

CULTURAL RESOURCES REPORT COVER SHEET

DAHP Project Number: _____

Author: Kelly R. Bush and Emma Dubois

Title of Report: Archaeological Survey Report: Residential Development for 87th Avenue NE Townhomes (Parcels 00590700021202, 00590700021300, 00590700022000), Marysville, Snohomish County, Washington

Date of Report: March 21, 2023

County: Snohomish Section: 01 Township: 29 N Range: 05 E

Quad: Lake Stevens Acres: ~12.4

PDF of report submitted (REQUIRED) Yes

Historic Property Inventory Forms to be Approved Online? Yes No

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

TCP(s) found? Yes No

Replace a draft? Yes No

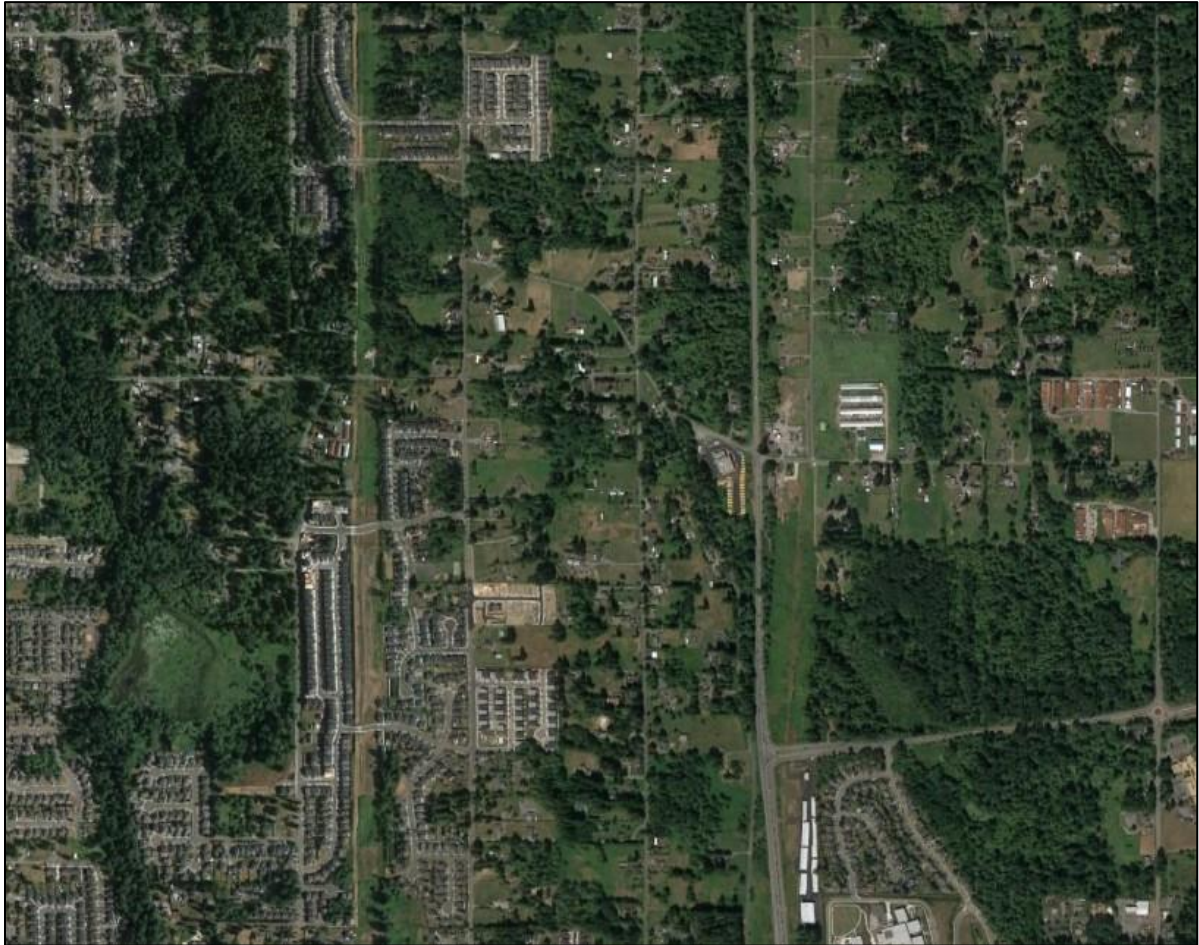
Satisfy a DAHP Archaeological Excavation Permit requirement? Yes # No

Were Human Remains Found? Yes DAHP Case # No

DAHP Archaeological Site #:

**ARCHAEOLOGICAL SURVEY REPORT: RESIDENTIAL
DEVELOPMENT FOR 87TH AVENUE NE TOWNHOMES (PARCELS
00590700021202, 00590700021300, 00590700022000), MARYSVILLE,
SNOHOMISH COUNTY, WASHINGTON**

Prepared for: Reid Development Group LLC



March 21, 2023

Prepared by:



CREDITS AND ACKNOWLEDGMENTS

PRINCIPAL INVESTIGATOR Kelly R. Bush, MA
LEAD AGENCY United States Army Corps of Engineers (USACE)
REPORT AUTHORS Kelly R. Bush, and Emma Dubois
GRAPHICS Ashley A. Yates, Rhododendron O’Boyle, BA
FIELD RESEARCHERS Leah Koch-Michael, MA, Aleta R. Baxley, BA,
..... Emma S. Dubois, BA, and Fiona L. Koehnen, BA
PROJECT CONTACT Michael Reid, Reid Development Group LLC
TRIBAL CONTACTS Steven Moses, Snoqualmie Indian Tribe
..... Kerry Lyste, Stillaguamish Tribe of Indians
..... Richard Young, Tulalip Tribes
DAHP CONTACTS Lance Wollwage, State Archaeologist
..... Rob Whitlam, State Archaeologist
..... Stephanie Jolivette, Local Government Archaeologist

Equinox Research and Consulting International Inc. (ERCI) would like to thank Reid Development Group LLC for retaining us for this survey and for their commitment to the process and archaeological resources.

We extend our thanks to the representatives of the Stillaguamish Tribe of Indians and the Tulalip Tribes for their insights and timely attention to our projects.

The opinions and recommendations in this report are those of ERCI alone and do not necessarily reflect those held by any of the organizations or individuals mentioned above. Any errors or omissions are ERCI’s responsibility.

