CULTURAL RESOURCES REPORT COVER SHEET

DAHP Project Number: 2022-06-04295

Author: Dave Iversen and Noelle Vasquez

Title of Report:Cultural Resources Assessment for the Jennings Substation,Marysville, Washington, Marysville, Snohomish County, Washington

Date of Report: August 2022

County: <u>Snohomish</u> Section: <u>21</u> Township: <u>30</u> Range: <u>5</u>E

Quad: <u>Marysville</u> Acres: <u>1.0</u>

PDF of report submitted (REQUIRED) Xes

Historic Property Inventory Forms to be Approved Online?
Yes No

Archaeological Site(s)/Isolate(s) Found or Amended?
Yes
No

<u>TCP(s) found? \Box Yes \boxtimes No</u>

Replace a draft?
Yes
No

Satisfy a DAHP Archaeological Excavation Permit requirement? Yes # No

Were Human Remains Found? Yes DAHP Case # No

DAHP Archaeological Site #:

- Submission of PDFs is required.
- Please be sure that any PDF submitted to DAHP has its cover sheet, figures, graphics, appendices, attachments, correspondence, etc., compiled into one single PDF file.
- Please check that the PDF displays correctly when opened.

Cultural Resources Assessment for the Jennings Substation, Marysville, Washington, Marysville, Snohomish County, Washington

Prepared for:

Will Blanchard, PE Substation Engineer Civil&Structural Engineering Snohomish County PUD

Prepared by:

David R. Iversen, M.A., RPA Noelle Vasquez, M.A., RPA ASM Affiliates, Inc. 26231 72nd Ave. NW, Suite 201 Stanwood, Washington 98292 (360) 572-4870

40340.00 August 2022

Table of Contents

Management Summary	ii
1. Introduction	1
Project Description	1
2. Archaeological Context	3
Environmental Setting	3
Cultural Setting	4
Prehistoric Context	4
Ethnohistoric Context	5
Historic Context	6
Previous Research	7
Previous Studies	7
Previously Recorded Cultural Resources	7
3. Research Design and Field Methods	8
Research Design	
Field Methods	
4. Field Results	
5. Conclusions and Management Recommendations	
References Cited	
Appendices	
Appendix A	Previous Research Tables
Appendix BSubs	surface Excavation Results
Appendix C	Snohomish County IDP

List of Figures

Project Location	2
Project Field Results	9
Overview of Open Field	.11
Overview of Gravel Driveway	.12
STPs 12 and 13 Profiles	.12
	Project Location Project Field Results Overview of Open Field Overview of Gravel Driveway STPs 12 and 13 Profiles

Management Summary

ASM Affiliates Inc. (ASM) contracted with the Public Utility District No. 1 of Snohomish County to conduct a cultural resources assessment for the Jennings Substation Project, Marysville, Snohomish County, Washington. The proposed project consists of the construction of a substation. ASM's cultural resources assessment included archival and literature review, agency and tribal coordination, cultural resources survey, and preparation of this technical report. No cultural resources were identified during of this assessment. Based on the results of the survey, ASM is recommending no further cultural resource oversight for the Project.

1. Introduction

This report presents the results of a cultural resources assessment conducted by ASM Affiliates, Inc. (ASM) of Proposed Jennings Substation Project, Marysville, Snohomish County, Washington. The proposed project consists of the constructing a substation. The project area is within Section 21 of Township 30 North, Range 5 East, Willamette Base and Meridian (Figure 1). ASM's assessment consisted of a literature review of site forms and previous cultural resources reports on file at the Washington State Department of Archaeology and Historic Preservation (DAHP) and pertinent environmental, historic, and ethnographic maps and documentation, a field investigation of the project area, and preparation of this technical report to fully document the results of the inventory in compliance with the Washington State Environmental Policy Act (SEPA) and DAHP.

After the introductory chapter, this report includes chapters on the archaeological context, briefly describing the environment, culture history and previous research; on research design and field methods; on field results; and on recommendations for further archaeological work associated with the proposed project.

Project Description

The proposed project is for a new Public Utility District No. 1 of Snohomish County (District) substation located at addresses 7808 & 7728 47th Ave NE Marysville, Washington. The District owned parcel at 7808 is undeveloped land while the parcel at 7728 currently has a building which will be demolished as part of the project. The new construction will include a 1.0-acre substation yard, access driveways, several adjacent pole additions, underground distribution circuits and landscape screening. The project will provide additional electrical capacity and improve electric service reliability in the surrounding service area. Construction is proposed to occur from approximately June of 2023 through September of 2024. The District is the lead agency for the SEPA checklist, and the City of Marysville will manage the land development permitting.





Figure 1.

2. Archaeological Context

This chapter reviews the environmental setting and the prehistoric, ethnohistoric, and historic cultural sequences of the project vicinity and summarizes how pertinent investigations in the general region have contributed to the current constructions of cultural history.

Environmental Setting

Environmental factors affecting human land-use patterns in the project area include Pleistocene glaciation and Holocene climate change. The Cordilleran Ice Sheet began moving south from the coastal mountains of British Columbia approximately 20,000 years ago, representing the last advance of a continental glacier through the Puget Lowland. The Puget Lobe of the Cordilleran Ice Sheet progressed south through the Puget Sound Basin from Canada, reaching its southern extent approximately 17,000 years ago (Porter and Swanson 1998). The advancing front of the glacier blocked drainage channels that previously flowed to the north into Puget Sound and the Strait of Juan de Fuca, forming lakes south of the ice sheet. Glacial outwash and ancestral channels of contemporary river systems in the Puget Lowland drained south through the Chehalis River Valley. Puget Sound embayments formed as the advancing glacier cut deep troughs through bedrock and previous glacial deposits. As the Puget Lobe of the Cordilleran Ice Sheet reached its maximum southern extent approximately 30 kilometers (km) south of Olympia by around 17,000 years ago, the southern edge of the ice sheet remained stationary and stagnated for a short period (Porter and Swanson 1998:210) At around 16,950 years ago, the Puget Lobe receded rapidly northward (Porter and Swanson 1998:210; Thorson 1981). After the retreat of the glacier, the sea level of Puget Sound and much of the world was still lower than it is today. Sea level was rising relative to ground surfaces approximately 9,000 years ago, and the surface elevation of Puget Sound was probably within 5 to 9 meters (m) (16 to 30 ft.) of its present elevation by around 5,000 years ago (Beale 1991; Eronen et al. 1987).

