

1 **3.10 HISTORICAL AND CULTURAL RESOURCES**

2 This section describes potential impacts on historical and cultural resources in the Project Area that may
3 result from construction, operation, or decommissioning of the Project. This section includes a discussion
4 of the existing cultural context for the Project Area, results of background research and field surveys, and
5 proposed mitigation measures. Appendix 3.10-1 includes the Phase I cultural resources prepared for the
6 Project.

7 The Washington State Department of Archaeology and Historic Preservation (DAHP) considers “cultural
8 and historic resources” as property types that represent human culture and heritage, including sites,
9 buildings, structures, objects, districts, traditional cultural places, and cultural or historic landscapes that
10 have been identified and documented as being significant in local or state history, architecture,
11 archaeology, engineering, or culture.

12 **3.10.1 Study Methodology**

13 For this resource, the study area includes the maximum area of disturbance for the Project features and
14 associated ground disturbance, as well as a 150-foot survey area surrounding the features. For the
15 purposes of this investigation, the study area was delineated using the High Probability Areas and Low
16 Probability Areas model provided by DAHP. This approach allowed the survey crew to focus efforts on
17 areas that have a higher overall potential for cultural resources. The study area and research design was
18 submitted to DAHP for review in May 2016 for a Project layout which included two WTG strings. As
19 described in Section 2.11, subsequent to the surveys being completed, the Applicant chose to remove the
20 northern string of WTGs from the Project, thereby reducing the overall Project footprint. A subsequent
21 submittal was made to DAHP in October 2017.

22 The location of the gen-tie line has also changed since DAHP’s review of the study approach and removal
23 of the northern WTG string. The currently proposed full gen-tie line was surveyed in July 2018.

24 For purposes of the analysis in this section of the EIS, the following areas are therefore defined:

- 25 • 2016 study area: the area described in the 2016 submittal to DAHP, including two WTG strings
26 and an earlier version of gen-tie-line alignment
- 27 • 2018 survey area: the area surveyed in accordance with the May 2016 submittal to DAHP and a
28 subsequent submittal to DAHP in October 2017.

29 A cultural resources literature review for the 2016 study area was conducted in May and July 2016 and
30 October 2017 (Chambers Group, Inc. 2017). This involved an analysis using the Washington Information
31 System for Architectural and Archaeological Records Data (WISAARD) online database maintained by the
32 DAHP and review of the National Park Service’s National Register of Historic Places (NRHP) database,
33 General Land Office (GLO) maps (U.S. Surveyor General 1856, 1868, 1873, 1874, and 1898), and inspection
34 of relevant USGS maps. Literature was reviewed for a one-mile search radius around the study area using
35 previous cultural resource surveys and identified archaeological sites, historical markers, and historic
36 period properties. Published books and journals and other publicly available resources describing the
37 cultural history for the Project study area and the surrounding area were also reviewed.

38 In addition to a literature review, three pedestrian field surveys were completed from September 7
39 through September 26, 2016; September 20 through October 18, 2017; July 1 through July 10, 2018; and
40 July 16 through July 21, 2018 (with a supplemental effort on, and August 10, 2018) by Chambers Group

1 and included over 50 percent of the approximately 2,610-acre study area. The survey reviewed all
2 accessible areas within the 2016 and subsequent 2017 and 2018 study areas for any indication of surface
3 or subsurface cultural materials, including cultural modifications to trees and archaeological features on
4 the landscape.

5 The pedestrian surveys were conducted in all safely accessible High Probability Areas. Reconnaissance-
6 level surveys were conducted in poorly accessible High Probability Areas and all Low Probability Areas
7 (approximately 2,610 acres). In accessible High Probability Areas, survey transects occurred in 15-to-30-
8 meter-wide transects, accompanied by systematic placement of shovel test probes (Figure 3.10-1). A
9 handheld submeter accuracy Global Positioning System unit was used to maintain transect intervals during
10 the survey. The transects were surveyed intensively, and where visibility was poor (less than 30 percent
11 ground visibility), subsurface shovel test probes were placed to access the presence or absence of
12 subsurface materials. Shovel test probes were approximately 35 to 40 centimeters in diameter and
13 excavated to a minimum depth of 40 centimeters, when possible. A total of 250 shovel test probes were
14 conducted in the 2016 and subsequent 2017 and 2018 study areas. Most of the 2016 as well as all
15 subsequent study areas were found to be largely inaccessible, particularly when attempting to traverse
16 linear transects for any extended distance horizontally on foot. Inaccessibility was primarily due to
17 disturbance from historic and modern logging activity that covers at least 80 percent of the all proposed
18 study areas and areas with greater than 30-degree slopes within the survey area. In all Low Probability
19 Areas, the reconnaissance-level survey was conducted unless areas included proposed design features.
20 No fewer than two shovel test probes were placed in the immediate vicinity of all proposed WTG locations.
21 Spacing of shovel test probes depended on ground surface visibility and local field conditions (landforms,
22 geology, and other obstructions). This methodology was applied to all subsequent field visits.

23 All work was conducted under the direction of individuals who meet the Secretary of the Interior's
24 Professional Qualification Standards (NPS 1994) and are Registered Professional Archaeologists.

25 Chambers Group initiated coordination with DAHP prior to conducting the survey. DAHP indicated that
26 formal review will begin once they were contacted by local, state and/or the federal representative
27 responsible for consultation regarding the Project.