MANAGEMENT SUMMARY

| | |
|--------------------|---|
| County | Snohomish |
| TRS | Township 29 N, Range 05 E, Section 01 |
| Quad | Lake Stevens |
| Area | ~12.4 acres |
| Lat/Long | 48° 01' 57.86" N/ 122° 06'49.28" W |
| UTM | Zone 10 565902 Easting 5320317 Northing |
| Elevation | 374-392' |
| Nearest Water Body | Lake Stevens |
| Nearest Arch Site | 45SN681 – ~0.5 miles |
| Soils | Tokul gravelly medial loam |
| Geology | Vashon drift till |
| Agency/Project No. | |

| | |
|------------------------|---|
| Parcel ID | 00590700021202 |
| Address | 3922 87th Ave NE, Marysville |
| Property Owner | Joel M. Haack & John R. Haack |
| Property Owner Address | 3922 87th Avenue NE, Marysville, WA 98270 |

| | |
|------------------------|---|
| Parcel ID | 00590700021300 |
| Address | 4112 87th Ave NE, Marysville |
| Property Owner | Neil Gumke, Rickie L. Gumke, & Wood Karment R Trust |
| Property Owner Address | 13233 279th Avenue NE, Granite Falls, WA 98252 |

| | |
|------------------------|---------------------------------|
| Parcel ID | 00590700022000 |
| Address | 4018 87th Avenue NE, Marysville |
| Property Owner | Andemoe LLC |
| Property Owner Address | PO BOX 66, Everett, WA 98201 |

In January 2023, Mike Reid of Reid Development Group LLC, contacted Kelly R. Bush of Equinox Research and Consulting International Inc. (ERCI) to carry out an archaeological survey for residential development for the 87th Avenue NE Townhomes Project (the Project), on approximately 12.4 acres of land along the west side of 87th Avenue NE (Parcels 00590700021202, 00590700021300, 00590700022000), Marysville, Snohomish County, Washington (Section 01, Township 29 N, Range 05 E). The area of potential effect (APE) is bordered by private property to the North, West, and South; 87th Avenue NE borders it on the east.

A JARPA permit has been prepared for the United States Army Corps of Engineers (USACE), the lead agency for the Project. The proposed Project includes construction of approximately 190 townhomes, internal access roads, and utility and stormwater infrastructure. Tree removal will take place across the APE, and the wetland area will be graded and cleared.

On February 14 and 15, 2023, ERCI undertook a research overview, a pedestrian survey, and a stratified subsurface shovel survey (51 subsurface shovel probes) to look for material traces of past human activity.

No archaeological resources were identified during our fieldwork. The management recommendations that we are now providing are based on our findings from this field survey. We recommend that:

1. Structure 1 should be recorded on an Historic Property Inventory prior to its removal.

2. The removal of and subsequent grading of two overgrown wood piles along south portion of west APE boundary to be monitored by a professional archaeologist to be recorded prior to removal to determine if they are relic structures for recordation or just debris piles (Figure 13). A monitoring plan will need to be written and approved prior to this work.
3. The proposed Project proceed as planned, following an unanticipated discovery protocol (UDP) training given to all construction personnel by a professional archaeologist. A copy of the Unanticipated Discoveries Protocol (UDP) (Appendix 3) to be kept on site at all times.
4. In the event that any ground-disturbing activities or other Project activities related to this development or in any future development uncover protected archaeological objects or sediments (e.g., old bottles or cans, charcoal, bones, shell, stone, horn or antler tools or weapons), all work in the immediate vicinity should stop, the area should be secured, and any equipment moved to a safe distance away from the location. The on-site superintendent should then follow the steps specified in the UDP (Appendix 3).
5. In the event that any ground-disturbing activities or other Project activities related to this development or in any future development uncover human remains, all work in the immediate vicinity should stop, the area should be secured, and any equipment moved to a safe distance away from the location. The on-site superintendent should then follow the steps specified in the UDP (Appendix 3).

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1.0 INTRODUCTION

In January 2023, Mike Reid of Reid Development Group LLC, contacted Kelly R. Bush of Equinox Research and Consulting International Inc. (ERCI) to carry out an archaeological survey for residential development for the 87th Townhomes Project (the Project), on approximately 12.4 acres on the west side of 87th Ave NE (Parcels 00590700021202, 00590700021300, 00590700022000), Marysville, Snohomish County, Washington (Section 01, Township 29 N, Range 05 E, Willamette Meridian) (Figure 1Figure 4). The area of potential effect (APE) lies in a residential neighborhood of Marysville north of Lake Stevens. The APE is bounded by 87th Ave NE to the east, and private property on all other sides (Figure 5).

The Project falls within the jurisdiction of the City of Marysville and is required to comply with SEPA. Additionally, a Joint Aquatic Resources Permit application (JARPA) has been prepared. The United States Army Corps of Engineers (USACE) is the Project lead agency. The proposed Project plan includes constructing approximately 190 townhomes on 12.4 acres, internal access roads, and utility and stormwater infrastructure. Tree removal will take place across the APE, and the wetland area will be graded and filled with material from onsite upland areas or imported fill. Existing septic tanks and other residential infrastructure will be removed. The planned maximum depth of disturbance is not known. Some graywater/sewer lines can be buried 30 feet below ground surface, making the possible depth of ground disturbance as much as 30 feet if Project infrastructure connects to existing buried utilities. If septic tanks are installed the depth of disturbance is estimated to be 9-12 feet.

This report documents ERCI's background research and archaeological survey for the Project.



Figure 1: Regional map showing approximate Project location.



Figure 2: USGS Lake Stevens 7.5-minute quadrangle with APE outlined in red.