Vegetation patterns in western Washington shifted at least three times in the past 14,000 years due to regional climate changes in the Pacific Northwest. The Northern Puget Sound was characterized by a cool, dry climate between approximately 13,000 and 12,000 B.P. Vegetation at this time included grasslands within open forests of sparse lodgepole pine (Pinus contorta), sedges (Cyperaceae), sagebrush (Artemisia sp.), and an assortment of herbs (Barnosky et al. 1987; Brubaker 1991; Whitlock 1992). Regional climate warmed by approximately 12,000 B.P., and Douglas fir (Pseudotsuga menziesii) and western hemlock (Tsuga heterophylla) became integrated with the existing forest (Whitlock 1992). From approximately 12,000 to 7000 B.P., regional climate became much drier, characterized by higher summer temperatures and an increase in severity and frequency of summer droughts (Barnosky et al. 1987; Brubaker 1991; Whitlock 1992). The regional environment changed to a cooler, moist marine climate after 6000 B.P. An increase in summer precipitation and a decrease in summer temperatures accompanied an increase in the relative abundance of western red cedar (Thuja plicata) and western hemlock, cumulating in a western hemlock Douglas fir-dominated forest (Brubaker 1991; Whitlock 1992).

The Jennings Substation project area is located on a broad valley between Quilceda and Allen Creeks. An early Government Land Office survey demonstrates that the creeks have remained relatively stable over the past ca. 100 years (United States Surveyor General 1872a, 1872b). Soils mapped within the APE consist of Ragnar fine sandy loam and Norma loam. Ragnar soils formed on outwash plains from glacial outwash. The typical sediment profile for Ragnar is 0-2 inches: ashy fine sandy loam; 2-24 inches: ashy sandy loam; 24-60 inches loamy sand. The soil is classified as well draining and the depth to the water table is more than 80 inches (Soil Survey Staff 2019).

Cultural Setting

This section briefly reviews the prehistoric, ethnohistoric, and historic cultural sequence of the Project vicinity. This is a summary of how pertinent investigations in the general region have contributed to the understanding of past utilization of the project area. It is not intended to be an exhaustive account of all research conducted in the area.

Prehistoric Context

The antiquity of human occupation in North America has been the subject of considerable debate, and a number of sites have been suggested to represent very early occupation of the Americas (Dillehay and Collins 1988; Fariña 2015; Guidon and Delibrias 1986; Owen 1984; Taylor 1991). The most widely accepted current model is that humans first entered the western hemisphere between approximately 16,000-15,000 B.P., with a second migration of proto-Clovis peoples occurring between 1,000-2,000 years later (e.g., Pitblado 2011; Waters and Stafford 2014). Humans probably migrated into the Puget Sound region by approximately 12,500 B.P. as glaciers retreated during the Late Pleistocene. Limited archaeological evidence, characterized by lithic artifacts, including the distinctive Clovis-type fluted projectile points, exists for these early populations in the Pacific Northwest region (Ames and Maschner 1999; Carlson 1990).

The earliest archaeological evidence of Holocene exploitation in the Puget Sound region is commonly classified as the Olcott complex. The Olcott complex began around 10,000 B.P. and continued to as late as 4000 B.P., although the chronology of this complex is poorly understood, with various classifications, terminologies, and subdivisions utilized within the literature. Large cobble tools and leaf-shaped projectile points, often heavily weathered, typically characterize Olcott sites. These sites are generally recorded on river and streams terraces, with the Olcott-type site recorded on the south fork of the Stillaguamish River (Carlson 1990; Chatters et al. 2011; Mattson 1985; Nelson 1990).

As the regional climate shifted to a drier pattern, and sea levels stabilized by 5000 B.P., people living in the Pacific Northwest Coast region increasingly relied on marine intertidal resources for subsistence (Ames and Maschner 1999:88-89), although sedentary seasonal winter settlements based on the storage of marine resources may have appeared on the Northwest Coast as early as 7000 B.P. (Cannon and Yang 2006). The specialized fishing industry characteristic of the Puget Sound region and the Northwest Coast in general solidified in the region after 2500 B.P. (Ames and Maschner 1999). Plank houses and specialized fishing implements, including toggled

harpoons, appear in the archaeological record of the Puget Sound region during this time period and likely accompanied an increased reliance on, and surplus storage of, salmon and harvested shellfish (Ames and Maschner 1999; Nelson 1990). Large shell midden sites also appear in the archaeological record at this time and continue into the ethnohistoric period (Ames and Maschner 1999:89), as do small, notched projectile points potentially indicative of bow-and-arrow technology (Ames and Maschner 1999:200; Nelson 1990). Archaeological materials typically associated with shell midden sites in the Puget Sound region include bone, stone, and antler tools, lithic debitage, ground stone implements, and fire-modified rock (FMR), in addition to vertebrate and invertebrate remains, within dark organic matrices. Shell remains represented within these midden deposits represent numerous species of marine bivalves, including oyster (*Ostreola conchaphila*), mussel (Mytilus sp.), cockle (Cardiidae), butter clam (*Saxidomus giganteus*), horse clam (*Tresus nuttallii* and *T. capax*), littleneck or steamer clam (*Protothaca staminea*), and geoduck (*Panopea generosa*), as well as various gastropods (see, for example, Larson and Lewarch 1995).