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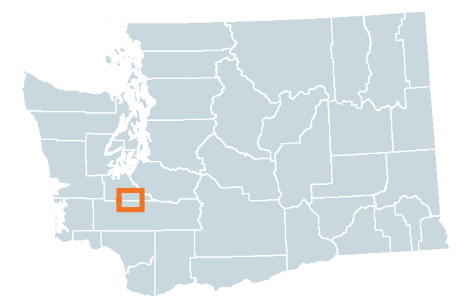
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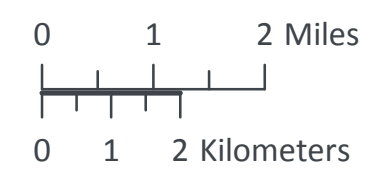
**FIGURE 3.10-1
STUDY AREA**



-  Study Area
-  Gen-Tie Line Corridor
-  Gen-Tie Micrositing Corridor
-  Project Area
-  Turbine Micrositing Corridor
-  Work Area



SOURCES: CHAMBERS GROUP 2017, LEWIS CO. 2016, THURSTON CO. 2016, USGS NHD 2017, WSDOT 2017



1 **3.10.2 Regulatory Framework**

2 The cultural resources inventory was prepared pursuant to SEPA (Chapter 43.21C RCW; WAC Chapter 197-
3 11). More specifically, the survey and this section were prepared pursuant to the provisions of the SEPA
4 checklist requirements and Chapters 27.44 (Indian Graves and Records) and 27.53 (Archaeological Sites
5 and Resources) of the RCW as they pertain to cultural resources and historic preservation.

6 This section was also prepared pursuant to Chapter 4 of Lewis County’s Comprehensive Plan (as
7 Amended), which outlines Land Use Objective 7 and Policy 7.6, the Land Use Element Ordinances 1218
8 and 1219 (2010), and the Lewis County Countywide Planning Policy 13 (2013). The county-level policy
9 reflects the guidelines set forth in Goal 13 of the statewide GMA (RCW 36.70A) with regards to cultural
10 resources.

11 The Thurston County Comprehensive Plan (TCCP) addresses historic preservation in much the same
12 manner as Lewis County, following Goal 13 of the statewide GMA. Chapter 2 of the TCCP (2005), Land
13 Use, addresses the county’s efforts to preserve archaeological and historical sites as they pertain to land
14 use and development. Chapter 10 of the TCCP details the county’s approach to preservation and
15 management of archaeological and historic resources (2005).

16 Although the Project site is located exclusively on private land, the Applicant is requesting an ITP for
17 potential take of marbled murrelet with coverage for take of bald and golden eagles and an HCP is in
18 progress. This activity requires compliance with Section 106 of the National Historic Preservation Act
19 (NHPA), as outlined in 36 CFR Part 800 – Protection of Historic Properties, as amended. Therefore, cultural
20 resource studies completed to date have been conducted in accordance with SEPA, Lewis and Thurston
21 counties’ guidelines and GMA Goal 13, and Section 106 of the NHPA guidelines for cultural resources.

22 **3.10.3 Tribal Consultation**

23 Outreach efforts with local Native American tribal representatives were initiated by the Applicant via
24 letter and email notification on May 18, 2016. Project information was provided to the Confederated
25 Tribes of the Chehalis Reservation and the Nisqually Indian Tribe to identify any potential tribal concerns
26 related to the proposed Project actions and location. Emphasis was made to determine whether any
27 Traditional Cultural Properties or other properties of cultural significance are present within the 2016
28 study area. Additional communication attempts were made after the initial outreach and before the field
29 survey efforts began. These included follow-up emails and phone calls to the Confederated Tribes of the
30 Chehalis Reservation and the Nisqually Indian Tribe on July 27, 2016. Both tribes were contacted via phone
31 while the cultural resources survey effort was being conducted to provide the opportunity for tribes to
32 comment and/or visit the 2016 and subsequent 2017 and 2018 study areas. The Project received an email
33 from Jackie Wall of the Nisqually Indian Tribe requesting a larger map for reference and later a response
34 indicating that the tribe is waiting for formal consultation from the lead agency to respond (Chambers
35 Group, Inc. 2016). On May 22, 2017, Ms. Wall sent a letter to Thurston County requesting participation
36 and/or a site visit on surveys for this Project. The letter was forwarded to Chambers Group PI (Ms. Nixon)
37 on August 18, 2017, who then followed up with Ms. Wall via email. Ms. Nixon also telephoned Ms. Wall
38 on August 25, 2017, to follow-up on the email and see if the tribe was interested in participating and/or
39 visiting the Project Area. Ms. Wall indicated she will like to have two Native American monitors accompany
40 the crew on the upcoming survey for the proposed gen-tie line and WTG locations and that the Tribe will
41 support their time with this support. Ms. Nixon followed up with Ms. Wall with meeting location

1 information later the same day. Due to Project delays that delayed survey dates, only one Native American
2 monitor (Jamie Gehring) accompanied the crew on subsequent surveys in 2017.

3 As described in Section 1.5.1, Lewis County, as lead SEPA agency, provided notification of the DS and DEIS
4 Scoping Notice to DAHP and the following tribes: Nisqually Indian Tribe; Squaxin Island Tribe;
5 Confederated Tribes of the Chehalis Reservation; Cowlitz Indian Tribe; Quinault Indian Nation; and
6 Puyallup Tribe of Indians. Both the Cowlitz Indian Tribe and the Nisqually Indian Tribes submitted scoping
7 comments to Lewis County. Lewis County has also notified these tribal nations of the issuance of this DEIS.