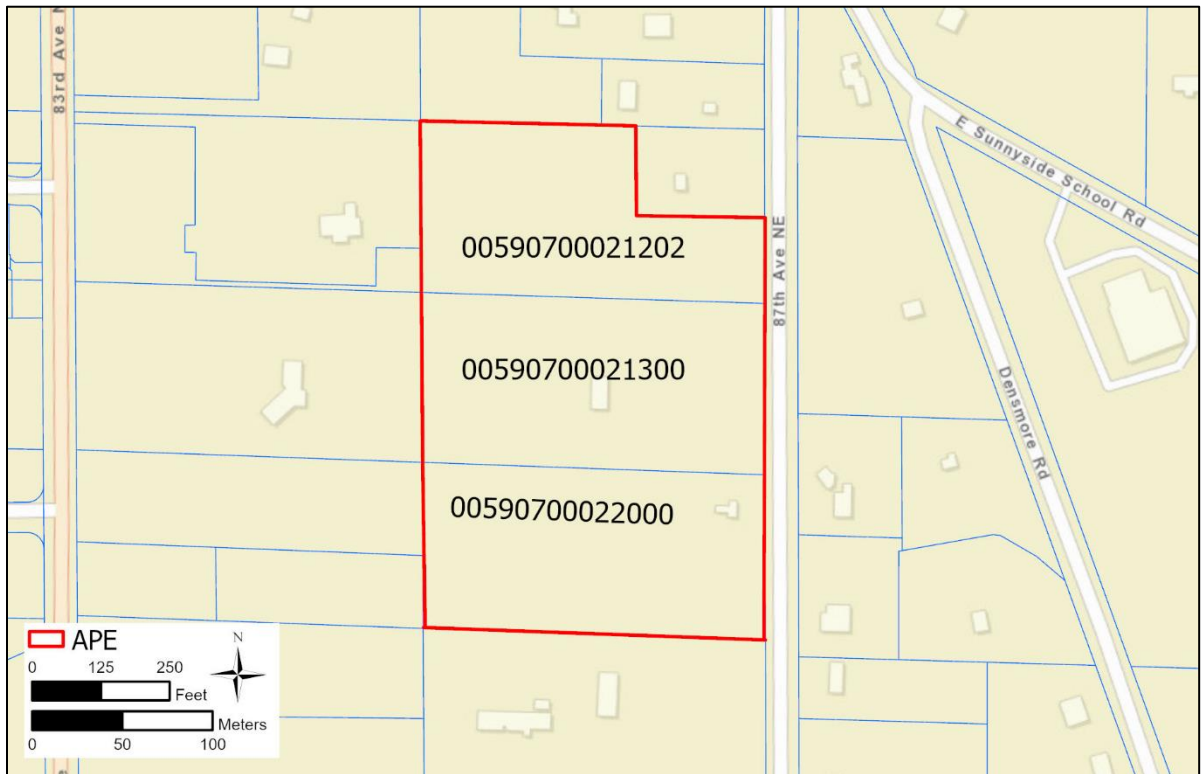


Figure 3: Snohomish County Assessor's map showing APE outlined in red.

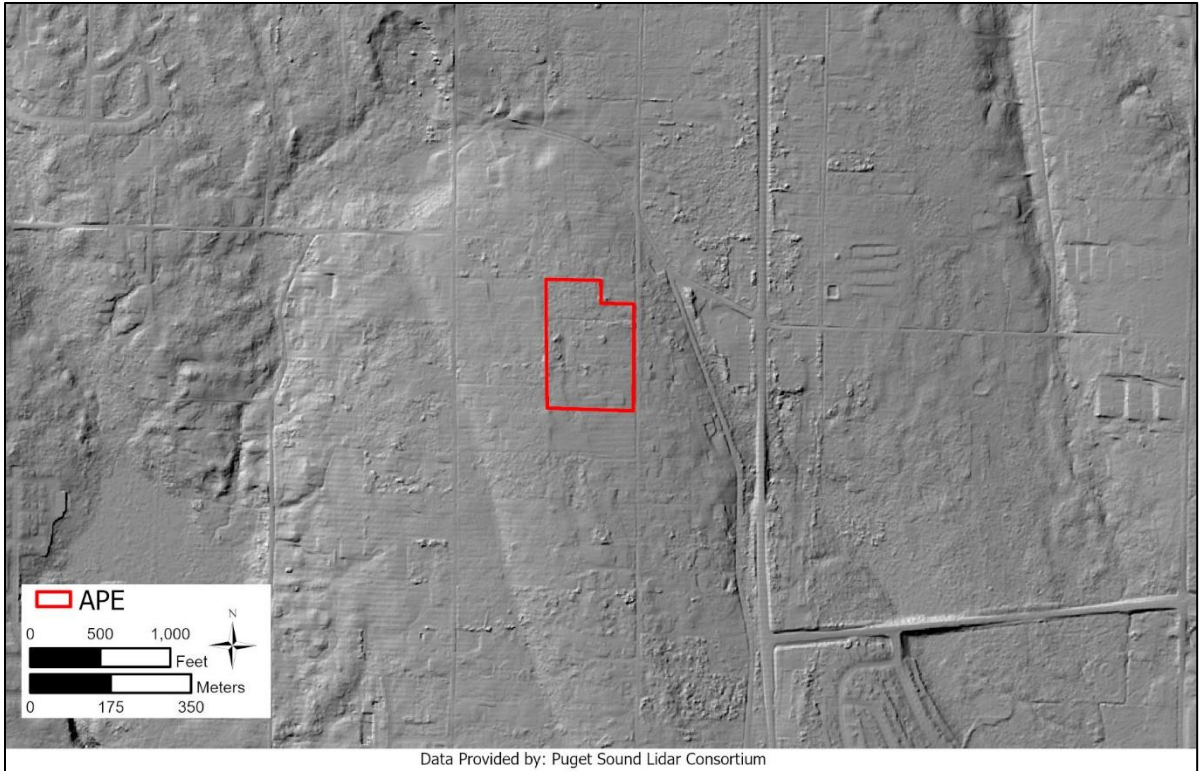


Figure 4: Lidar map with APE outlined in red (courtesy of Puget Sound Lidar Consortium).



Figure 5: Aerial photograph with APE outlined in red.

2.0 REGULATORY FRAMEWORK

The Project is permitted by the City of Marysville; it must therefore comply with the State Environmental Policy Act (SEPA). SEPA requires that all major actions sponsored, funded, permitted, or approved by state and/or local agencies undergo planning to ensure environmental considerations such as impacts on historic and cultural resources are given due weight in decision-making. State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details on SEPA procedures see Chapter 400.

In addition, Snohomish County Code, Chapter 30.32D governs the purpose of the county with respect to archaeological and historic resources, which includes identifying, evaluating, and protecting archaeological and historic resources within Snohomish County and to preserving and rehabilitating eligible historic properties for future generations, in order to

- Safeguard the heritage of the county as represented by those buildings, sites, structures, objects and districts which reflect significant elements of county history;
- Foster civic pride in the beauty and accomplishments of the past, and a sense of identity with county history;
- Assist, encourage and provide incentives to private owners for preservation, restoration, rehabilitation and use of outstanding historic buildings, sites, structures, objects, and districts;
- Promote and facilitate the early identification and resolution of conflicts between preservation of archaeological and historic resources and land uses; and
- Stabilize and improve the aesthetic and economic vitality and values of such sites improvements and objects.

Further, the Project may impact wetlands and requires a Joint Aquatic Resources Permit from the United States Army Corps of Engineers (USACE). Thus, it must comply with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, which requires that federal agencies identify and assess the effects of federal undertakings on historic properties, including archaeological sites and traditional cultural properties, and to consult with others to find acceptable ways to avoid, minimize or resolve adverse effects.

