying important recreational opportunities;

OAR 345-021-0010(1)(t)(E) A map of the analysis area showing the locations of important recreational opportunities identified in paragraph (A); and

As previously found by the Energy Facility Siting Council (Council), the design, construction and operation of the Project are not likely to result in a significant adverse impact to any important recreational opportunities in the Analysis Area.¹ Three new recreation areas are located within the Analysis Area since the Final Order on RFA 12 was issued: the North Coast Travel Management Area/Hunting Area, Clatskanie City Park, and Cope's Park.^{1,2,3} The Analysis Area is shown on Figure T-1 and an inventory of the recreational opportunities within the Analysis Area is included as Table T-1.

¹ Final Order on Requests for Contested Case and Amendment #12 of the Site Certificate (September 2017), p. 17

² Note that the County Line Park was previously included in the RFA 11 Exhibit T analysis; however, it is managed by Washington entities and located in Washington and is thus outside the scope of Oregon's RFA process.

³ Final Order on Request for Contested Case and Amendment No. 11 of the Site Certificate (April 2016), p. 132-137

Table T- 1. Inventory of Recreational Resources in the Analysis Area

Recreational Opportunity	Responsible Entity	Distance from Site Boundary (miles)	Description	Size or Distance	Importance Factors					Important Recreation Resource?
					Designation	Demand	Qualities	Rareness	Replaceability	
Federal										
Julia Butler Hansen Refuge (JBHR) for the Columbian White-Tailed Deer	USFWS	1.4	Refuge established in 1971 for protection of endangered Columbian white-tailed deer. Analysis Area encompasses a portion of the Westport unit; the remaining units are outside of the Analysis Area.	6,200 acres; 715 acres within Analysis Area	National Wildlife Refuge	Low; little recreational activity in portion of JBHR within Analysis Area	No facilities; foot traffic only; island access by water only; hunting not permitted in Anunde Island and Westport units but permitted seasonally off Wallace Island (all within Analysis Area) from shoreline or water only; wildlife viewing throughout; no camping	Protected islands are relatively uncommon in a general sense; JBHR island areas within the Analysis Area are among two dozen named islands managed by the USFWS in the lower Columbia River; islands offer a unique wildlife-dependent recreational opportunity.	Undeveloped islands are effectively irreplaceable, although the Kinnunen Cut "Island" within JBHR was created by a constructed ditch	Yes
State										
North Coast Travel Management Area/Hunting Area	ODFW	Within	ODFW-managed hunting area for deer, elk, bear, forest grouse, band-tailed pigeon with no camping or restrooms. ATVs are not permitted.	1 million acres; 113,814 acres within Analysis Area	State-managed hunting area	Low; considering the vast majority of the hunting area does not contain the Site Boundary and thus demand is likely low in this small portion	No facilities and no camping allowed	Hunting area is very large and spans most of northwestern Oregon, thus many other areas are available within the hunting area to recreate.	Replaceable	No
Local										
Beaver Boat Ramp and Park	Columbia County	1.7	Beaver Boat Ramp and Park is a day-use park and offers paved parking, boarding floats, restrooms and barbeque grills.	1.8 acres; 1.8 acres within Analysis Area	County Park	High; commonly used boat launching location on the Clatskanie River	Common day-use park facilities including restrooms, parking, grills, boat launch	Common	Replaceable	No
Clatskanie City Park	City of Clatskanie	2.0	Clatskanie City Park is a day-use park with a boat ramp, swimming pool, skate park, several sports fields and courts, a play area, and picnic areas.	23 acres; 23 acres within Analysis Area	City Park	Low to high; high during summer months, otherwise low	Common day-use park facilities including sports fields and courts, play area, boat ramp, and picnic areas; swimming pool and skate park are somewhat unique qualities	Common	Replaceable	No

Recreational Opportunity	Responsible Entity	Distance from Site Boundary (miles)	Description	Size or Distance	Importance Factors					Important Recreation Resource?
					Designation	Demand	Qualities	Rareness	Replaceability	
Cope's Park	City of Clatskanie	2.0	Cope's Park is a day-use park with a 1.4-mile paved walking trail that includes eight fitness stations along the path. The park is also home to the Veterans Memorial and the location of the Clatskanie Farmer's Market every Saturday during the summer months.	5.0 acres; 5.0 acres within Analysis Area	City Park	Low to high; high during summer months, otherwise low	Public walking trail with no developed facilities; Veterans Memorial is a unique quality	Common	Replaceable	No
Private										
Lower Columbia River Water Trail	Lower Columbia River Estuary Partnership	1.4	146-mile, bi-state trail spanning the tidally influenced river waters from Bonneville Dam to the Pacific Ocean. The trail is a loose affiliation of launch and landing sites, campsites, and other facilities for non-motorized boaters. No affiliated campsites are located within the Analysis Area.	146 miles; approximately 7.6 miles of route in Analysis Area	None	Moderate; opportunities for boating, along the trail	Loose affiliation of businesses and ports that cater to or easily accommodate needs of human-powered river travelers; no dedicated facilities or specific route designated	Participating facilities common in region; the geography of the water trail and aquatic ecosystems along and within the water trail would be considered relatively rare	Irreplaceable due to geography of the water trail and aquatic ecosystems along and within the water trail	Yes
Vernonia to Astoria Bike Route	Not specific	0	61-mile bicycle tour route from Vernonia to Astoria, following OR-47 and OR-202. Publicized on PBOT web site.	61 miles; Approximately 12.0 miles of route in Analysis Area	State highways; not a state-designated tour or scenic route or bike route	Low	Long, challenging scenic bicycle tour route on lightly trafficked rural state highways; no bike lanes or other bike infrastructure	Common	Replaceable	No