Ethnohistoric Context

Native groups living in the Puget Sound region at the time of contact generally spoke one of two Lushootseed dialects, Northern and Southern. All of these groups spoke languages assigned by linguists to the Coast Salish language family (Suttles and Lane 1990:485-486). Although there were distinct differences in the practices of speakers of various dialects, and even within groups speaking the same dialect, the people living in the Puget Sound region shared many cultural traits, including a dependence on marine resources, particularly salmon and shellfish, as their primary basis of subsistence, as well as extensive woodworking and basketry technologies. Gill and dip nets, basket traps, weirs, harpoons, and gaff hooks were utilized to catch fish, while shellfish were collected by hand or with digging sticks. Wooden implements, including boxes, water containers, and other domestic items were crafted using adzes, mauls, and wedges made of stone, antler, and wood. Cedar bark was utilized extensively for several purposes, including clothing, basketry, bedding, and cordage. People often occupied winter residences consisting of cedar plank longhouses, although some people lived in similar villages year-round. They also utilized seasonal resource procurement systems, using cedar dugout canoes, trail networks, and portable shelters when traveling to fishing, hunting, shellfish-collecting, and berry-gathering areas in the spring, summer, and early fall. Animals hunted include deer, elk, bear, mountain goat, beaver, seal, and waterfowl and were taken with bow and arrows, clubs, harpoons, pitfalls, deadfalls, and nets. In addition to food, animal resources also provided clothing, bedding, and tools. Numerous types of roots, berries, nuts and other plants were gathered for subsistence as well as medicinal purposes (Gibbs 1877; Haeberlin and Gunther 1930; Smith 1941; Suttles and Lane 1990; Waterman 1973; Waterman and Greiner 1921). Puget Sound groups maintained expansive trading networks within the region, as well as south to the Columbia River, north into present-day Canada, west to the Pacific Coast, and eastward across the Cascade Mountain Range, and they established complex religious, economic, and social structures that were made possible by a surplus of stored marine resources (Holm 1990; Hymes 1990; Suttles and Lane 1990).

The Jennings Substation project area lies within the ethnographic territory of the Northern Lushootseed-speaking Snohomish (Gibbs 1855:431-432; Smith 1941:204; Spier 1936:42; Suttles and

2. Archaeological Context

Lane 1990:486). The Snohomish occupied numerous villages, ranging from Warm Beach to Richmond Beach along the Puget Sound, as well as along the Snohomish River and its tributaries. Four major villages are reported near the mouth of the Snohomish River in the project area vicinity: on the waterfront in the current City of Everett; at Priest Point; at the mouth of Quilceda Creek; and between Priest Point and Quilceda Creek (Lane 1975:11; Smith 1941:208; Spier 1936:35; Waterman ca.1920). The village at the mouth of Quilceda Creek was evidently relatively extensive and home to prominent tribal members, including one of the signatories of the 1855 Point Elliot Treaty, Mowich Sam. The Quilceda Creek salmon run was extremely productive and well known. At least four additional villages are reported along Quilceda Creek upstream from its confluence with the Snohomish River (Tweddell 1953, 1974). Waterman (ca. 1920:296,337) assigned an ethnographic place name translated as "sturgeon place" to Quilceda Creek. In 1855, several representatives of numerous Northern and Southern Lushootseed-speaking tribes, including the Duwamish, Samish, Suquamish, Snoqualmie, Snohomish, Stillaguamish, Swinomish, and Skagit, signed the Treaty of Point Elliott, resulting in the creation of the Tulalip, Swinomish, and Port Madison reservations. The Tulalip Indian Reservation was established in 1873 for members of the Snohomish, Snoqualmie, Skagit, Skykomish, Suiattle, Samish, and Stillaguamish tribes (Lane 1975; Marino 1990; Ruby and Brown 1986:244). The Allotment Act of 1887 resulted in the partitioning of much of the Reservation to non-Native landowners, although several tribal members did register for and receive allotments between 1883 and 1909. The current Tulalip Tribes was organized in 1936 under the Indian Reorganization Act of 1934 (Coil 2004:2-8; Marino 1990:177; Ruby and Brown 1986:245).

Historic Context

Non-natives began arriving in Puget Sound in the late 1700s. The first non-natives to travel south of the Strait of Juan de Fuca were explorers, followed by fur traders and missionaries. The United States took sole possession of the southern half of the Oregon Country, including what is now Washington State, in 1846, and by the early 1850s, Euro-Americans began streaming into Puget Sound, first seeking timber and then lands to establish homes and farms. The United States Congress established Washington Territory in 1853, and Washington gained statehood in 1889. The late nineteenth century saw the proliferation of logging camps and lumber mills throughout the Puget Sound region (Bagley 1929; Whitfield 1926).

Logging activities and transportation-related construction represent the most substantial historic development in the project vicinity. James Comeford and his wife Maria, founders of the town of Marysville, operated a government trading post on the Tulalip Indian Reservation and conducted extensive logging operations and related activities in the area in the 1870s (Cameron et al. 2005; Whitfield 1926). The early GLO survey documented several early settlers and their associated dwellings along the Allen Creek drainage at that time (United States Surveyor General 1872a, 1872b). The town of Marysville was platted in 1885 and incorporated in 1891, with at least 10 sawmills operating in the area by 1906 (Cameron et al. 2005; Whitfield 1926). The Great Northern Railway (GNRR) line was constructed along Quilceda Creek west of the current project area in the late 1880s, with a Marysville depot active by 1891 (Armbruster 1999; Cameron et al. 2005). The Jennings Substation project area is encompassed by a 24.5-acre parcel originally owned by

Ole A. Amundson. A structure is depected on the Amundson property south of the Jennings Substation project area in the early 20th century. No historic developments are depicted on the project properties until the 1970s (Anderson 1910; Kroll Map Company1934, 1952, 1960; Metsker 1927, 1936; United States Geological Survey 1909; 1943; 1956).