This is a planning procedure and must be completed prior to approval of federal funds or issuance of any license. The federal agency is also required to consult with the SHPO, THPO, or affected Tribes; representatives of local governments with jurisdiction of the area in which the undertaking is happening; and any additional consulting parties, or the public. Code of Federal Regulations (CFR) Title 36 Part 800 provides more detailed guidance on this process and states that the agency must try to coordinate with other review processes and determine the scope, including the level of effort required for both field work and research. The regulations also require that the design of the undertaking use best practices to avoid, minimize, or mitigate any effect on identified historic properties.

Resources protected under Section 106 are those that are listed on or are eligible for listing on the National Register of Historic Places (the National Register). Eligible properties generally must be at least 50 years old, possess integrity of physical characteristics, and meet at least one of four significance criteria (described at 36 CFR 60.4). Historic properties may include archaeological sites, buildings, structures, districts, or objects. Amendments to Section 101 of the NHPA in 1992 explicitly allowed properties of traditional religious and cultural importance to be eligible for inclusion on the Register.

Additional guidance is provided as to what constitutes an effect and the resolution of adverse effects. These guidelines also provide standards for documentation of the process and how to determine which agreement structure to use for the process of management of identified and evaluated historic

properties. The US Department of the Interior (National Park Service), the Advisory Council on Historic Preservation, and additional federal agencies provide guidance on how to fulfill the requirements of this important preservation law.

The USACE is the lead agency and is responsible for consultation and distribution of this report to the appropriate parties.

3.0 TRIBAL CONSULTATION

Agencies for the federal government recognize the long and unique relationship that the federal government has had with federally recognized Indian tribes. These responsibilities have grown from the historic relationship between the Federal government and the Indian tribes including treaties, public laws, policies, statutes, and executive orders. Paramount of these relationships are the treaties in which tribes have ceded portions of aboriginal lands to the U.S. Government in return for promises to protect tribal rights as self-governing communities within reservation lands as well as certain rights to use resources from non-reservation lands.

The Snoqualmie Indian Tribe, the Stillaguamish Tribe of Indians, and the Tulalip Tribes consider the APE within their traditional use area. The Tribes will require detailed development descriptions to adequately review the Project. Representatives of the Stillaguamish Tribe of Indians and the Tulalip Tribes commented on the Project's SEPA Checklist. As lead agency, USACE is responsible for carrying out consultation regarding this project, including providing our report to the affected Tribes. Tribal representatives are the only people qualified to determine if Traditional Cultural Properties exist within the APE, whether they will be affected by the undertaking, and how any suggested management strategies might work. In discussions between Kelly Bush and Tribal representatives, it is clear that the Tribes consider this area to be culturally and historically significant, and are concerned about the effects of development.

4.0 BACKGROUND

Any archaeological undertaking requires knowledge of the physical surroundings (and their evolution) and the duration and kind of human activity in any given area. From this knowledge, archaeologists are able to develop the current best method to carry out field investigations. For example, environmental factors play an important role in the location and preservation of archaeological sites. Sediments and soils are of particular interest to cultural resource managers because they can be used for reconstructing past landscapes and landscape evolution, in estimating the age of surfaces and depositional episodes, and providing physical and chemical indicators of human occupation (Holliday 1992).

4.1 Physical Environment

The APE lies near the low-relief summit of a hill comprising Vashon Stade lodgement till. The surface is nearly level; elevation ranges from 374 to 392 feet above sea level within the APE. The northern third of the property is separated from the rest by an east-west drainage ditch; wetlands and larger trees occur in the north and northwest. The APE's south and southeast are mostly covered with grass, with occasional clumps of blackberry canes; two houses and three sheds remain on the property.

Previous disturbance to the APE includes

- Logging
- Construction and maintenance of roads and infrastructure
- Clearing and construction of buildings and other residential structures.

Geology and Soils

The geology of a region is important to archaeological investigations because it lays the foundation for landforms and soil development. Like the foundation of a house, it determines the shape and subsequently the human use of the landscape above it. How water and sediment move across the surface of the earth is in a great part determined by the geology of a region. This, in turn, affects how people use the land. Slope, available water, exposed bedrock, the success of vegetation are all influenced by what is under the soil. We use the geology of the APE and the surrounding landscape to help assess the likelihood of encountering archaeological objects and features based on how the landscape would have influenced human activities in the past.

Geology Geomorphology Puget Lowland

For most of the last 2.6 million years—the Pleistocene Epoch—the Earth underwent drastic shifts in global temperature caused by periodic variations in the Earth’s orbital eccentricity, axial tilt and precession. The result has been 11 ice ages, during which almost 30 percent of the world’s land surface was covered by sheets of ice as much as 3 kilometers (km) thick (Porter and Swanson 1998). Archaeological evidence supports an inference that the first humans entered the Americas as the most recent deglaciation progressed, and that by about 10,500 years ago, humans had populated North and South America from the Arctic Ocean to Tierra del Fuego.

As the last cold stage intensified, high-altitude valley glaciers grew in depth and extent, and through a process of coalescence formed the Cordilleran Ice Sheet, centered over the Pacific Northwest’s Mountain ranges: Coast Mountains, Cascade Range, Olympic Mountains, Columbia Mountains and Rocky Mountains. Further east in North America, ice simply accumulated in place, creating the Laurentide ice sheet, centered over Hudson Bay. During the cold periods (glacials or glaciations) so much of the world’s water was stored as ice that global sea level dropped by as much as 150 meters (m) (almost 500 feet). At the same time, beneath the ice Earth’s crust was depressed by the enormous weight. Thus, during the last glaciation, much of what is now the coastline was below present-day sea level. The most recent glacial period—the Fraser Glaciation—began about 25,000 years ago and ended by about 10,000. In that time the ice advanced and retreated twice in what is now the area of Puget Sound, first during the Everson Creek Stade and most recently in the Vashon Stade (Easterbrook 1986). At the height of the Vashon Stade—about 17,500 years ago—the APE was under as much as 2 km of glacial ice (Porter and Swanson 1998:206). By about 16,500 years ago the ice was retreating—exposing the Puget Lowland and Cascade Range—and glacial meltwater carried rivers of sediment onto the lowlands, mantling the area with deep deposits that subsequent stream activity covered with alluvium in river valleys and built out deltas in Puget Sound.

As the ice sheets finally retreated the land rebounded and sea level rose. The precise timing of sea-level stabilization (eustasy) and the rate of post-glacial rebound (isostasy) varied from place to place due to a complex interplay between the underlying geology and the surficial geological processes that predominated at any given location. In the Pacific Northwest, most of the coastline has been within a few meters of present-day sea level for about the last 6,000 years (Anundsen et al. 1994), while in the northernmost parts of the Northern Hemisphere the land is still rebounding (Thorson 1980, 1989). Yet, in the Hakai Passage region of the central British Columbia coast, due to the particulars of geology and movement of the receding ice sheet, sea level has been relatively stable for most of the past 15,000 years (McLaren et al. 2014).