8 **3.10.4 Affected Environment**

9 **3.10.4.1 Prehistoric Overview**

10 This section provides a brief overview of human occupation in and around the 2016 study area. This region
11 has a long history of human occupation, with the earliest evidence of settlement during the Late
12 Pleistocene-Early Holocene transition, circa (ca.) 13,000 years before present (B.P). Prehistoric material
13 culture in this region has been categorized by Ames and Maschner (1999) into periods that define
14 technological, economic, social, and ideological elements. Within these periods, archaeologists have
15 defined cultural intervals specific to prehistory within western Washington, including the 2016 study area.

16 **Paleoindian Period (14,500 – 12,500 years B.P.).** Evidence indicates that early maritime cultures migrated
17 into the Pacific Northwest during the late Pleistocene, around 16,000 years ago, and exhibited diversified
18 collecting, fishing, and hunting economies (Dillehay et al. 2008, Erlandson et al. 2007, Fedje et al. 2011).
19 Early chronologies of these cultures are mainly focused on projectile point typology from sites located
20 along major river systems or along the coast. The earliest artifacts in western Washington date to the Late
21 Pleistocene-Holocene Transition, ca. 16,000 to 8,000 calibrated years B.P. Large fluted “Clovis-style”
22 points denote the Paleoindian Period, found in the same region but as isolates lacking context, are also
23 some of the earliest clear examples of human occupation of the North American continent (Davis et al.
24 2012).

25 **Archaic Period (12,500 – 6,400 years B.P.).** This period represents the warmest and driest portion of the
26 Holocene Epoch in the Pacific Northwest region. Archaeological sites from this period are still rare, due in
27 part to the continuing rise of relative sea level until about 5,000 years ago that will have inundated many
28 Late Pleistocene-Holocene sites. The available artifact assemblage demonstrates that people lived in small
29 hunter and gatherer groups that foraged, fished, and hunted seasonal game (Binford 1980). These sites
30 contain small blades and small leaf-shaped points (classified as Cascade Points) and have been used to
31 argue for Archaic occupation in this region (Chatters et al. 2011). The most discussed and reported Archaic
32 sites are known as “Olcott” sites (Kidd 1964). Olcott sites usually lack absolute dates, are located on older
33 terrace landforms above rivers, and contain assemblages dominated by expedient tool types such as
34 scrapers, cobbles, and debitage, in addition to partially intact large lanceolate and stemmed projectile
35 points (Chatters et al. 2011).

36 **Early Pacific Period (6,400 B.P. – 3,800 years B.P.).** During the early Pacific Period, dramatic changes in
37 archaeological records are the result of an increase in population size, winter sedentism, and increased
38 reliance on stored foods (Prentiss et al. 2005). The archaeological record demonstrates a proliferation of
39 bone tools, specifically unilaterally and bilaterally barbed harpoon heads used for harvesting resources
40 from the estuaries and bays along the coast (Ames and Maschner 1999). Ground stone and antler also
41 begin to appear in the archaeological record at this time (Morgan 1998).

1 **Middle Pacific Period (3,800 – 1,500 years B.P.).** During this period, sea levels were stabilized, and
2 temperatures were becoming cooler and wetter. As populations became larger and more sedentary,
3 about 2,000 years B.P., remains of plank houses, and manifestations of wealth and social stratification
4 begin to appear in the archaeological record. Archaeological features reflecting more intensive food
5 storage techniques also become much more common as the populations started to focus on the
6 preservation and processing of salmon. As well as food technology, the occurrence of points increased
7 and these artifacts became much more specialized. A diversification of food sources is evident after about
8 2,000 years B.P, and populations began using more specialized hunting tools to focus on specific species
9 at certain times of the year. Many items depicting personal wealth and status also appeared during this
10 period. Personal adornment artifacts such as stone and shell beads, brooches, and items made of local
11 copper are found in the ethnographic record from this time. Other items associated with status also
12 appeared, such as larger houses and housing complexes, more sophisticated food storage systems with
13 greater capacity, and art (Morgan 1998).

14 **Late Pacific Period (1,500 – 250 years B.P.).** The archaeological record of the past 1,500 years shows many
15 similarities to the material culture ethnographically documented in the 19th and early 20th centuries in
16 the Pacific Northwest. Regional tool and craft specialization began to appear, although whether it was the
17 result of regional need based on functionality and/or ethnic and cultural differences along the Pacific
18 Coast is debated (Chatters et al. 2011). This tool specialization can also be seen in the size of points
19 becoming smaller and very specialized. Population sizes increased until about 1,000 years before present,
20 when newly introduced diseases and other factors began to affect the overall health of the society
21 (Morgan 1998).

22 **3.10.4.2 Ethnography**

23 The Native American tribes that inhabited this region were part of a larger aboriginal group linked by their
24 common Coastal Salish language. Ethnographic study and detailed observation of the Coastal Salish by
25 European American explorers, traders, and settlers began during the late eighteenth century with Euro-
26 American contact. Most of the early contact with the native populations of the region took place during
27 expeditions such as those of George Vancouver (A.D. 1791 – 1795) and Lewis and Clark (A.D. 1792 – 1805)
28 (Lamb 1984). Descriptions by Vancouver and others of the Coastal Salish were the first glimpse by any
29 Euro-American at their lives and culture.