3.1 Inventory Methods

Recreational opportunities within the Analysis Area were identified through collection and review of existing published and unpublished information available from desktop research sources commonly used for recreation inventory efforts. Key types of information resources investigated for the inventory included:

- Geographic Information System files documenting recreational resources obtained from key recreation provider agencies, e.g., the Bureau of Land Management (BLM 2022), Oregon Department of Fish and Wildlife (ODFW; ODFW 2021), United States Forest Service (USFS 2023a, USFS 2023b), United States Geological Survey (USGS 2022), and Oregon Parks and Recreation Department (OPRD; OPRD 2018);
- Land management agency planning documents;
- Comprehensive plans, park and recreation plans, and individual park master plans prepared by OPRD and by counties and municipal governments within the Analysis Area;
- Internet sites maintained by recreation provider agencies, including OPRD, ODFW, and county and city park departments (Clatskanie Park and Recreation District 2023, Columbia County Undated, ODFW 2023, OPRD 2023); and
- Internet sites maintained by various commercial entities, including sites providing general recreation and tourism information and sites applicable to specific private-sector recreation opportunities (Google Earth 2021, ORBIC 2020).

3.2 Importance Criteria

Recreational opportunities identified within the Analysis Area were evaluated for “importance” based on the criteria outlined in OAR 345-022-0100. A recreational opportunity may be determined to be important based on assessment of available information specific to each criterion, and a qualitative balancing of the attributes for all five criteria for a given resource. Specific considerations used to characterize the importance of a recreational opportunity relative to the five criteria outlined in OAR 345-022-0100 are summarized as follows:

- 1. Any special designation or management of the location;*

There are distinct, identifiable differences among the types of special management designations that apply to lands within the Analysis Area, and their associated implications for resource protection. Wilderness designation, for example, results in management direction to preserve the resource values of the designated area and represents a high level of protection. Other types of designations allow much more latitude in undertaking management activities and involve a lower degree of resource protection. The source of the special designation is also a relevant consideration; a designation established through an Act of Congress clearly carries more weight than an administrative designation applied by a resource management agency.

- 2. The degree of demand;*

Qualitative ratings of High, Moderate, and Low were used as proxy measures for the level of demand for a specific recreational opportunity.

3. Outstanding or unusual qualities;

Identification of characteristics that might be considered outstanding or unusual for a given opportunity is a highly subjective task, as there is a wide variation in the values, tastes, and perceptions among the recreational public. The standard does not specify what qualities would define an opportunity as “outstanding” or “unusual,” or indicate how those characteristics could be measured. Some sites or areas have attributes that qualify them as “unique” (i.e., one of a kind), while others have qualities that are not unique, but intuitively set them apart from other opportunities and could be considered outstanding or unusual.

4. Availability or rareness; and

Qualitative ratings of Rare, Uncommon, and Common were used to address the criterion based on the apparent rareness of an opportunity. Consideration of this rareness attribute was based on the approximate set of comparable opportunities (and the geographic scale appropriate to each type of opportunity) available within the region surrounding the Project.

5. Irreplaceability or irretrievability of the opportunity.

Ratings of Irreplaceable, Somewhat Irreplaceable, and Replaceable were used to address the criterion based on the ability to replace an opportunity. In general, opportunities based on inherent natural resource characteristics that could not feasibly be recreated in the same place or at another reasonably nearby location were considered Irreplaceable. By contrast, most opportunities that are based on constructed recreational facilities or infrastructure (such as typical campgrounds) could feasibly be replaced and were considered Replaceable.

The overall assessment of importance for each recreational opportunity identified was conducted on a case-by-case basis. Table T-1 provides a summary of each identified recreation opportunity in the Analysis Area, and indicates which are considered important for the purposes of this RFA 13. A description of each recreation opportunity is provided in the following sections.