Previous Research

The following section summarizes pertinent previous archaeological work conducted within the project vicinity. Appendix A of this report presents the previous studies in tabular form.

Previous Studies

At least 12 previous studies have been carried out within one-mile of the Jennings Substation project area this century (Appendix A). None of these studies intersected the Jennings Substation project aera. The nearest previous study was conducted along 80th Street NE to the north of the current project area (Hushour 2020). Native sediments documented in subsurface excavations conducted for the project consisted of uniform silty sand-sand consistent with Ragnar soils No significant cultural resources were identified as a result of the study.

Previously Recorded Cultural Resources

No previously recorded cultural resources are recorded within or in the immediate vicinity of the project area. However, several archaeological sites are documented within one mile to the west and east of the project area along the Quilceda and Allen Creek drainages, respectively (Bryan 1963; Dunnell and Fuller 1975; Mattson 1985; Miss 2022; Parvey et al. 2020). The sites documented along Quilceda Creek include precontact shell middens (45SN12, 45SN38, 45SN39, and 45SN839) and a precontact lithic scatter (45SN756) while those recorded along Allen Creek represent precontact lithic material (45SN149, 45SN201, and 45SN757).

3. Research Design and Field Methods

This chapter discusses the research design, including expectations for identifying cultural resources within the project area, as well as field methods employed for the Project.

Research Design

Several factors contribute to expectations concerning the likelihood of locating cultural resources within project area. Recorded cultural resources, landform characteristics, documented land use, and previous archaeological work discussed in the preceding sections all contributed to those expectations. Additionally, probability models provided by the DAHP document the landform at high risk for containing cultural material with survey highly recommended. Native populations undoubtably accessed the project area landform while traveling and/or procuring resources in association with the larger villages and campsites along the creek drainages. Cultural resources associated with these types of sites could include flaked tools; bifaces; projectile points; spalls; hand mauls; adzes; cores; ground stone implements; debitage; culturally modified trees; FMR; and/or hearth features. Cultural resources associated with previously logging, railroad construction, and/or the Amundsom occupation of the property could also be present and would most likely date to the late 19th-early 20th centuries.

Field Methods

Archaeologist Noelle Vasquez and Field Technicians Kelina Victor and Elizabeth Pennington conducted a pedestrian and subsurface survey of the project area. Vasquez mapped out 21 shovel test probe (STP) excavations at 20-meter intervals (Figure 2).

STP excavations measured approximately 35-40 cm in diameter and were excavated in 20 cm arbitrary levels. All excavated sediments were passed through ¼-inch mesh hardware cloth and the screen searched for cultural material. Probes were terminated when obstacles such as large rocks precluded further excavation, when glacial sediments were reached, or when cultural material was uncovered. The findings of each STP were recorded on standard forms that include information regarding soil color, texture, composition and observed cultural materials. Appendix B of this report presents the STP results in tabular form. Digital photographs were taken of the project area, each shovel STP, and recovered cultural material. Photographs were recorded on a standard photo log. Project files and field notes are on file at ASM Affiliates, Seattle.



4. Field Results

The northwest side of the project areas is an open field with grass, vegetation, and a partial gravel cover. A gravel driveway leads from 47th Ave west to the field and has some grass on the southern side of the driveway (currently fenced in behind Chet's Cabinets). The business (Chet's Cabinets) is in an existing building that will be torn down according to the project manager. Smokey Point Masonry & Landscape Supply is on the northern side of the driveway. The open field is surrounded by Liberty Square apartments to the north, Glacier West Self Storage to the west, and another open field to the south.

On July 11th, 2022, Archaeologist Noelle Vasquez and Kelina Victor conducted a pedestrian survey of the project area. The project area consists of a long gravel driveway and an open field (Figures 3 and 4). Directly south of driveway is a gravel parking area for Chet's Cabinets followed by a fenced-in grass lawn with some gravel. The open field has gravel laid in the eastern/southeastern portion with grass growing through. The rest of the parcel is covered in tall grass, wheatgrass, and blackberries. Trees line the eastern border of the field on either side of the driveway as well as the north- and south-western corners. The tall grass and wheat grass were especially dominant in the northern 1/3 of the project area and held a lot of moisture.

STP excavations were conducted over the course of two days, July 11-12th. The probes ranged from 35 to 40 cm in diameter and 23 to 100 cm in depth. STPs 1-3 were placed just south of the driveway and STPs 4-21 were placed in three rows of six to cover the open field.

Detailed descriptions of each STP can be found in Table 1. Thirteen STPs were dug to depths of 60-100 cm with similar soil profiles of a reddish-brown sand to grey sand with increasing compaction (Figure 5). Pockets of charcoal were present throughout the subsurface deposits, likely representing natural historic/modern burn episodes. Gravel was compact and dense in the areas where a gravel fill had been laid. In the sandy deposits however, there was little to no gravel present. STP 8 encountered groundwater at 100 cm. SP12 encountered two nondiagnostic glass shards and SP20 was terminated due to a piece of rubber at 18 cm. No cultural resources were found in any STP excavations. The northern portion of the project area and held a lot of moisture.