30 As Euro-American contact with the Coastal Salish increased, more meaningful ethnography was produced.
31 In the mid-to-late nineteenth century, government-sponsored expeditions were sent to the region to
32 make treaty negotiations and express other governmental concerns to the local populations. By this time
33 though, the population size of the Coastal Salish was greatly decreased due to the introduction of foreign
34 diseases and attempted assimilation of native groups into Euro-American society (Boyd 1999). As time
35 progressed and the ancient ways of the Coastal Salish were almost completely lost, ethnography began
36 to focus more on the modern lifeways of the Coastal Salish rather than their ancient traditions.

37 The study area (2016, and as revised 2017 and 2018) for this Project is in the same area as a group of
38 Coastal Salish that speak a dialect called Upper Chehalis (Hajda 1990). While significant cultural variation
39 did exist between Coastal Salish populations, all shared certain characteristics. The most significant and
40 documented characteristic is a reliance upon salmon as a dietary staple (Suttles and Lane 1990). The
41 Coastal Salish and, more specifically the Chehalis, lived in winter village complexes located along the coast
42 or in river valleys. The nearest of these known villages was documented at the confluence of the Chehalis

1 and Skookumchuck rivers (Marr et al. 1980). These villages were composed of plank houses, built in the
2 shed-roof tradition, although gambrel and gable roof houses were sometimes utilized.

3 The Nisqually Indian Tribe also considers portions of the study area part of their traditional resource use
4 area. This area encompasses the cities of Tenino, Olympia, and Dupont and extends east to Mount Rainier.
5 As of 2005, there were approximately 5,719 Native Americans living on the Nisqually Reservation in
6 Thurston County.

7 **3.10.4.3 Historic Overview**

8 With the removal of the native populations from the river valleys and coastal regions, large numbers of
9 Euro-American settlers moved in. Aided by treaties enacted during the 1850s, which allowed them to
10 acquire unsettled land, immigrants moved in to exploit the natural resources of the Upper Chehalis for
11 wealth. Members of a small exploration band led by Michael Simmons first documented the area in 1844.
12 Several years later, Simmons' group returned with their families to start the first settlement known as
13 Centralia (Citizens of Centralia 1977). In 1852, a freed black man named George Washington Bush, whose
14 father was a slave and emigrated from the Oregon Territories in the 1850s, bought a large parcel of land
15 near the confluence of the Skookumchuck and Chehalis rivers. Bush would later sell off plots of his land,
16 forming the historic core of the town of Centralia (Hajda 1990).

17 In 1864, a reservation of approximately 4,200 acres was established for the Upper Chehalis people in
18 Oakville. The tribe then became a confederation, establishing an autonomous government in 1939. In
19 1963, the Indian Claims Commission awarded compensation for 840,000 acres deemed to have been
20 originally in native ownership (Ruby and Brown 1986).

21 Large portions of the study area first left federal control and ownership through a grant to the Northern
22 Pacific Railroad. The land was then surveyed by GLO between 1856 and 1898 without any notable
23 discoveries by the surveyors. Large-scale commercial timber harvest began in the region in 1900, when
24 Frederick Weyerhaeuser bought 900,000 acres of southwestern Washington forestland from Northern
25 Pacific (Hajda 1990). By 1905, Washington State had become the largest lumber producing state in the
26 country (Abbot 2004). Extensive timber harvest and reforestation have occurred within the study area
27 since this time (Chapman et al. 1996).

28 **3.10.4.4 Previous Cultural Resource Investigations**

29 *2016 Study Area*

30 A literature review was conducted through the online WISAARD database in May and July 2016 and a
31 second review prior to conducting the initial field surveys. Additional record searches were done in
32 October 2017 prior to subsequent surveys for Project Area changes and to assess a portion of the
33 proposed gen-tie line alignment. Eleven studies were identified: four within the 2016 study area and seven
34 within a one-mile radius of the 2016 study area. These studies identified 31 resources within a one-mile
35 radius of the study area directly north of the Project in Thurston County. The previous studies identified
36 a single isolate prehistoric artifact and 29 historic-period structural and archaeological sites, all are within
37 the 1-mile search radius of Project study area. No previous sites have been found within the 2016 study
38 area. Table 3.10-1 summarizes the previous studies and identified resources. A map of these areas is not
39 provided in this document as their location is confidential.

1 **Table 3.10-1. Previous Cultural Resource Studies within the 2016 and 2017 Study Areas**

Location to Project Study Area	National Archaeological Database (NADB)	Title	Cultural Resources Identified in 2016 or 2017 Study Area	Citation
Within the 1 mile 2016 study area	1342734	Phase I Cultural Resources Investigations of the Proposed Northwest Pipeline Corporation – Grays Harbor Lateral Project in Thurston and Grays Harbor Counties, Washington	None	Historic Research Associates, Inc. 2002
Within the 1 mile 2016 study area	1334433	Draft Phase I Cultural Resources Survey Report of Northwest Pipeline Corporation’s Proposed Olympia Lateral Loop Pipeline, Thurston County, Washington (NADB # 1334433)	One small lithic scatter, 30 historic structures and buildings	Historic Research Associates, Inc. 1995
Within the 1 mile 2016 study area	1340863	A Cultural Resource Survey for the 26-inch Pipeline Integrity Project: Pipeline Modification for Internal Inspection (NADB #1342734)	Portions of abandoned railroad grade. The segment recorded was not recommend eligible for NRHP.	Archaeological Investigations Northwest, Inc. 2004
Within the 1 mile 2017 study area	134099	Final TransAlta Centralia Mine, Central Packwood Field and Komah Field Project, Archaeological Resources and Traditional Cultural Places Assessment. Lewis County, Washington	One historic period archaeological site, the Hanaford Valley Home Site (45LE51 0); not recommend eligible for NRHP. one Isolated historic period artifact surface scatter m the Central Packwood Field	Larson Anthropological Archaeological Services Limited 2001