3.3 Summary of Recreational Opportunities

In general, recreation activities in the vicinity of the Project consist of hiking, fishing, boating, camping, bicycling, organized sports, photography, game and bird hunting, and sightseeing. These activities may occur in numerous locations both inside and outside the Analysis Area; however, most of these activities occur only on an informal basis within the Analysis Area and therefore do not rise to a level of importance sufficient to require analysis under OAR 345-022-0100(2).

There are seven identified recreational opportunities within the Analysis Area. These are:

- Julia Butler Hansen Refuge for the Columbian White-Tailed Deer (JBHR);
- North Coast Travel Management Area/Hunting Area;
- The Beaver Boat Ramp and Park;

- Clatskanie City Park;
- Cope's Park;
- The Lower Columbia River Water Trail; and
- The Vernonia to Astoria Bike Route.

One of the recreational opportunities overlaps with the Site Boundary as proposed by RFA 13 (North Coast Travel Management Area/Hunting Area). Recreational opportunities within the Analysis Area are described below in order of federal, state, local and private ownership/management. Table T-1 provides a summary of each identified recreational opportunity, and an assessment of the importance of each opportunity. Figure T-1 shows the location of the recreation opportunities identified in the Analysis Area; note that the Lower Columbia River Water Trail does not have a designated route so its presence is indicated only by the open waters of the Columbia River.

3.3.1 Federal

The U.S. Fish and Wildlife Service (USFWS) manages a single recreation area within the Analysis Area (see Figure T-1): the JBHR. The JBHR encompasses several islands in the Columbia River and portions of the mainland in Washington, just west of Cathlamet, covering over 6,000 acres of pastures, forested tidal swamps, brushy wood lots, marshes and sloughs. The Analysis Area encompasses a majority of the Westport Unit of the JBHR, approximately 4.1 miles northwest of the Site Boundary, as well as Wallace Island, located approximately 2.2 miles north of the Site Boundary, and Anunde Island, located approximately 1.4 miles northeast of the Site Boundary. All other portions of the JBHR are outside of the Analysis Area (i.e., the Crims-Gull Island Complex [6.4 miles northeast of the Site Boundary] and the Mainland-Hunting Islands-Tenasillahe Island-Welch Island-Price Island Unit [11.8 miles northwest of the Site Boundary]; Figure T-1). The locations outside of the Analysis Area are not considered for compliance with OAR 345-022-0010(t).

This refuge was established in 1972 specifically to protect and manage the endangered Columbian white-tailed deer. The JBHR is managed under a Comprehensive Conservation Plan (USFWS 2010) that also guides management of the Lewis and Clark National Wildlife Refuge (LCNWR); the LCNWR is outside of the Analysis Area and is not discussed further in this exhibit.

One estimate provided in the Comprehensive Conservation Plan indicates that the JBHR and LCNWR combined attract approximately 29,000 visitor-use days each year (USFWS 2010). Recreation activities within the JBHR include wildlife viewing, photography, boating, fishing, and seasonal hunting in designated areas. Most of the JBHR 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 and over 11 miles outside of the Analysis Area (Figure L-1). The Comprehensive Conservation Plan notes that activities in the units nearest the Project “are self-limiting due to dense vegetation, with public uses generally occurring only on the shorelines of these sites.” Seasonal waterfowl hunting is permitted along the shorelines of Wallace and Crims islands, while the Anunde Island and Westport units are closed to hunting; note that Wallace Island, Anunde

Island, and a portion of the Westport unit are the only portions of the JBHR within the Analysis Area. Fishing is known to occur throughout the river near these islands, but the USFWS indicates that fishing appears to be concentrated in areas near the Mainland Unit, outside of the Analysis Area. Wildlife viewing opportunities are effectively confined to the Mainland Unit, due to the difficulty in accessing the JBHR's island units and their dense riparian vegetation. Camping, overnight use, and fires are not permitted within the JBHR. Wallace Island has been designated as a wilderness study area and is managed to retain its wilderness characteristics. Observations of recreational use in the area during noise monitoring in June 2015 support the Comprehensive Conservation Plan statements (USFWS 2010). There appeared to be no use of Kinnunen Cut Island (within Wallace Island) for recreational activities, and the adjacent waterways appeared to be used primarily as a thoroughfare for motorized craft transiting from the Beaver Boat Ramp in Clatskanie to the Columbia River.

The USFWS does not collect or maintain recreational use data in a format that would support an estimate of the level of recreational use within the JBHR areas within the Analysis Area (Paul Meyers, USFWS, pers. comm. with Tetra Tech, June 26, 2015; and JBHR/USFWS staff, pers. comm. with Tetra Tech, July 5, 2023). The Comprehensive Conservation Plan does, however, include data on the distribution of use by the type of activity; interpretation of these data indicates that very little recreational use occurs in the Westport Unit, Anunde Island, and Wallace Island.