4. Field Results



Figure 3. Overview of Open Field

4. Field Results



Figure 4. Overview of Gravel Driveway



Figure 5. STPs 12 and 13 Profiles

5. Conclusions and Management Recommendations

ASM conducted a cultural resources assessment for the Jennings Substation Project, Marysville, Snohomish County, Washington under contract to the District. The proposed project consists of substation construction. ASM's cultural resources assessment included archival and literature review, agency and tribal coordination, cultural resources survey, and preparation of this technical report. No cultural resources were identified as a result of this assessment. Twenty-one shovel probes were excavated in the project area. No archaeologically significant material was found during the pedestrian nor subsurface surveys. The Statewide Archaeological Predictive Model assessed the project area as high risk for containing archaeological resources due to the archaeological, ethnographic, and historical significance of the area. About 2/3 of the project area was previously disturbed by a gravel fill layer. When able to excavate below the gravel fill, no cultural resources were encountered. While this cultural resource survey adequately surveyed the project area, the landform is still archaeologically relevant.

Based on the negative survey results, it is recommended that the project proceed as planned with no additional archaeological investigation. However, an Archaeological Inadvertent Discovery Plan (Appendix C) should be implemented and included in construction planning going forward. Construction staff should be trained on how to identify archaeological material and whom to contact if archaeological material is found.

While this survey appropriately sampled the project area, it is possible that cultural material not discovered during this survey could be present within the project area. Such materials may include: concentrations of fragmented shell; bone; fire-modified rock; artifacts such as stone tools or fragments from manufacturing stone tools; cans/bottles/refuge; charcoal; or, organically enriched sediments. Disturbing or altering an archaeological resource or site without a DAHP-issued permit is a punishable action under the Revised Code of Washington (RCW 27.53.060). If disturbance to archaeological resources takes place inadvertently during the project, work should be halted to prevent further disturbance and the DAHP should be contacted. If human remains are encountered, work must cease immediately in the vicinity of the remains, the find must be secured, and the Snohomish County Sheriff and Coroner must be contacted to determine if the site is a crime scene. If the remains are determined by the sheriff not to be associated with a crime scene, the DAHP will assume jurisdiction under the state physical anthropologist, Dr. Guy Tasa (RCW 27.44; 68.50; 68.60).

References Cited

Ames, Kenneth M., and Herbert D. G. Maschner

1999 *Peoples of the Northwest Coast: Their Archaeology and Prehistory*. Thames and Hudson, London.

Anderson Map Company

1910 Plat Book of Snohomish County Washington. Anderson Map Company, Seattle.

Bagley, Clarence, B.

1929 *History of King County, Washington.* 4 vols. S. J. Clarke, Chicago.

Barnosky, Cathy W., Patricia M. Anderson, and Patrick J. Bartlein

1987 The Northwestern U.S. during Deglaciation: Vegetational History and Paleoclimatic Implications. In *The Geology of North America, Volume K-3: North America and Adjacent Oceans during the Last Deglaciation,* edited by W. F. Ruddiman and Herbert E. Wright, Jr., pp. 289-321. Geological Society of America, Boulder, Colorado.

Beale, Harriet

1991 *Relative Rise in Sea-Level during the Past 5,000 Years at Six Salt Marshes in Northern Puget Sound, Washington.* Shorelands and Coastal Management Program, Washington Department of Ecology, Olympia.

Brubaker, Linda B.

1991 Climate Change and the Origin of Old-Growth Douglas-Fir Forests in the Puget Sound Lowland. In Wildlife and Vegetation of Unmanaged Douglas-Fir Forests, edited by Leonard F. Ruggiero, Keith B. Aubry, Andrew B. Carey, and Mark F. Huff, pp. 17-24. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, General Technical Report PNW-GTR-285.

Bryan, Alan L.

1963 *An Archaeological Survey of the Northern Puget Sound*. Occasional Papers of the Idaho State University Museum No. 2. Pocatello.

Cameron, David A., Charles P. LeWarne, M. Allan May, Jack C. O'Donnell, and Lawrence E. O'Donnell

2005 Snohomish County: An Illustrated History. Kelcema Books, Index, Washington.

Cannon, Aubrey, and Dongya Y. Yang

2006 Early Storage and Sedentism on the Pacific Northwest Coast: Ancient DNA Analysis of Salmon Remains from Namu, British Columbia. *American Antiquity* 71:123-140.

Carlson, Roy L.

1990 Cultural Antecedents. In *Northwest Coast,* edited by Wayne Suttles, pp. 60-69. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Chatters, James C., Jason B. Cooper, Philippe D. LeTourneau, and Lara C. Rooke

2011 Understanding Olcott: Data Recovery at 45SN28 and 45SN303 Snohomish County, Washington. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Coil, Glenn B.

2004 Tulalip Reservation Hazard Mitigation Plan. University of Washington, Seattle

Dillehay, Tom, and Michael Collins

1988 Early Cultural Evidence from Monte Verde in Chile. *Nature* 332:150-152.

Dunnell, Robert C., and John H. Fuller

1975 *An Archaeological Survey of Everett Harbor and the Lower Snohomish Estuary-Delta*. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Eronen, Matti, Tuovi Kankamen, and Matsuo Tsukada

1987 Late Holocene Sea-level Record in a Core from the Puget Lowland, Washington. *Quaternary Research* 27:147-159.

Fariña, Richard A.

2015 Bone Surface Modifications, Reasonable Certainty, and Human Antiquity in the Americas: The Case of the Arroyo del Vizcaíno Site. *American Antiquity* 80:193-200.

Gibbs, George

- 1855 Report of Mr. George Gibbs to Captain McClellan on the Indian Tribes of the Territory of Washington. In *Reports of Explorations and Survey, to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean* 1:402-434. Executive document No. 78, 2nd Session, 33rd Congress, Washington.
- 1877 Tribes of Western Washington and Northwestern Oregon. In *Contributions to North American Ethnology*, Vol. 1, pp. 157-241, Department of the Interior, Washington, D.C.