Location to Project Study Area	National Archaeological Database (NADB)	Title	Cultural Resources Identified in 2016 or 2017 Study Area	Citation
			project area, however, the scatter was not recorded as an archaeological site	
Within the 1 mile 2017 study area	1880108	Cultural Resource Survey of the Northwest Pipeline GP Blue Bridge Pipeline Project, Lewis, Clark, Skamania, Klickitat, and Benton Counties, Washington	None	Archaeological Investigations Northwest, Inc 2010

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2 The records search results included a single isolate prehistoric artifact and 29 historic-period structural
3 and archaeological sites within the 2016 and subsequent 2017 study areas. Although the records search
4 did not identify previously recorded resources directly within the 2016 and subsequent 2017 study areas,
5 those that were identified within the one-mile record search radius have been applied in establishing the
6 prehistoric and historic context and resource types expected in this region. Table 3.10-2 lists all previously
7 recorded resources, including relevant data and DAHP eligibility determination, identified within the 2016
8 and subsequent 2017 one-mile study area.

9 **Table 3.10-2. Previously Recorded Archaeological Resources within the 2016 Study Area and 2016 One-**
10 **Mile Study Area**

Trinomial	Quadrangle	Date Recorded	Resource Description	Period	Washington SHPO Eligibility Determination	Proximity to Project Study area
45TN00202	Vail	Original 1989; Updated 2000-01	Prehistoric: lithic scatter	Early to mid-Holocene	Undetermined	Outside
45TN00270	Vail	1991	Historic: Vail Loop Barn	Early 20 th century	Undetermined	Outside
45TN00385	Vail	2009	Historic: Railroad grade	Early 20 th century	Undetermined	Outside

Trinomial	Quadrangle	Date Recorded	Resource Description	Period	Washington SHPO Eligibility Determination	Proximity to Project Study area
45TN00413	Vail	2011	Historic: insulator and downed power pole	Early 20 th century	Undetermined	Outside
45TN00466	Vail	2013	Historic: Chatwood Barn	Built date ca. 1928	Listed on Washington State Heritage Barn Register	Outside
28307	Vail	2004	Historic: Chehalis Western/Vail to South Bay Rail Line	Built date ca. 1928	Undetermined	Outside
21627100200	Vail	1985	Historic: Townsite of Vail	Founded 1928	Undetermined	Outside (within 1-mile radius)
21622230100	Vail	2011	Historic: single-family residence	Built date 1903	Undetermined	Outside (within 1-mile radius)
21622340202	Vail	2011	Historic: single-family residence	Built date 1925	Undetermined	Outside (within 1-mile radius)
21622340100	Vail	2011	Historic: single-family residence	Built date 1950	Undetermined	Outside (within 1-mile radius)
21622340400	Vail	2011	Historic: single-family residence	Built date 1901	Undetermined	Outside (within 1-mile radius)
21622310000	Vail	2011	Historic: single-family residence(s)	Unknown	Undetermined	Outside (within 1-mile radius)
21622310900	Vail	2011	Historic: single-family residence	Built date 1960	Undetermined	Outside (within 1-mile radius)
21622340000	Vail	2011	Historic: single-family residence	Built date 1868	Undetermined	Outside (within 1-mile radius)

Trinomial	Quadrangle	Date Recorded	Resource Description	Period	Washington SHPO Eligibility Determination	Proximity to Project Study area
21622430300	Vail	2011	Historic: single-family residence	Unknown	Undetermined	Outside (within 1-mile radius)
21627100000	Vail	2011	Historic: commercial building	Built date 1928	Undetermined	Outside (within 1-mile radius)
21626221501	Vail	2011	Historic: single-family residence	Built date 1969	Undetermined	Outside (within 1-mile radius)
21626221500	Vail	2011	Historic: single-family residence	Built date 1969	Undetermined	Outside (within 1-mile radius)
21626221400	Vail	2011	Historic: single-family residence	Built date 1969	Undetermined	Outside (within 1-mile radius)
21622310100	Vail	2011	Historic: single-family residence	Built date 1901	Undetermined	Outside (within 1-mile radius)
21622310200	Vail	2011	Historic: single-family residence	Built date 1901	Undetermined	Outside (within 1-mile radius)
21622230100	Vail	2011	Historic: single-family residence	Built date 1901	Undetermined	Outside (within 1-mile radius)
21622240000	Vail	2011	Historic: single-family residence	Built date 1903	Undetermined	Outside (within 1-mile radius)
21622240100	Vail	2011	Historic: single-family residence	Built date 1960	Undetermined	Outside (within 1-mile radius)
21622430100	Vail	2011	Historic: single-family residence	Built date 1965	Undetermined	Outside (within 1-mile radius)

Trinomial	Quadrangle	Date Recorded	Resource Description	Period	Washington SHPO Eligibility Determination	Proximity to Project Study area
21626330000	Vail	2011	Historic: single-family residence	Built date 1901	Undetermined	Outside (within 1-mile radius)
21626310202	Vail	2011	Historic: single-family residence	Built date 1901	Undetermined	Outside (within 1-mile radius)
21626310600	Vail	2011	Historic: single-family residence	Built date 1967	Undetermined	Outside (within 1-mile radius)
21635200000	Vail	2013	Historic: Chatwood Residence	Built date ca. 1920	Undetermined	Outside (within 1-mile radius)
21635420000	Vail	2011	Historic: single-family residence	Built date 1966	Undetermined	Outside (within 1-mile radius)
21635420100	Vail	2011	Historic: single-family residence	Built date 1900	Undetermined	Outside (within 1-mile radius)