Wildlife observation/photography (6,700 annual visits) and environmental education/interpretation (600 visits) account for more than half of total JBHR use; virtually all that activity occurs at the Mainland Unit, where there is vehicle access, hiking/walking opportunities, and a viewpoint on Washington State Route 4 (USFWS 2010). Activity that would logically occur at or around the JBHR components within the Analysis Area or near the Project is essentially limited to waterfowl hunting and fishing. As noted above, those activities occur only along the shorelines of islands where hunting and access are permitted (the Westport Unit is closed to hunting) and on the adjacent waters, and fishing activity is concentrated around the Mainland Unit. Waterfowl hunting activity for the entirety of JBHR is estimated at 1,200 visits, and fishing is estimated at 4,500 visits, for a combined total of 5,700 annual visits. That volume of use is distributed in an uncertain pattern throughout the water-accessible areas of the 6,000-acre JBHR. The Comprehensive Conservation Plan indicates that Wallace Island includes 579 total acres (including the 47-acre Kinnunen Cut Island; entirely within the Analysis Area) all owned by the USFWS; Anunde Island is 102 total acres, including only 3.6 acres owned by USFWS (the privately owned remainder is entirely within the Analysis Area); the Westport Unit includes 146 acres, of which perhaps 131.4 acres are within the Analysis Area, all owned by USFWS; and Crims Island includes 695 acres, of which 473 are owned by the USFWS (not within the Analysis Area). Among these islands, the combined area located within the Analysis Area is likely 715 acres or less. Based on their acreage and shoreline extent, the JBHR components within the Analysis Area account for at most a small fraction of the total waterfowl hunting and fishing activity within JBHR.

The federal designation as a national wildlife refuge would not by itself automatically qualify this area as an important recreation opportunity. The specific descriptions of JBHR use in the

Comprehensive Conservation Plan indicate that there is very little recreational use in the portion of the JBHR within the Analysis Area; USFWS staff confirmed that visitor use in that area has not been quantified but is quite low (Paul Meyers, USFWS, pers. comm. with Tetra Tech, June 26, 2015; and JBHR/USFWS staff, pers. comm. with Tetra Tech, July 5, 2023). Rather, recreational use tends to be concentrated on or near the Mainland Unit, outside of the Analysis Area. However, because the JBHR 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, the JBHR is considered an important recreation opportunity for the purposes of this RFA 13. The JBHR is also considered a protected area and impacts to it are discussed in Exhibit L of this RFA 13.

3.3.2 State

There are two parcels owned by the State of Oregon within the Analysis Area. These parcels do not contain designated recreation areas nor are considered to be recreational resources. Within the Analysis Area and within 5 miles of the Site Boundary is the North Coast Travel Management Area/Hunting Area, managed by ODFW (Figure T-1). The site is open to hunting for deer, elk, bear, forest grouse, and band-tailed pigeon with no camping or restrooms. All-terrain vehicles (ATVs) are not permitted, limited motor vehicle travel allowed, and the access period is three days prior to the opening of archery season through close of all bull elk rifle seasons. The entire Site Boundary overlaps with this hunting area, but only makes up less than one percent of the hunting area available, which totals over one million acres. Demand for hunting within the Site Boundary is predicted to be low due to the great amount of other areas available for hunting within the same hunting unit. Due to the hunting area's lack of demand, outstanding qualities, rareness, and irreplaceability, the hunting area is not considered an important recreational resource.

3.3.3 Local Governments and Special Districts

Counties, cities, and special districts provide three recreation opportunities within the Analysis Area. Local government resources tend to be smaller-scale parks with an emphasis on day-use activities and typically serve more localized user populations. Local government recreation providers within the Analysis Area include Columbia County and the City of Clatskanie.

Columbia County manages one recreational opportunity in the Analysis Area, the Beaver Boat Ramp and Park (see Figure T-1). The park is nearly two acres and is a day-use park with paved parking, boarding floats, restrooms, and barbeque grills (Columbia County Undated). Demand is considered high, for it is a commonly used boat launching location on the Clatskanie River. Due to the park's lack of outstanding qualities, rareness, and irreplaceability, the park is not considered an important recreation resource for the purposes of this application.

There are also two parks owned and managed by the City of Clatskanie within the Analysis Area: Clatskanie City Park and Cope's Park (see Figure T-1). The Clatskanie City Park is a day-use park with a swimming pool, skate park, boat ramp, several sports fields and courts, a play area, and

picnic areas. The Clatskanie City Park is the sole city park in the area with rare amenities such as a public swimming pool and skate park. Cope's Park is a day-use park with a 1.4-mile paved walking trail that includes eight fitness stations along the path; there are no developed facilities (Clatskanie Park and Recreation District 2023). The park is also home to the Veterans Memorial and the location of the Clatskanie Farmer's Market every Saturday during the summer months. Cope's Park is the sole city park in the area with rare amenities such as a Veterans Memorial. Both parks primarily serve the residents of Clatskanie, and demand is anticipated to range from high during the summer months to low during the other seasons for both parks. Due to both parks' lack of outstanding qualities, rareness, and irreplaceability, the parks are not considered an important recreation resource for the purposes of this RFA 13.