Guidon, Niède, and Gaston Delibrias

1986 Carbon-14 Dates Point to Man in the Americas 32,000 Years Ago. *Nature* 321:769-771.

Haeberlin, H., and E. Gunther

1930 The Indians of Puget Sound. *University of Washington Publications in Anthropology* 4(1):1-84. Seattle.

Holm, Bill

1990 Art. In *Northwest Coast*, edited by Wayne Suttles, pp. 602-632. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Hushour, Jennifer

2020 Cultural Resources Inventory for the 80th Street NE Corridor Improvement Project, Snohomish County, Washington. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Hymes, Dell

1990 Mythology. In *Northwest Coast*, edited by Wayne Suttles, pp. 593-601. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Kroll Map Company

- 1934 Kroll Atlas of Snohomish County, Washington. Kroll Map Company, Seattle, Washington.
- 1952 Kroll Atlas of Snohomish County, Washington. Kroll Map Company, Seattle, Washington.
- 1960 Kroll Atlas of Snohomish County, Washington. Kroll Map Company, Seattle, Washington.

Lane, Barbara

1975 *Identity, Treaty Status and Fisheries of the Tulalip Tribe of Indians*. Document on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Marino, Cesare

1990 History of Western Washington since 1846. In *Northwest Coast*, edited by Wayne Suttles, pp. 169-179. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Mattson, John L.

1985 Puget Sound Prehistory: Postglacial Adaptations in the Puget Sound Basin with Archaeological Implications for a Solution to the "Cascade Problem". Unpublished Ph.D. dissertation, Department of Anthropology, University of North Carolina, Chapel Hill.

Metsker, Charles F.

- 1927 Metsker's Atlas of Snohomish County Washington. Metsker Map Company, Seattle.
- 1936 Metsker's Atlas of Snohomish County Washington. Metsker Map Company, Seattle.

Miss, Christian J.

2022 *Pre Contact Shell Midden (45SN839).* State of Washington Archaeological Site Inventory Form. Document on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Nelson, Charles M.

1990 Prehistory of the Puget Sound Region. In *Northwest Coast,* edited by Wayne Suttles, pp. 481-484. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Parvey, Michele, Eileen Heideman, and Sherri M. Middleton

2020 *Cultural Resources Investigation for the 88th Street NE Corridor Improvement Project, Snohomish County, Washington.* Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Pitblado, Bonnie L.

2011 A Tale of Two Migrations: Reconciling Recent Biological and Archaeological Evidence for the Pleistocene Peopling of the Americas. *Journal of Archaeological Research* 19:327-375.

Porter, Stephen C., and Terry W. Swanson

1998 Radiocarbon Age Constraints on Rates of Advance and Retreat of the Puget Lobe of the Cordilleran Ice Sheet during the Last Glaciation. *Quaternary Research* 50:205-213.

Ruby, Robert H., and John A. Brown

1986 *A Guide to the Indian Tribes of the Pacific Northwest*. University of Oklahoma Press, Norman.

Smith, Marilyn W.

1941 The Coast Salish of Puget Sound. *American Anthropologist* 43:2.

Soil Survey Staff

2019 Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Electronic document http://websoilsurvey.nrcs.usda.gov.

Spier, Leslie

1936 *Tribal Distribution in Washington*. General Series in Anthropology No. 3. Menasha, Wisconsin.

Suttles, Wayne, and Barbara Lane

1990 Southern Coast Salish. In *Northwest Coast*, edited by Wayne Suttles, pp. 485-502. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Swanton, John R.

1952 *Indian Tribes of Washington, Oregon and Idaho.* Bureau of American Ethnology Bulletin No. 145, Smithsonian Institution, Washington, D.C.

Thorson, Robert. M.

1981 *Isostatic Effects of the Last Glaciation in the Puget Lowland, Washington.* U.S. Geological Survey, Open-File Report 81-370.

Tweddell, Colin

- 1953 Historical and Ethnological Study of the Snohomish Indian People: A Report specifically Covering Their Aboriginal and Continued Existence, and Their Effective Occupation of a Definite Territory. Docket No. 125, Cl. Ex No. 10, Seattle, Washington.
- 1974 Historical and Ethnological Study of the Snohomish Indian People. In *Coast Salish and Western Washington Indians, Volume 2,* edited by David Agee Horr, pp. 475-694. Garland Publishing, New York.

United States Geological Survey

- 1909 Mount Vernon Washington, 1:125,000. U.S. Printing Office, Washington D.C.
- 1943 Marysville Washington, 1:62,500. U.S. Printing Office, Washington D.C.
- 1956 Marysville Washington, 1:24,000. U.S. Printing Office, Washington D.C.

United States Surveyor General

- 1872a General Land Office Notes, Township 30 North, Range 5 East, Willamette Meridian. U.S. Surveyor General's Office, Olympia, Washington.
- 1872b General Land Office Plat Map, Township 30 North, Range 5 East, Willamette Meridian. U.S. Surveyor General's Office, Olympia, Washington.

Waterman, Thomas T.

1973 Notes on the Ethnology of the Indians of the Puget Sound. *Indian Notes and Monographs No. 59.* Museum of the American Indian, Heye Foundation, New York.

Waterman, Thomas T., and Ruth Greiner

1921 Indian Houses of Puget Sound. *Indian Notes and Monographs No. 9.* Museum of the American Indian, Heye Foundation, New York.

Waters, Michael R., and Thomas Wier Stafford, Jr.

2014 The First Americans: A Review of the Evidence for the Late-Pleistocene Peopling of the Americas. In *Paleoamerican Odyssey*, edited by Kelly E. Graf, Caroline V. Ketron, and Michael R. Waters, pp. 541-560. Texas A&M University Press, College Station.

Whitfield, William

1926 *History of Snohomish County Washington.* 2 vols. Pioneer Historical Publishing, Seattle, Washington.