On the Salish Sea the picture is equally complex. Due to the gradual south-to-north progression of deglaciation and the relatively rapid rise of sea level in the early postglacial period, sea level in the southern Puget Sound was about 40 m below its present elevation by 8,000 years ago (Thorson 1989).

By contrast, in the northern Puget Sound at the same time, sea level was only about 10 m below its present elevation (Clague 1983; Easterbrook 1963; Kelsey et al. 2004; Thorson 1989).

Across the globe, sea level has been rising gradually since about 8,000 years ago. By about 5,000 years ago, sea level across Puget Sound was about 2 to 3 m below its present level; it reached its present-day elevation only in the last 1,500 years or so (Kelsey et al. 2004; Sherrod et al. 2000). For all these reasons, even though people have been in the region for 14,000 or more years, evidence for human occupation near the present Puget Sound coastline dates to the time since sea level stabilized at or near its present elevation. In general, evidence of earlier coastal occupation has been inundated by the encroaching sea.

Surface Geology

Surface sediments in the APE are Fraser Glaciation Vashon Stade lodgement till, represented as (Qvt on Figure 6). It is described as “a nonsorted mixture of clay, silt, sand, pebbles, cobbles, and boulders (diamicton), but includes some lenses of stratified material” (Minard 1985).

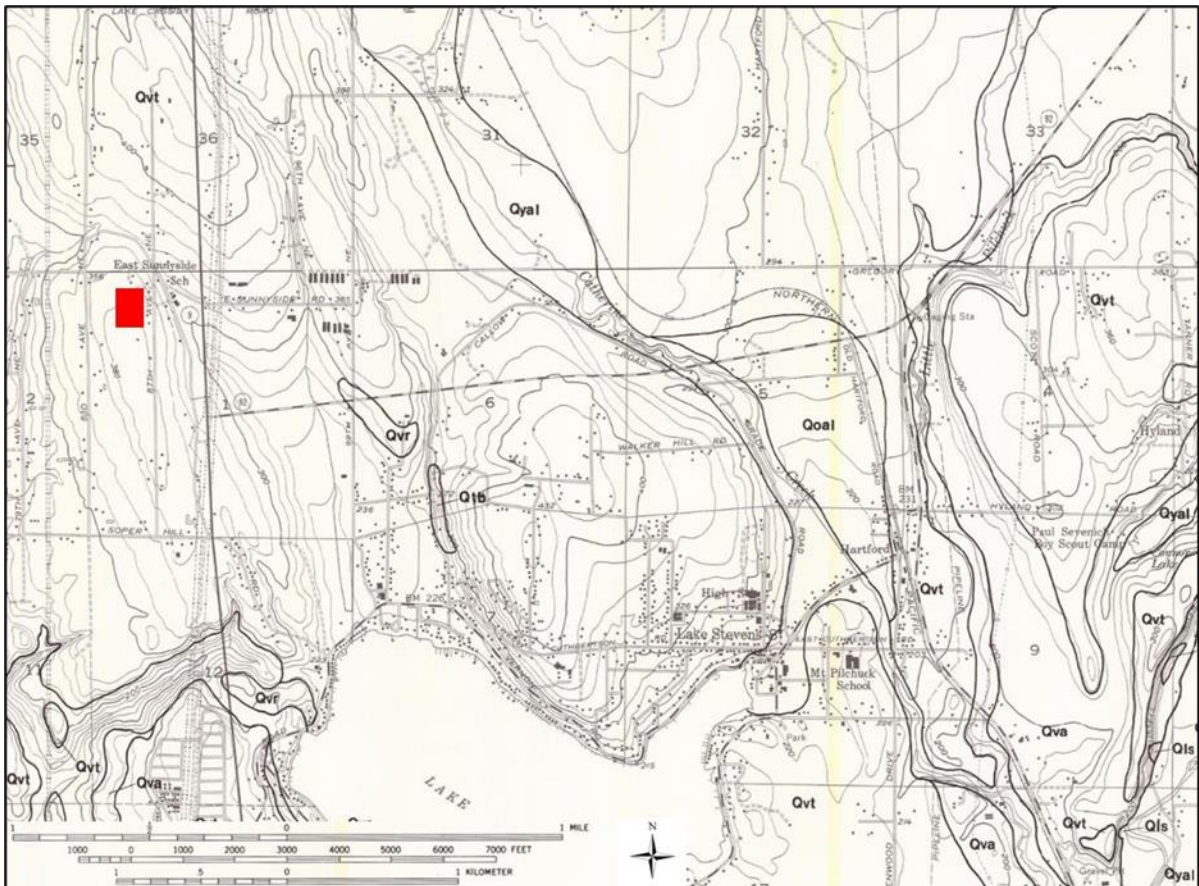


Figure 6: Map of surface geology with approximate Project location shown with red rectangle (after Minard 1985).

Soils

Geologists define a soil as the effect of weathering on naturally or culturally deposited sediments, which creates discernible ‘horizons’ within a vertical soil profile. A soil typically comprises an A horizon that contains decomposed organic material mixed with the upper portion of the so-called parent material—usually naturally occurring deposits that are exposed to weathering. The A horizon lies above one or

more horizons that develop as a result of water percolating downward, carrying chemicals leached from the A and lower horizons. Soils vary from place to place across the landscape, in keeping with the type of sediments that form the parent material and the local environmental conditions. The horizons of different soil types display color variations according to the local soil chemistry. Color, coupled with the nature of the parent material are what enable soil scientists and archaeologists to distinguish one soil type from another, and, most importantly, to tell a naturally developed soil from a stratigraphic profile that results from cultural processes. A soil complex consists of areas of two or more soils, so intricately mixed or so small in size that they cannot be shown separately on the soil map. Each area of a complex contains some of each of the two or more dominant soils, and the pattern and relative proportions are about the same in all areas.

There is one soil type within the APE: Tokul gravelly medial loam, 0 to 8 percent slopes (72 on Figure 7).



Figure 7: Map of soils with APE indicated with green lines (Soil Survey Staff 2019).

Tokul gravelly medial loam, 0 to 8 percent slopes is found on hillslopes and till plains, the parent material is volcanic ash mixed with loess over glacial till. It is moderately well drained with about 18 to 36 inches to the water table. It does not pond or flood on the surface. A typical profile consists of 0 to 1 inches: slightly decomposed plant material, 1 to 2 inches: highly decomposed plant material, 2 to 6 inches: gravelly medial loam, 6 to 9 inches: gravelly medial loam, 9 to 17 inches: gravelly medial

loam, 17 to 24 inches: gravelly medial loam, 24 to 33 inches: gravelly medial fine sandy loam, 33 to 62 inches: cemented material (Soil Survey Staff 2022).