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2 **3.10.4.5 Pedestrian Survey**

3 *2016 and Subsequent 2017 and 2018 Study Areas*

4 The surveys resulted in the discovery of one prehistoric isolated artifact and two prehistoric sites. The
5 isolate 1 (ISO-1) was found within a heavily disturbed context (clear cut area) and may have been
6 redeposited by recent activity in the area. Site One (Site-1) was discovered through a positive shovel test
7 probe and consists of three basalt and cryptocrystalline flakes at depths from 20 to 40 centimeters below
8 surface. Due to the dense vegetation and water in this area, the site boundary could not be fully
9 delineated. Site Two (Site-2) consists of a collection of several tested cobbles on the surface. Due to dense
10 vegetation, shovel test probes were not feasible in this location. Additional testing for both sites is
11 recommended to determine the site boundary is recommended to provide eligibility recommendations if
12 these sites cannot be avoided.

13 All resources were closely examined, mapped, photographed, and documented per DAHP guidelines. The
14 isolated finds lack any primary archaeological context and are not recommended eligible under any

1 criteria for the NHPA or the Washington Heritage Register and are not considered eligible for inclusion in
2 the NRHP.

3 *Gen-Tie Line Corridor and Buffer*

4 The supplemental cultural resources investigation was conducted on July 1 through July 10, 2018; July 16
5 through July 21, 2018; and August 10, 2018. The survey was requested to address the gen-tie line portion
6 of the Area of Potential Effect (APE), as well as two new offsite intersection improvement areas and four
7 bridge jump areas added to the APE. The survey methods were consistent with those presented in the
8 technical report, including a systematic pedestrian survey of all accessible high probability areas (HPAs), and
9 reconnaissance-level survey within low probability areas (LPAs) and the portions of the HPAs with poor
10 access. The general conditions throughout the proposed Gen-Tie Line portion were observed as highly
11 disturbed from activities related to the mining and logging industry. No cultural resources were observed
12 during the current survey effort.

13 **3.10.5 Impacts of the Proposed Action**

14 **3.10.5.1 Construction**

15 Project construction activities have the potential to impact cultural resources as a result of ground
16 disturbance. Although no NRHP-listed resources were found within the survey area, ground-disturbing
17 activities have the potential to impact unidentified cultural resources. The mitigation measures provided
18 in Section 3.10.6 include conditions for addressing inadvertent discoveries. In addition, potential impacts
19 to cultural resources may result from increased traffic to the study area associated with construction
20 activities.

21 **3.10.5.2 Operation**

22 Maintenance and repairs to the Project may require ground-disturbing activities. If such activities are
23 planned in areas not previously surveyed, unidentified cultural resources may be potentially impacted. In
24 addition, potential impacts to cultural resources may include increased traffic to the study area associated
25 with operation and maintenance of the Project. Whenever more people are brought into an area, there
26 is an increased risk of artifact collecting from archaeological sites.

27 **3.10.5.3 Decommissioning**

28 Decommissioning of the Project is not anticipated to have an impact on cultural resources unless activities
29 go beyond areas previously disturbed during construction of the Project. If any of the decommissioning
30 activities cause ground disturbance in areas not previously surveyed for cultural resources there could be
31 impacts to undocumented cultural resources.

32 **3.10.5.4 Impacts of the No Action Alternative**

33 Under the No Action Alternative, the Project would not be constructed. There would be no change from
34 current conditions and, therefore, there would be no Project-related impacts.

1 **3.10.6 Mitigation Measures**

2 **3.10.6.1 Construction and Decommissioning**

3 The following mitigation measures proposed by the Applicant will reduce or avoid effects on cultural
4 resources:

5 *Avoidance of Identified Cultural Resources:*

- 6 • Due to the overall poor surface visibility across some of the study area, archaeological monitoring
7 for vegetation and ground-disturbing Project activity will be conducted in areas defined as
8 sensitive for cultural resources based on the results of the survey and High Probability Area
9 modeling. The areas within the study area that have been subject to recent logging activity
10 represent larger percentages of testable ground surface, but the logging slash created safety
11 hazards and limited access during the survey. In the event that the large logging slash deposits in
12 these areas are cleared for Project actions, a qualified cultural resource monitor will be present.
- 13 • At the two sites (Site-1 and Site-2) that have been identified as potential resources but could not
14 be fully investigated because they were located in heavily vegetated areas will be avoided. The
15 one isolate identified during pedestrian surveys will also be avoided.
- 16 • During ground clearing activity, an onsite environmental manager who will know the precise
17 boundaries of the resource will be present to oversee implementation of avoidance measures. All
18 site locations will remain confidential. This site is recommended not-eligible for NRHP under any
19 criteria.

20 *Construction Training and Monitoring:*

- 21 • A cultural resources sensitivity training for personnel working on Project construction will be
22 conducted. The purpose of this training will be to instruct Project personnel on the sensitivity of
23 cultural resources in the Project area, protocols for stopping work and notification in the event of
24 findings, and to provide an overview of the laws that govern cultural resources, as well as to
25 introduce them to the Tribe's perspective on potential impacts. Individuals from potentially
26 affected tribes will be invited to contribute to this training.
- 27 • A qualified cultural resources archaeologist will monitor vegetation clearing and ground-
28 disturbing decommissioning activities that go beyond the previously disturbed areas during
29 construction. If cultural resources are uncovered during decommissioning, work shall halt until a
30 qualified archaeologist can determine the significance of the find, as described per the
31 Unanticipated Discovery Plan (UDP).