Whitlock, Cathy

1992 Vegetational and Climatic History of the Pacific Northwest during the Last 20,000 Years: Implications for Understanding Present-Day Biodiversity. *Northwest Environmental Journal* 8:5-28. Appendices

Appendix A

Previous Research Tables

Title	Author	Date	NADB#
Cultural Resources Assessment for the Community Transit North Park and Ride - Marysville	Berger, Margaret	2007	1348844
Letter to Allyson Brooks RE: Request for Determination of Effects Concurrence I-5 Marysville to Stillaguamish River Vic. Project	Chidley, Michael	2008	1351215
Cultural Resources Assessment of the Tulalip Water Pipeline	Earley, Amber	2010	1354503
Archaeological Survey and Assessment for the Marysville Special Care Facility Project, Marysville	Meidinger, Brett	2011	1680545
Letter to Adam Escalona RE: Cultural Resources Review for the AT&T Mobility Project, SN2892 Maryville Grove	Baldwin, Garth	2014	1685061
Archaeological Investigation Report: Jennings Park Phase One Riparian Restoration, 6915 Armar Road, Marysville, Snohomish County, Washington	Syvertson, Laura	2018	1692049
A Cultural Resource Review for PSE's Proposed Phase I District Regulator and 8-inch Gas Main Installation (Project 107057927), Marysville, Washington	Baldwin, Garth L.	2019	1692626
Archaeological Investigation Report: Cedar Field Renovation Project, Marysville, Washington	Bush, Kelly	2019	1693092
Cultural Resources Inventory for the 88th Street NE Corridor Improvement Project, Snohomish County, Washington	Parvey, Michele	2020	1694383
Cultural Resources Inventory for the 80th Street NE Corridor Improvement Project, Snohomish County, Washington	Hushour, Jennifer	2020	1694561
National Register Evaluation of Archaeological Site 45SN756, within the 88th Street NE Corridor Improvement Project, Snohomish County, Washington	Parvey, Michele	2021	1695752
Cultural Resource Assessment of a Drain field Replacement Project at 5302 89th Street NE (TPN: 00518100003000), Marysville, Washington	Baldwin, Garth	2022	1696601

Cultural Resources Studies Within 1-mile of the Project Area

Archaeological Sites Recorded Within 1-mile of the Project Area

Trinomial	Description	Recorders (Date)	
SN00012	FCR, CHARCOAL, AT LEAST ONE BASALT FLAKE	Bryan (1963)	
SN00038	PREHISTORIC SHELL MIDDEN, MAMMAL BONES, FCR	Dunnell and Fuller (1975)	
SN00039	PREHISTORIC SHELL MIDDEN, FCR AND HEARTH FEATURE	Dunnell and Fuller (1975)	
SN00149	PROJECTILE POINT FRAGMENT	Mattson (1985)	
SN00201	PRE CONTACT CAMP PRE CONTACT LITHIC MATERIAL	Mattson (1985)	
SN00756	PRE CONTACT LITHIC MATERIAL, OLCOTT	Parvey et al. (2019)	
SN00757	PRE CONTACT ISOLATE, PRE CONTACT LITHIC MATERIAL	Parvey et al. (2020)	
SN00839	PRE CONTACT SHELL MIDDEN	Miss (2022)	

Appendix B

Subsurface Excavation Results

STP	Depth (cm)	Description	Contents	Notes
1	0-16	Brown topsoil; less than 5% gravel inclusions; clumpy and moist soil	Natural flakes of charcoal	
	16-66	Orange-brown silty sand; less than 5% gravel inclusions	Natural flakes of charcoal	
	66-100	Gray-brown silty sand; less than 5% gravel inclusions	Natural flakes of charcoal	Terminated after reaching one meter
2	0-23	Brown compact soil; 90% small subangular gravel		Terminated due to impenetrable soil
3	0-28	Brown silt; 90% small subangular gravel; fine roots in top 13cm	Strip of black plastic in top 10cm	Terminated due to impassable cobbles
4	0-38	Brown silty sand; 25% small to medium subangular gravel; fine roots		
	38-40	Golden brown silty sand; 25% small subangular gravel		Terminated due to impassable cobbles
	0-8	Brown silty sand; 50% small to medium subangular and subrounded gravel; fine roots		
5	8-24	Grey clay; 50% small to medium subangular and subrounded gravel		
	24-45	Dark brown silty sand; 75% small to medium subangular and subrounded gravel; moist soil		Terminated due to impassable cobbles
6	0-19	Dark brown silty sand; 50% small to medium subangular gravel		
	19-44	Grey silty sand; 50% medium subangular gravel	Charcoal layer	
	44-100	Orange-brown silty sand; less than 5% subangular gravel inclusions		Terminated after reaching one meter
7	0-28	Dark brown silty sand; less than 5% medium subangular gravel	Pockets of charcoal	
	28-70	Orangey brown silty sand; less than 5% gravel inclusions		Terminated due to impassable cobbles