3.3.4 Private

There are two privately owned recreation opportunities within the Analysis Area, the Lower Columbia River Water Trail and the Vernonia to Astoria Bike Route. The Lower Columbia River Water Trail is not a designated trail route; rather, it is a loose affiliation of businesses, parks, and boat launch sites that cater to or easily accommodate human-powered travel on the lower Columbia, none of which are specific to the Lower Columbia River Water Trail. There is no official state or local designation for the route or any associated sites. The Lower Columbia Estuary Partnership hosts a website with information and an interactive map of trail resources including boat launches, campsites, and a few restaurants (LCEP 2023). Identified boat launches and parks within the Analysis Area include the Beaver Boat Ramp and Park, Clatskanie City Park, and Cope's Park; no campsites were identified within the Analysis Area. The map points out that a grocery store and several restaurants are within walking distance of boat launches in Clatskanie. Demand is considered to be moderate due to the various opportunities for boating along the trail. The geography of the water trail and aquatic ecosystems along and within the water trail would be considered relatively unusual, uncommon and irreplaceable. Therefore, the trail is considered to be an important recreation opportunity for the purposes of this RFA 13.

Bicycling can occur on any road, but there is one recognized bicycle tour route within the Analysis Area, a ride from Vernonia to Astoria via Oregon Highway 47 (OR-47) and Oregon Highway 202 (OR-202). This bike route is described on the Portland Bureau of Transportation website (PBOT 2023). This 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. Due to a lack of official designation or support, and the ability to replace this route using other similar roads, this bike route is not considered an important recreation opportunity for the purposes of this application.

3.3.5 Importance Assessment Summary

Based on the importance criteria described above, two of the identified recreation resources have been determined to be important for the purposes of this analysis. These resources are summarized in Table T-1 of this exhibit. The potential for impacts to the important recreation resources as a result of the Project as modified by RFA 13 is discussed in Section 4.

4.0 Impact Assessment – OAR 345-021-0010(1)(t)(B)(C)

OAR 345-021-0010(1)(t)(B) A description of any potential adverse impacts to the important opportunities identified in paragraph (A) including, but not limited to:

- (i) Direct or indirect loss of a recreational opportunity as a result of facility construction or operation;*
- (ii) Noise resulting from facility construction or operation;*
- (iii) Increased traffic resulting from facility construction or operation;*
- (iv) Visual impacts of facility structures or plumes, including but not limited to, changes in landscape character or quality;*

OAR 345-021-0010(1)(t)(C) An evaluation of the significance of the potential adverse impacts identified under paragraph (B);

As previously found by the Council, the design, construction, and operation of the Project, when taking into account mitigation, are not likely to result in any significant adverse impacts to any important recreational opportunities in the Analysis Area.^{4,5} The following sections summarize the types of potential adverse impacts evaluated and provide summaries of the analysis.

4.1 Direct or Indirect Loss of Recreational Opportunities – OAR 345-021-0010(1)(t)(B)(i)

- (ii) Direct or indirect loss of a recreational opportunity as a result of facility construction or operation;*

For a direct loss of opportunity to occur, the Project would need to physically disturb the ground located within the affected recreational resource area. The Project as modified by RFA 13 would not directly impact any identified recreation resource as none of the important recreational opportunities are within the Site Boundary.

An indirect loss of opportunity could occur if 1) a recreational opportunity nearby the Project would not be physically disturbed by construction activity but might need to be temporarily closed to public use in response to safety concerns; or 2) if development of the Project were to alter the environment of a recreational opportunity through indirect effects that it substantially adversely impacted the quality of the recreation experience at that site.

Because both important recreation resources in the Analysis Area are located farther than one mile from the Site Boundary, indirect loss of opportunity for safety concerns is unlikely to occur. Potential sources of indirect disturbance impacts to important recreational opportunities include

⁴ Final Order on Requests for Contested Case and Amendment #12 of the Site Certificate (September 2017), p. 17.

⁵ Final Order on Request for Contested Case and Amendment No. 11 of the Site Certificate (April 2016), p. 137.

noise, traffic, and changes in visual quality associated with the Project as modified by RFA 13; the following sections analyze these three factors.

4.2 Noise – OAR 345-021-0010(1)(t)(B)(ii)

(ii) Noise resulting from facility construction or operation;

Exhibit Y provides an assessment of the existing acoustical environment and anticipated Project sound levels. The methodology for noise modeling is also discussed in detail in that Exhibit. Exhibit Y describes sound level thresholds derived from the Oregon Department of Environmental Quality (ODEQ) noise regulations (OAR 340-035-0035), which are used to assess the significance of impacts to noise sensitive properties. As defined in OAR 340-035-0035, “noise sensitive properties” are “real property normally used for sleeping, or normally used as schools, churches, hospitals or public libraries. Property used in industrial or agricultural activities is not Noise Sensitive Property unless it meets the above criteria in more than an incidental manner.” None of the important recreation areas are considered to be noise sensitive properties, and the ODEQ noise regulations do not apply.