32 *Treatment of Unanticipated Discoveries:*

- 33 • A UDP will be developed and reviewed by the County, DAHP, and any affected tribes prior to
34 beginning of construction activities and will be implemented during construction and
35 decommissioning of the Project. If archaeological deposits are encountered during -construction,
36 the provisions of the UDP shall be followed.
- 37 • If any previously unidentified cultural resources are encountered during construction, all work
38 activities shall cease in the immediate vicinity of the site until a qualified archeologist can assess
39 the find and consult with the DAHP to identify appropriate mitigation measures such as avoidance

1 or scientific data recovery. No further construction activities will occur within the vicinity of the
2 discovery until a qualified archaeologist, in concert with tribal representatives and local and state
3 agency representatives, is able to evaluate the significance of the find.

- 4 • Should human remains be discovered during Project activities, all work within 200 feet shall stop.
5 Additionally, the Washington State DAHP (360-586-3065), the Thurston or Lewis County's
6 planning office (depending on which county the discovery was made), the affected Tribes, and
7 the respective county coroner (if human remains are uncovered) shall be contacted within 24
8 hours to help assess the situation and determine how to preserve the resource(s) (Chapters 27.44,
9 68.50, and 68.60 RCW).
- 10 • If human remains are determined to be associated with an archaeological site, the DAHP and any
11 affected Tribes shall be notified. Appropriate measures will be taken to ensure the site is
12 protected from further disturbance until a treatment plan is agreed upon by all involved parties.
- 13 • Compliance with all applicable laws pertaining to archaeological resources will be observed and
14 permits obtained (RCW 27.53 and 27.44 and WAC 25-48) as required.

15 **3.10.6.2 Operation**

16 Project operations are not expected to require excavation or ground disturbance in areas which have not
17 been previously disturbed. Mitigation measures discussed above for construction and decommissioning
18 will be followed in the event of inadvertent discovery of cultural resources during operations. Project
19 operations are not expected to result in adverse impacts.

20 **3.10.7 Connected Action**

21 Construction of the interconnection will involve delivery and installation of a step-up transformer in the
22 Tono substation yard, and conductoring to interconnect the gen-tie line to the step-up transformer, and
23 the transformer to the remainder of the substation. These activities will not require excavation or
24 significant ground disturbance either inside or outside the developed area of the yard. Gravel covering
25 existing developed surfaces may be temporarily displaced by the installation activity and will be replaced
26 or repaired to match pre-existing conditions. No cultural resources have been previously identified at the
27 substation location. Therefore, there is minimal potential for the interconnection activity to affect cultural
28 and historical resources.

29 **3.10.5 Unavoidable Adverse Impacts**

30 The Project has been designed in such a manner as to avoid adversely affecting areas that are potentially
31 eligible for inclusion on the NRHP. The Applicant has conducted surveys for archeological and historical
32 resources and has committed to additional survey in areas where survey has not yet occurred. The
33 Applicant will provide archaeological monitoring for vegetation and ground disturbing in areas where
34 Project activity is defined as sensitive for cultural resources. The Applicant will implement a UDP to
35 address any inadvertent discovery of archeological resources during construction. The Applicant will also
36 implement cultural resources training and will provide a qualified cultural resource archeologist to
37 monitor ground disturbance in areas requiring extensive clearing. Operation will not result in additional
38 impacts to cultural resources, as operations will not involve ground disturbance in any new areas. With
39 the avoidance, minimization, and mitigation measures provided by the Applicant, the Project will not
40 result in impacts to cultural resources that rise to a level of significance.