STP	Depth (cm)	Description	Contents	Notes
8	0-14	Dark brown silt; less than 5% gravel inclusions		
	14-25	Grey sand; less than 5% gravel inclusions		
	25-100	Orange-brown silty sand; less than 5% gravel inclusions; groundwater		Terminated after reaching one meter
9	0-25	Dark brown silty sand; less than 5% gravel inclusions; fine to medium roots		
	25-54	Reddish brown silty sand; less than 5% gravel inclusions;	Pockets of charcoal	Terminated due to impassable cobbles
	0-35	Dark brown clay; less than 5% gravel; fine roots; tan mottle on E side		
10	35-60	Gray and tan-orange mottle clay sand; less than 5% gravel		
	60-75	Brown with gray mottle clay fine sand; compact soil		Terminated due to impenetrable soil
	0-30	Dark brown fine clay; less than 5% gravel inclusions		
11	30-50	Brown-orange fine sandy clay; less than 5% gravel inclusions		
	50-70	Brown with gray mottle clay fine sand; compact soil; less than 5% gravel inclusions		Terminated due to impenetrable soil
12	0-45	Dark brown-black fine sandy clay; less than 5% gravel inclusions	small clear glass fragment (4cm x 5cm) found at 30cmbs	
	45-70	Brown-orange fine sand; very compact with gray mottle	Medium glass fragment (4cm x 2cm) found at 60cmbs	Terminated due to impenetrable soil
13	0-40	Dark brown-black fine sandy clay; less than 5% gravel inclusions		
	40-75	Brown-orange fine sand; very compact soil; less than 5% gravel inclusions		Terminated due to impenetrable soil

STP	Depth (cm)	Description	Contents	Notes
14	0-20	Dark brown-black fine sandy clay; less than 5% gravel inclusions		
	20-40	Gray fine compacted sand		
	40-80	Brown-orange compacted fine sandy clay		Terminated due to impenetrable soil
	0-30	Dark brown-black fine sandy clay; less than 5% gravel inclusions		
15	30-60	Brown-orange very compacted soil; fine clay sand; less than 5% gravel inclusions		
	60	Brown-orange soil with brown-red mottle; soil was very compacted		Terminated due to impenetrable soil
16	0-38	Brown sandy silt; thin roots with one medium roots and pieces of bark throughout layer		
16	38-70	Reddish brown silty sand; less than 5% gravel inclusions; medium roots		Terminated due to compacted sand
	0-13	Light brown silty sand; thin roots; less than 5% gravel inclusions		
17	13-34	Dark brown silty sand; clumps of sand and clay		
17	34-60	Reddish brown silty sand; clumps of sand and clay		
	61-77	Gray-brown silty sand; clumps of sand and clay		Terminated due to compacted sand
18	0-8	Brown silty loam; 5% small subangular gravel and one 12cm cobble; thin roots from tall grass on surface	Charred wood and flakes of charcoal	
	9-40	Dark brown silty loam with red pockets; 5% medium subangular gravel; massive root at 40cm	Charred wood and flakes of charcoal	Terminated due to massive root
19	0-36	Light brown-gray silty loam; 90% small subangular and subrounded gravel	Modern garbage; plastic granola bar wrapper	Terminated due to dense compact gravel fill

STP	Depth (cm)	Description	Contents	Notes
20	0-27	Dark brown silty loam; less than 5% subangular pebbles; moist, tall grass and wheat grass on surface; fine to medium roots in top 10cm	Possible rubber tire at 18cm	Terminated due to impenetrable rubber
21	0-27	Dark brown silty sand; clumps of sand and clay; less than 5% gravel	Charcoal flakes	
21	27-70	Reddish brown silty sand		Terminated due to compacted sand

Appendix C

Snohomish County IDP

Snohomish County, Washington Inadvertent Discovery Plan

The project area has a high to moderate probability for containing precontact archaeological resources associated with indigenous use of wetlands, freshwater lakes.

In the event that any ground-disturbing activities or other project activities related to this development or in any future development uncover protected cultural material (e.g., bones, shell, bone or stone tools, patches of burned and/or dark organic earth), the following actions will be taken:

1. When an unanticipated discovery of cultural material (see definitions below)

occurs, the property owner or contractor will completely secure the location and contact:

- a. The property owner and project manager;
- b. A professional archaeologist;
- c. The Department of Archaeology and Historic Preservation (DAHP)

(Stephanie Jolivette 360-586-3088, 360-628-2755 cell)

d. The Tulalip Tribe (Richard Young 360-716-2652; The Swinomish Tribe (Josephine Peters (360-466-7352)

- e. The Snoqualmie Tribe (Steve Mullen-Moses 425-888-6551);
- f. The Stillaguamish Tribe (Kerry Lyste, Cultural Resources, 360-572-3072)
- g. The Samish Tribe (Jackie Ferry, Archaeologist 360-293-6404 ext. 215)

h. Snohomish County Planning and Community Development, 425-388-3311.

2. If the discovery is human remains, the property owner or contractor will stop work in and adjacent to the discovery, completely secure the work area by moving the land-altering equipment to a reasonable distance, and will immediately contact: a. The property owner and project manager;

b. The Snohomish County Sheriff's Department (non-emergency 425-388-3393) and the Snohomish County Medical Examiner, J. Matthew Lacey (425-388-3411) to determine if the remains are forensic in nature;

c. If the remains are not forensic in nature the Department of Archaeology and Historic Preservation (DAHP) (Stephanie Jolivette 360-586-3088 and Guy Tasa 360-586-3534); will take the lead on determining the appropriate method of treatment for the remains and will consult with the affected tribes;

d. A professional archaeologist; and

e. Snohomish County Planning and Community Development, (425-388-3311).

Cultural material that may be protected by law could include but not be limited to:Buried layers of black soil with layers of shell, charcoal, and fish and/or mammal bones. Buried cobbles that may indicate a hearth feature (Figure 1);

• Non-natural sediment or stone deposits that may be related to activity areas of people;

• Stone, bone, shell, horn, or antler tools that may include projectile points (arrowheads) (Figure

2), scrapers, cutting tools, wood working wedges or axes, and grinding stones;

• Stone tools or stone flakes (Figures 2 and 3);

• Perennially damp areas may have preservation conditions that allow for remnants of wood and other plant fibers; in these locations there may be remains including fragments of basketry, weaving, wood tools, or carved pieces; and

• Human remains.



Figure 1: Hearth Feature



Figure 2: Example of stone tools



Figure 3: Examples of modified cobbles, expedient stone tools