Mechanical equipment at the North Mist Compressor Station (NMCS) will create noise; however, the NMCS will be designed to meet ODEQ standards at the nearest residences to the site, which are located near Fishhawk Lake. Noise from operations of the NMCS will be inaudible generally or indistinguishable from background/ambient noise levels (35 decibels) at sites beyond 0.5 miles from the NMCS.

The Oregon State Noise Control Regulations specifically exempt noise emanating from construction activities from compliance with the state noise regulations under OAR 340-035-0035(5). Notwithstanding the arguable inapplicability of the noise regulations to construction activities, the following discussion of construction noise is intended to demonstrate that the Project as modified by RFA 13 continues to meet the evidentiary requirements as previously found by the Council under OAR 345-021-0010(1)(t)(B)(ii), and would not create new noise impacts to important recreational opportunities beyond those that were previously identified.^{6,7} Construction activities will occur at the NMCS Site, and along the proposed pipeline route. Along the pipeline route and within the NMCS Site, there is one primary method of construction: trenched pipe installation. Trenched piping will involve logging and grading of the route, excavation, pipe welding and placement, and backfilling. In general, the types and loudness of sound sources associated with trenched pipe will be similar to logging and silviculture activities that already occur in the proposed trenched pipe section.

Horizontal directional drilling pipe installation will primarily occur along the powerline alignment near the stretch of the mainline road down near Highway 202. This Site Boundary area for the

⁶ Final Order on Requests for Contested Case and Amendment #12 of the Site Certificate (September 2017), p. 17.

⁷ Final Order on Request for Contested Case and Amendment No. 11 of the Site Certificate (April 2016), p. 135-136.

powerline alignment is located over 6.6 miles away from the nearest important recreation area, thus adverse noise impacts are not anticipated as a result.

4.3 Traffic – OAR 345-021-0010(1)(t)(B)(iii)

(iii) Increased traffic resulting from facility construction or operation;

No new significant traffic impacts to important recreation areas are anticipated from the Project as modified by RFA 13.^{8,9} Most construction traffic would occur on U.S. Highway 30 (US-30), which has adequate capacity to carry all Project construction traffic without creating traffic delays (see traffic impact analysis in Exhibit U). Although access to the JBHR and the Lower Columbia River Water Trail are largely via US-30, there would be no direct traffic impacts at those recreation areas, and little likelihood of even temporary delays in reaching those areas due to the capacity of US-30. The portions of the JBHR closest to the Project are islands accessible only by boat, so would be unaffected by Project traffic. Similarly, the portions of the Lower Columbia River Water Trail within the Analysis Area will predominately be boaters. Project traffic would also utilize OR-47 between Clatskanie and Mist, and some of the local roads north of Clatskanie. None of these roads provide direct access to any important recreation area. While some of the access roads cross or run within the Site Boundary and may experience some temporary disruption during Project construction, these are private timber roads that would not typically be accessible to the public.

In the unlikely event that users of any important recreation area experience access disruptions or delays due to delivery of Project materials or construction equipment, these impacts would be brief, intermittent and temporary, and traffic levels would return to normal following construction. During construction, best management practices as detailed in Exhibit U, will ensure that access restrictions to any important recreation area will be temporary and timed to avoid peak traffic flow.

The operational phase of the Project would not generate amounts of traffic that could adversely impact important recreation areas; the Project would not require additional staffing to operate, so operational traffic levels would be similar to current, pre-project levels. Therefore, there will be no significant impacts to important recreation areas due to Project traffic.

Traffic impacts are addressed in greater detail in Exhibit U, which provides additional information on anticipated traffic volumes, peak construction traffic times, potential delays, and temporary road closures; mitigation measures that would be implemented by NWN and the construction contractor to avoid significant traffic impacts; and required coordination with Oregon Department of Transportation and county road officials for necessary road improvements, road closures, and permits for construction and oversized load movements.

⁸ Final Order on Requests for Contested Case and Amendment #12 of the Site Certificate (September 2017), p. 17.

⁹ Final Order on Request for Contested Case and Amendment No. 11 of the Site Certificate (April 2016), p. 136-137.

4.4 Visual – OAR 345-021-0010(1)(t)(B)(iv)

(iv) Visual impacts of facility structures or plumes, including, but not limited to, changes in landscape character or quality;

No new significant visual impacts to protected areas are anticipated from the Project as modified by RFA 13.^{10,11} OAR 345-021-0010(1)(t)(B)(iv) requires an assessment of “Visual impacts of facility structures or plumes, including, but not limited to, changes in landscape character or quality.” The Project would not generate any emissions plumes, so would not cause any visual impacts from air emissions.