0 to 3 cm; forest litter consisting of leaves and twigs.

3 to 5 cm; black (10YR 2/1) decomposed litter.

5 to 15 cm; gravelly medial loam, yellowish brown (10YR 5/4) dry, dark brown (7.5YR 3/2) moist; moderate medium granular structure; soft, very friable, slightly sticky and nonplastic, weakly smeary; common very fine, fine, and medium and few coarse roots; common very fine discontinuous pores; 5 percent medium rounded concretions; 15 percent gravel; moderately acid (pH 5.8); abrupt wavy boundary

15 to 23 cm; gravelly medial loam, light brown (7.5YR 6/4) dry, brown (7.5YR 4/4) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic, weakly smeary; common very fine, fine, and medium and few coarse roots; common very fine discontinuous pores; 5 percent fine and medium rounded concretions; 15 percent gravel; slightly acid (pH 6.2); clear smooth boundary

23 to 43 cm; gravelly medial loam, light yellowish brown (10YR 6/4) dry, strong brown (7.5YR 5/6) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic, weakly smeary; common very fine, fine, and medium and few coarse roots; common very fine discontinuous pores; 5 percent fine and medium rounded concretions; 15 percent gravel; slightly acid (pH 6.2); clear smooth boundary

43 to 61 cm; gravelly medial loam, very pale brown (10YR 7/4) dry, dark yellowish brown (10YR 4/4) moist; common medium distinct yellowish brown (10YR 5/8) redoximorphic concentrations; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic, weakly smeary; few very fine, fine, medium, and coarse roots; common very fine discontinuous pores; 3 percent fine rounded concretions; 20 percent gravel and 10 percent cobbles; slightly acid (pH 6.2); abrupt smooth boundary

61 to 84 cm; gravelly medial fine sandy loam, pale yellow (2.5Y 8/4) dry, light olive brown (2.5Y 5/4) moist; common fine distinct yellowish brown (10YR 5/8) redoximorphic concentrations; massive; slightly hard, friable, slightly sticky and nonplastic; weakly smeary; few very fine, fine, medium, and coarse roots; common very fine discontinuous pores; 1 percent fine irregularly shaped concretions; 25 percent gravel and 5 percent cobbles; moderately acid (pH 6.0); abrupt smooth boundary

84 to 157 cm; very gravelly sandy loam, light gray (2.5Y 7/2) dry, dark grayish brown (2.5Y 4/2) moist; common medium distinct yellowish brown (10YR 5/8) redoximorphic concentrations; massive; hard, extremely firm, weakly cemented, extremely hard in places; 35 percent gravel; very thin (0.55 mm) discontinuous indurated layer on surface of horizon; moderately acid (pH 6.0) [National Cooperative Soil Survey 2017].

Climate and Biota

Prior to the influx of immigrant settlers, the area in eastern Puget Sound likely supported a mixed prairie/forest vegetation of Western Washington's climax western hemlock (*Tsuga heterophylla*) and western red cedar (*Thuja plicata*) forests (Franklin and Dyrness 1988; Heusser 1983; Pojar and Mackinnon 1994; Turner 1995).

Hebda and Mathewes (1984) cite *Thuja plicata* as occurring in low frequency throughout the region between 10,000 and 6000 years before present (BP). Both cedar and hemlock began to expand following 6800 BP and likely dominated the Puget Lowland by 5000 BP. Cooling temperatures and increased rainfall also resulted in the increase of deltaic wetland and riparian habitat (Hebda 2000; Hutchings and Campbell 2005).

Warm, dry summers and mild, wet winters prevail in this biogeoclimatic zone. The area likely supported a wide variety of large and small mammals, birds, reptiles, and amphibians common to river deltas and foothill transition zones. Bear, cougar, deer and elk are the indigenous large mammals, with small mammals including otter, beaver, fox, porcupine, marten, snowshoe hare, bobcat, chipmunk and squirrel. Prior to immigrant settlement in this area, land mammals and plant resources would have been present during all seasons.

4.2 Cultural Environment

The APE lies in a region that Native Americans had inhabited for at least 14,000 years by the time of contact with Europeans, when Salishan-speaking people occupied vast tracts in the Columbia and Fraser River basins, the inland waters of the Salish Sea, the Puget Lowland, the Cascade Range, and parts of the Pacific Coast between the Columbia River and the Olympic Peninsula. European explorers first entered the region in the late sixteenth century, with Euro-American settlement beginning in the early nineteenth century and increasing after the Donation Land Claim Act of 1850 and Homestead Act of 1862. Here we present a synopsis of the archaeological cultures, traditional Salish lifeways, and pertinent details of the time since non-Native American immigration began.

Archaeological cultures

Archaeological evidence of human presence in Western Washington is at least 14,000 years old in the upland areas, evidenced by finds of Clovis and other early postglacial cultural traditions (Ames and Maschner 1999; Kopperl 2016; Kopperl et al. 2015). Although people have been in the region all along, many archaeological sites on the relatively narrow strip of near-shore landscape were inhabited for the first time between 5,000 and 1,500 years ago due to sea-level changes that resulted from a complex interplay of climatic and geological processes whose magnitude and influence varied with location.

As sea level rose in the early and middle Holocene, river valleys in the Puget Lowlands gradually filled up with sediment, burying any early archaeological sites in the near-stream areas. Thus, evidence for early human occupation around Puget Sound is most often found at higher elevations on landforms that retain sediments from those earlier times, and sometimes deeply buried in river valleys. In those upland areas, where sea level change has had no effect on archaeological visibility, evidence from the early Holocene is widespread, but well-dated contexts are extremely rare—most archaeological assemblages are ‘dated’ by their formal similarity to those recovered from dated contexts. Here we mention only the few well-dated archaeological occurrences.

The earliest period in Western Washington is represented by the Lower Bear Creek Site (45KI839), near the shore of Lake Sammamish. It is a late Pleistocene-Holocene (LPH) transition site with diagnostic lithics of the western North American Paleoindian and Paleoarchaic traditions with two archaeological deposits. A more recent deposit lays above Mazama tephra and peat, dated to 10,168–9710 cal BP. The second deposit is a deeper LPH component below the peat. The deeper component rests on glacial sediments and is below peat and diatomaceous earth. Sediment below the deeper archaeological deposit is 12,770–12596 cal PB (Kopperl 2016). In the North Cascades National Park near Marblemount and Newhalem in the Skagit River basin, the Cascades Pass site yielded artifacts and a cooking feature beneath Mazama volcanic ash, estimated to be 9,700 years old. The site is nine layers of volcanic ash from four Cascade volcanoes that are interbedded with archaeological deposits.