1 **3.10.6** References

- 2 Abbot, C. 2004. *Starting a Second Century: The Lewis and Clark Centennial Exposition, 1905: Making a*
3 *Timber Industry*. Oregon Historical Society Oregon History Project. Available online:
4 http://www.ohs.org/education/oregonhistory/narratives/subtopic.cfm?subtopic_ID=334. Accessed
5 December 13, 2012.
- 6 Ames, K.M., and Herbert D.G. Maschner. 1999. *Peoples of the Northwest Coast: Their Archaeology and*
7 *Prehistory*. First edition. New York: Thames & Hudson Ltd.
- 8 Archaeological Investigations Northwest, Inc. 2004. A Cultural Resource Survey for the 26-inch Pipeline
9 Integrity Project: Pipeline Modification for Internal Inspection (NADB #1342734).
- 10 Binford, L.R. 1980. Willow Smoke and Dogs' Tails: Hunter-Gatherer Settlement Systems and
11 Archaeological Site Formation. *American Antiquity* 45(1): 4–20.
- 12 Boyd, R.T. 1999. The Coming of the Spirit of Pestilence: Introduced Infectious Diseases and Population
13 Decline Among Northwest Coast Indians, 1774-1874. University of Washington Press. Seattle,
14 Washington.
- 15 Chambers Group, Inc. 2016. Phase I Cultural Resources Inventory of Skookumchuck Wind Energy Project,
16 Lewis and Thurston Counties, Washington. Prepared for Skookumchuck Wind Energy Project, LLC.
- 17 Chapman, J.S., D.V. Ellis, E.E. Forgeng, D.T. Francis, T.J. Hills, and J.J. Wilt. 1996. A Cultural Resources
18 Inventory of the Proposed Worldcom Fiber Optic Cable Project, Portland, Oregon to Seattle,
19 Washington. Archaeological Investigations Northwest, Inc., Report No. 117. Archaeological
20 Investigations Northwest, Inc., Portland, Oregon.
- 21 Chatters, J.C., J.B. Cooper, P.D. LeTourneau, and L.C. Rooke. 2011. Understanding Olcott: Data Recovery
22 at 45SN28 and 45SN303, Snohomish County, Washington. On file at the Department of Archaeology and
23 Historic Preservation, Olympia, Washington.
- 24 Citizens of Centralia. 1977. Centralia, The First Century, 1845-1955. Centralia, Washington: Centralia
25 Chamber of Commerce.
- 26 Davis, L. G., S.J. Macfarlan, and C.N. Henrickson. 2012. A PXRF-based chemostratigraphy and
27 provenience system for the Cooper's Ferry site, Idaho. *Journal of Archaeological Science* 39(3): 663–671.
- 28 Dillehay, T.D., C. Ramirez, M. Pino, M.B. Collins, J. Rossen, and J.D. Pino-Navarro. 2008. Monte Verde:
29 Seaweed, Food, Medicine, and the Peopling of South America. *Science* 320:784–786.
- 30 Erlandson, J.M., M.H. Graham, B.J. Bourque, D. Corbett, J.A. Estes, and R.S. Steneck. 2007. The Kelp
31 Highway Hypothesis: Marine Ecology, The Coastal Migration Theory, and the Peopling of the Americas.
32 *Journal of Island and Coastal Archaeology*, 2:161-174, 2007.
- 33 Fedje, D., Q. Mackie, N. Smith, and D. McLaren. 2011. Function, variability, and interpretation of
34 archaeological assemblages at the Pleistocene/Holocene transition in Haida Gwaii. In *From the Yenisei to*
35 *the Yukon: Interpreting Lithic Assemblage Variability in Late Pleistocene/Early Holocene Beringia*, edited
36 by T. Goebel and I. Buvit, 325–344. College Station.

- 1 Forrest, J. 1997. Cultural Survey of the Capital Peak and Porcupine Ridge Areas that are to be Utilized as
2 Off-site Communications Relay Stations for Fort Lewis. Jones Technologies, Inc (NADB Number 1348391).
- 3 Hajda, Y. 1990. Southwestern Coast Salish. In *Northwest Coast*, edited by W. Suttles. Pp. 503-517.
4 *Handbook of North American Indians*, Vol. 7, W. Sturtevant, general editor. Smithsonian Institution,
5 Washington, D.C.
- 6 Historic Research Associates, Inc. 1995. Draft Phase I Cultural Resources Survey Report of Northwest
7 Pipeline Corporation's Proposed Olympia Lateral Loop Pipeline, Thurston County, Washington (NADB #
8 1334433).
- 9 Historic Research Associates, Inc. 2002. Phase I Cultural Resources Investigations of the Proposed
10 Northwest Pipeline Corporation – Grays Harbor Lateral Project in Thurston and Grays Harbor Counties,
11 Washington.
- 12 Jones Technologies, Inc. 1997. Cultural Survey of the Capital Peak and Porcupine Ridge Areas that are to
13 be utilized as Communications Relay Station (NADB# 1348391).
- 14 Kidd, R.S. 1964. A Synthesis of Western Washington Prehistory from the Perspective of Three Occupation
15 Sites. Unpublished Master's Thesis, Department of Anthropology, University of Washington, Seattle.
- 16 Lamb, K.W. (ed.). 1984. *A Voyage of Discovery to the North Pacific Ocean and Round the World*. London:
17 The Hakluyt Society.
- 18 Lewis County Planning Department. 2010. Lewis County Comprehensive Plan (Amended). Available
19 online: <http://lewiscountywa.gov/communitydevelopment/comprehensive-plan>.
- 20 Lewis County Planning Department. 2013. Lewis County Countywide Planning Policies. Available online:
21 <http://lewiscountywa.gov/attachment/7682/CWPPAdopted16Dec2013.stan.pdf>.
- 22 Marr et al. 1990. The Chehalis People. Confederated Tribes of the Chehalis Indian Reservation, Oakville
23 Washington.
- 24 Morgan, V.E. 1998. *The Sequim Bypass Archaeological Project: Draft Report*. V.E. Morgan, editor, Eastern
25 Washington University Reports in *Archaeology and History* 100-108, Archaeological and Historical
26 Services, Cheney, Washington.
- 27 National Park Service (NPS). 1994. Secretary of the Interior's Professional Qualification Standards.
- 28 Prentiss, W., J. Chatters, M. Lenert, D. Clarke, and R. O'Boyle. 2005. The Archaeology of the Plateau of
29 Northwestern North America During the Late Prehistoric Period (3500–200 B.P.): Evolution of Hunting and
30 Gathering Societies. *Journal of World Prehistory* 19(1):47-118.
- 31 Ruby, R.H., and J.A. Brown. 1986. *A Guide to the Indian Tribes of the Pacific Northwest*. University of
32 Oklahoma Press, Norman, Oklahoma.
- 33 Suttles, W., and B. Lane. 1990. Southern Coast Salish. In *Northwest Coast, Handbook of North American*
34 *Indians*, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

- 1 Thurston County Planning Department. 2005. Thurston County Comprehensive Plan. Available online:
- 2 http://www.co.thurston.wa.us/planning/comp_plan/docs/2009/comprehensive-plan-chapter-10.pdf.