Nearly all Project facilities would be underground, so visual effects of the Project are largely limited to potential views of construction activities (including activity at the temporary laydown yards), and potential views of the area along the pipeline right-of-way and powerline alignment right-of-way that would be cleared of vegetation. All of these would be temporary impacts; construction will be phased lasting from approximately July 2025 through November 2029, and any cleared rights-of-way would be revegetated following completion of construction. Permanent above-ground facilities as proposed by RFA 13 are limited to the NMCS (including a new compressor building and two dehydration trains), above-ground appurtenances at the Newton, Stegosaur, and Medicine well pads, and the control and operations building. All of these locations are surrounded by mature forest vegetation that would effectively screen them from public view. Additionally, potential views of these facilities from the important recreation areas (i.e., the JBHR and Lower Columbia River Water Trail) would be blocked by both terrain and vegetation. Table T-2 describes the locations of the identified recreation areas and geographic features that would serve to block potential views of the Project; Figure T-1 is a set of topographic maps that show the recreation area locations and intervening terrain.

As described in Table T-2, the visual impact of the Project on all important recreation areas would be negligible. Based on an assessment of screening due to topography, both important recreation areas may have partial views of the Project. However, from both important recreation areas, the only portions of the Project that may be visible are the cleared pipeline right-of-way and cleared powerline alignment right-of-way located within the timber lands south of US-30, and actual views are likely to be partially to entirely screened by vegetation. If visible, the cleared rights-of-way would be seen in the context of a patchwork of actively managed timber lands including clearcuts and regenerating areas and a network of logging roads. In addition, the long viewing distances would make these features difficult to distinguish. The cleared rights-of-way through the timber lands, therefore, would not represent an unusual visual feature in the area, and would not be considered a significant change to existing visual quality.

¹⁰ Final Order on Requests for Contested Case and Amendment #12 of the Site Certificate (September 2017), p. 17.

¹¹ Final Order on Request for Contested Case and Amendment No. 11 of the Site Certificate (April 2016), p. 137.

Table T- 2. Potential Visual Impacts to Important Recreation Resources

Protected Area	Potential Project Visibility	Potential Visual Impact
<p>Julia Butler Hansen Refuge</p>	<p>Some potential visibility of portions of Project in hills south of US-30, from island units nearest the Project. View of the NMCS, well pad appurtenances, and control and operations building blocked by terrain for entirety of the JBHR (see Figure T-1).</p>	<p>Negligible. Potential views of the Project from refuge headquarters and primary public use areas in the Mainland Unit are largely blocked by vegetation within the JBHR and also by terrain. Some portions of the pipeline and powerline alignment rights-of-way may be visible from the Mainland Unit, at a distance of at least 11.7 miles. Some portions of some of the island units closer to the Project may have increased views of pipeline and powerline alignment rights-of-way at a minimum viewing distance of about 4.6 miles. However, where visible, the rights-of-way would be seen in the context of actively managed commercial timber lands with a network of logging roads and a patchwork of clearcuts and recovering harvested areas, so would not represent new or unusual visual features in the landscape. Additionally, the island units are accessible only by water and reportedly receive little public use (USFWS 2010) so there would be few viewers affected. The NMCS, well pad appurtenances, and control and operations building would not be visible from any point in the JBHR.</p>
<p>Lower Columbia River Water Trail</p>	<p>Some potential visibility of portions of Project in hills south of US-30. View of the NMCS, well pad appurtenances, and control and operations building blocked by terrain (see Figure T-1).</p>	<p>Negligible. Potential views of the Project along the Trail are largely blocked by vegetation and terrain. Some portions of the pipeline and powerline alignment rights-of-way may be visible, at a minimum viewing distance of at least 5.1 miles. However, where visible, the rights-of-way would be seen in the context of actively managed commercial timber lands with a network of logging roads and a patchwork of clearcuts and recovering harvested areas, so would not represent new or unusual visual features in the landscape. The NMCS, well pad appurtenances, and control and operations building would not be visible from any point along the Trail.</p>

5.0 Minimization and Mitigation Measures – OAR 345-021-0010(1)(t)(D)

OAR 345-021-0010(1)(t)(D) A description of any measures the applicant proposes to avoid, reduce or otherwise mitigate the significant adverse impacts identified in paragraph (B);

As described in Section 4, the Project as modified by RFA 13 will have no significant, direct adverse impact on any important recreational opportunity in the Analysis Area. Indirect disturbance effects associated with traffic, noise, or visual aspects of the Project as modified by RFA 13 would not lead to an indirect loss of any important or identified recreational opportunity. Consequently, no mitigation measures for recreation are proposed.