Archaeological deposits include heating and cooking pits, flaked stone, discarded tool fragments, and quartz quarrying debris. Charcoal, burnt seeds and burnt wood also found at all deposit depths. The most recent deposit is dated 2200 and 2000 years old, exhibiting a long history of utilization of the Cascade Pass (Mierendorf et al. 2018:99). The Beech Creek Site (45LE415) in the Gifford Pinchot National Forest of southwestern Washington represents another early Holocene archaeological culture, the Stemmed Point Tradition, at 9,200 years old (Mack et al. 2010).

In the Puget Sound/Cascade regional cultural chronology, the Olcott Phase (ca. 10,000 to 7,550 years ago) succeeds the Fluted Point and Stemmed traditions. Olcott assemblages are remarkably similar to others attributed to the Old Cordilleran Tradition, well known from other parts of the Northwest Coast (Chatters et al. 2011). Typical Olcott artifacts include “Cascade” leaf-shaped bifaces, which bear distinctive edge grinding on the stem, or hafting portion, and often-heavily patinated expedient stone artifacts of medium- to coarse-grained raw material, and lacking in fine-grained silicates.

Although there are numerous sites ascribed to the Olcott Phase, securely dated components are rare, as evidenced by the few mentioned here. Thermoluminescence (TL) dating of fire-modified rock (FMR) from the Woodhaven Site (45SN417), near Granite Falls, produced median dates of 9,316 and 7,886 years ago (Kiers 2014). Two other Olcott Phase sites near Granite Falls, 45SN28 and 45SN303, yielded TL dates on FMR in the same age range, between 7,340 and 9,650 years ago (Chatters et al. 2011).

Between about 7,550 and 4,000 years ago—often termed the middle Holocene—well-dated archaeological sites are more numerous, in part due to the gradual stabilization of sea level near present elevations. The archaeological cultures are called by many names, but the Marymoor Phase and Charles Culture (or Mayne Phase in the San Juan/Gulf Islands) seem most common in the region. Many include microblade technology. Recent radiocarbon dates from calcined bone at the Marymoor Site (45KI9) range between approximately 5300 to 7000 BP (Chatters et al. 2017; Greengo and Houston 1970). Other sites in the region dated to the middle Holocene include Cattle Point (45SJ9) on San Juan Island (King 1950), the Glenrose Cannery Site (DgRr-22) near Vancouver, BC. (Matson 1976), the Milliken Site (DjRi-3) near Yale, B.C. (Borden 1960), and Pender Island (DeRt-1 and -2) in the Gulf Islands, the northern extension of the San Juan Islands (Carlson and Hobler 1993) and the more recent deposits at the Cascade Pass Site (45CH221) (Mierendorf et al. 2018).

Beginning roughly 5,000 years ago western red cedar became more prevalent in the coastal forests, and archaeological evidence reveals the intensification of its use by the people living on the Salish Sea. Specifically, in the Locarno Beach Phase (3,300–3,500 to 2,500 years ago) and the succeeding Marpole Phase, the woodworking triad of the antler wedge, polished nephrite adze bit and hand maul formed an increasingly prominent part of coastal shell middens (Hebda and Mathewes 1984). In addition, evidence for large post and plank houses and food storage comes to the fore (Matson 2010). Artifact assemblages from this time also illustrate increasing social complexity in the form of personal adornment—e.g., finely made nephrite and jadeite labrets—refinements in procurement technology—e.g., ground slate knives, toggling harpoons and fishing paraphernalia—and ascribed status in the form of status symbols interred with infants and very young children, and cranial deformation. These archaeological manifestations comprise the climax Northwest Coast cultural pattern that was encountered when Europeans first visited the region. Among the best known archaeological sites in the region, the Ozette site (2,500 to 500 years ago) (e.g., Daugherty and Fryxell 1967) and the Hoko River site (3,000 to 1,700) (Croes 1995) on the Olympic Peninsula preserved botanical material in addition to the other artifacts common in most Northwest Coast middens, thus revealing a breadth of material culture similar to that known ethnographically, and underscoring the material and social complexity of the regional cultures that existed in the late precontact period.

Finally, the complex interplay of post-glacial geological processes meant that salmon streams were constantly disrupted by cycles of erosion and deposition, which precluded establishment of nearshore marine resources and climax salmon runs between the time of deglaciation and that of sea-level stabilization, which began around 5,000 years ago and ended approximately 1,500 years ago (Fladmark 1975). Thus, prior to about 5,000 years ago, without the abundant, predictable salmon runs, which affect entire river systems and the people who exploit them, the entire region would have been populated by more mobile foragers (Grier et al. 2009; Moss et al. 2007). Since that time, the rich resources available in the maritime and riverine environments encouraged a less mobile lifestyle for some people. We see larger residential villages, increasingly dense populations and complex cultures that existed at the time of European contact (Butler and Campbell 2004; Taylor et al. 2011).

Specific archaeological findings for the APE and surroundings are discussed in Section 4.3.

Salish Ethnography and Ethnohistory

The APE has been home to people for millennia. Ethnographic accounts, the historic record and the oral histories of the people who lived provide stories of the lives and deaths of the area's original inhabitants. The published material for the overall Coast Salish tribal area is primarily written by early and mid-twentieth century ethnographers and archaeologists educated in universities. These ethnographies are precious, but they are one snapshot from one researcher based on interviews with select informants. They are extremely filtered and limited. It is also easy to read these accounts and think that the descendants of the informants too lived in the past, however modern-day tribal communities are vibrant active neighbors and partners in cultural resource management and protection. Their cultures are alive. It is within this context that we provide a brief summary of the published work of these researchers with the understanding that they are limited in scope and content.

A detailed description of central Puget Sound cultures is beyond the scope of this report. Instead, we present a broad overview of their traditional lifeways, including what is known of the precontact cultures, using knowledge gained from ethnography, ethnohistory, and the historic record. For in-depth descriptions of traditional Salish culture, readers are directed to the following references: Adamson (1969), Allen (1976), Amoss (1977a, 1977b, 1978, 1981), Belcher (1986), Bierwert (1990, 1993, 1999), Blukis Onat and Hollenbeck (1981), Boyd (1994, 1999), Bruseth (1926), Collins (1950, 1952, 1974a, 1974b [1946]), Curtis (1913), Dewhirst (1976), Eells and Castile (1985), Elmendorf (1971), Guilmet et al. (1991), Gunther (1928, 1945), Haeberlin (1924), Haberlin and Gunther (1930), Harmon (1998), Harris (1994), Hilbert et al. (2001), Howay (1918), Jorgensen (1969), Kew (1972, 1990, Mansfield (1993), B. Miller (1993, 1995, 1997, 1998, 2001), Miller and Boxberger (1994), Mooney (1976), Moss (1986), M. Smith (1941, 1950, 1956), Snyder (1954, 1980, 1981), Spier (1935, 1936), Stewart (1973, 1977, 1979, 1984, 1996), Suttles (1957, 1958, 1960, 1974 [1951], 1987, 1990a, b), Suttles and Lane (1990), Taylor (1953, 1984), Tollefson (1989, 1992), Tollefson et al. (1996), Tweddell (1974 [1953]), United States (1859), United States Court of Claims (1933), and Waterman (1920).