6.0 Monitoring Program – OAR 345-021-0010(1)(t)(F)

OAR 345-021-0010(1)(t)(F) The applicant's proposed monitoring program, if any, for impacts to important recreational opportunities.

Because construction and operation of the Project as modified by RFA 13 would have no significant adverse impacts on recreational opportunities in the Analysis Area, and no mitigation specific to recreation is warranted or proposed, no monitoring program for recreation is proposed.

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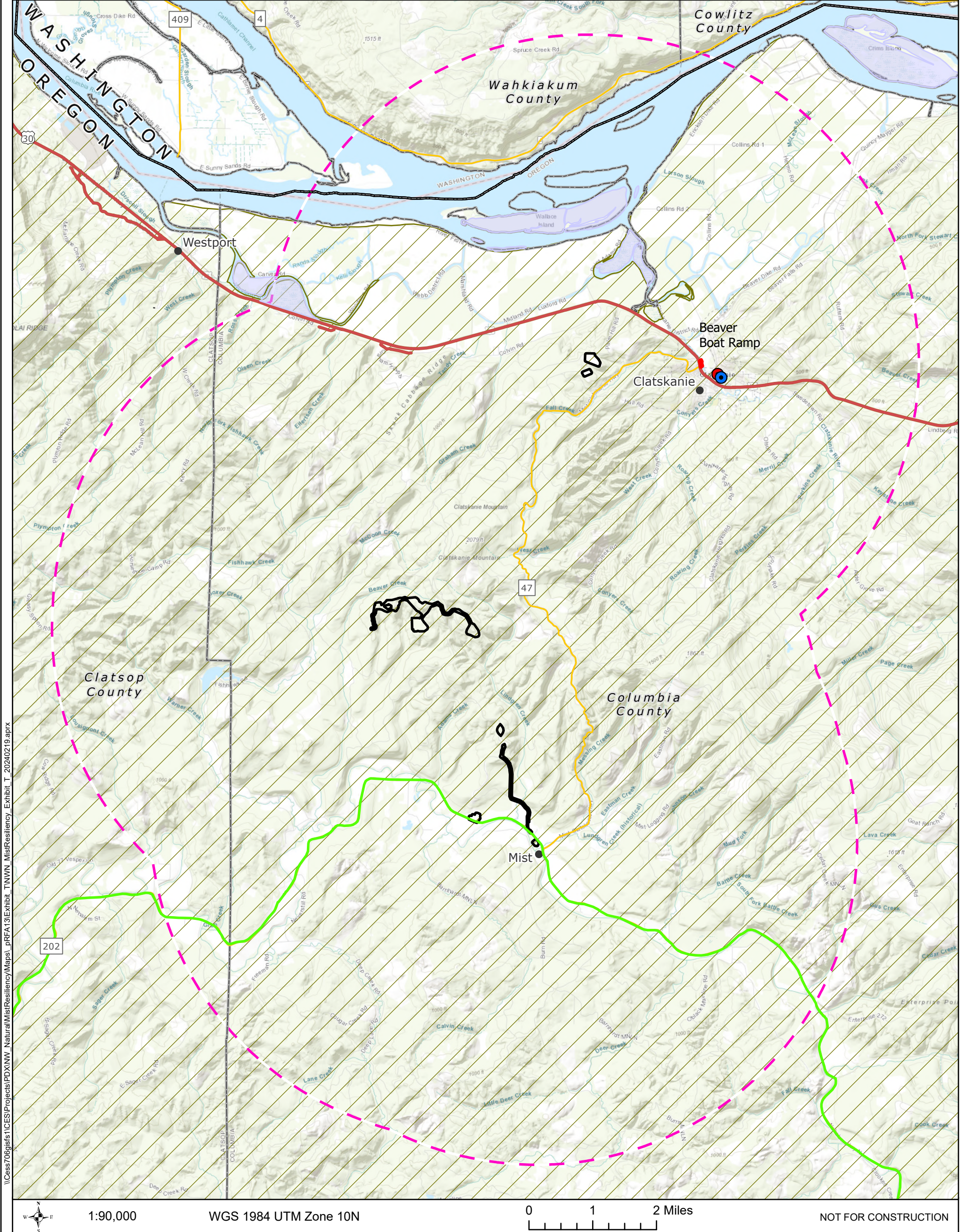
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1:90,000 WGS 1984 UTM Zone 10N 0 1 2 Miles NOT FOR CONSTRUCTION

Mist Resiliency Project

**Figure T-1
Recreation Areas**

COLUMBIA COUNTY, OREGON

- Site Boundary
- Analysis Area (5-mile Buffer)
- City/Town
- County Boundary
- State Boundary
- US Highway
- State Highway
- County Highway
- Cope's Park
- Clatskanie City Park
- Beaver Boat Ramp and Park
- Julia Butler Hansen Refuge for Columbian White-tailed Deer
- Veronia To Astoria Bike Route
- North Coast Travel Management Area