The APE is within the Snohomish River watershed, downstream of the Skykomish and Snoqualmie River watersheds. The Snoqualmie Indian Tribe, the Stillaguamish Tribe of Indians, and the Tulalip Tribes consider the APE to be within their traditional use areas.

Salish social life

The peoples of the greater Snohomish River watershed, like other groups in the Puget Sound, followed seasonal mobility patterns dictated by the time of year resources became available, generally occupying a permanent village in the winter, and traveling throughout the rest of the year to temporary camps at known fishing, hunting, and gathering locations. Territory boundaries were flexible, often crossed by marriage, kin groups, and resource acquisition areas shared between friendly tribes (Dover and

Fitzpatrick 2015; Miss and Campbell 1991). Winter villages were permanent habitation sites with some occupants residing there year-round. Two or more extended families lived together in a winter house, and during the spring, summer, and fall when individual families left the winter village for their temporary gathering and hunting camps, they would often join with relatives or friends from other villages (Haeberlin and Gunther 1930). Resident families were generally related through the father's line, though there were men who moved to live with their wife's family (Tweddell 1974). Marriages were exogamous, to expand the social and economic resources of the group and strengthen ties with friendly tribes (Miss and Campbell 1991).

Longhouses in the winter villages were constructed of cedar planks over posts. The planks forming the walls were tied to the post, while roof planks were loose so they could be removed to allow sunlight into the house during the day or to act as a chimney for cooking-fire smoke (Bruseth 1926; Dover and Fitzpatrick 2015). Unlike other Puget Sound tribes who tied the wall planks vertically, the Snohomish and Stillaguamish tied them horizontally; however, they did use the swinging entrance doors of the other tribes. The interior poles were often carved (Haeberlin and Gunther 1930). Woven cattail mats covered the floors and walls, and were used as bedding, while beds and storage shelves lined the walls. Baskets were hung from hooks on the poles and dried fish was hung from the roof support pole. Each longhouse was home to up to 30 people (Blukis Onat and Hollenbeck 1981). Winter houses were one to two hundred feet long, often built on Puget Sound or rivers and streams facing the water. The Snohomish built cedar palisades around their villages of more than two houses (Haeberlin and Gunther 1930).

Summer houses constructed for the gathering and hunting camps were often simpler and made of materials that were easily transported. The Snoqualmie made square mat-covered houses with gable roofs (Haeberlin and Gunther 1930: 18). Four poles with forked ends were at each corner, the forked ends held up horizontal poles that made the roof. One side of the house was left open, unless there was bad weather, and the roof and other sides were covered with mats (Haeberlin and Gunther 1930: 18). The Snohomish built square houses, called *g."Elai'tx"*, made of cattail mats tied to wood poles. A *g."Elai'tx"* could be up to 30 feet long and usually housed one family, though if more than one family resided together the house would be built larger to accommodate them (Haeberlin and Gunther 1930:19). Figure 8 is an example of the summer square house style made by the Skokomish, a tribe in the south Puget Sound.



Figure 8: Example of a seasonal house, “Mat House—Skokomish” (1912) by Edward S. Curtis (Northwestern University Library 2003a).

Each village had a potlatch house unless economic circumstances prevented a village from building one. Potlatches were held at remarkable occasions, like when a young person received the name of an ancestor, when the salmon runs began, when a death occurred, when a body was reburied, or after successful hunts. There was a Snohomish potlatch house at the village of *hēbō'lb* near present-day Everett and one at the largest village, *tc'ıl!ā'qs*, at Priest Point (Haeberlin and Gunther 1930).

The peoples of the greater Snohomish River watershed had friendly relations with the tribes east of the Cascades, including the Chelan and Wenatchee, and would trade and intermarry with them. The Snoqualmie Valley hosted one of the principal regional east–west trade routes across the Cascade Mountains, which facilitated frequent interactions between the Salish Sea and Interior Salish groups across the Cascade Divide. Trading parties from the east journeyed through this area on their way to Puget Sound (Haeberlin and Gunther 1930:11; Teit 1928:110, 121). A trail follows the left bank (generally the south side) of the Snoqualmie River, and leads down from the upper valley at Snoqualmie Falls (Murphy et al. 2000). The Stillaguamish shared hunting areas with the eastern tribes under the condition that they stayed within certain boundaries and did not take too much game (Bruseh 1926).

Fish and Fishing

Fish are central to the culture of the Snoqualmie Indian Tribe, the Stillaguamish Tribe of Indians, and the Tulalip Tribes today and to their ancestors.

Salmon was not merely an important part of life – not a recreation and not solely a means of providing food—it was the heart of a whole way of life. It was the staple article of year-round diet; fresh, smoked, or dried...It was a major commodity in trade between tribes. Above all, it was a blessing for which the Indians always gave thanks.... Many religious beliefs and tales concerned salmon, and these were often presented in the rituals.... The ceremonies, stories and taboos exhibited a fundamental concept of the immortality of the salmon and the related desire not to offend it and endanger its return. The methods and skill of the aboriginal fishermen achieved

extraordinary harvests but at the same time ensured continuation of the great runs [AFSC 1970:3].

Salmon was a primary staple in the diet and were most bountiful in the fall and early winter when they traveled up streams to spawn. Winter villages were often at or near important salmon fishing locations. Salmon were caught in a variety of ways, including using weirs, nets, traps, lines, or spears, depending on the number of fish and location within the river or stream. Smelt, herring, flounder, and trout were sought after, and the peoples of the greater Snohomish River watershed fished for sturgeon, cod, and skates. Smelt and herring were prized for their oil, which could be drained and stored (Haeberlin and Gunther 1930). Weirs placed across small streams, or large circular nets tied between two canoes were used to catch large numbers of salmon during spawning. As weirs were labor- and time-intensive to construct, they were often used year after year and repaired as needed. Flounder and trout were caught with long lines or nets, while smelt and herring were caught with rakes made of cedar and ironwood pegs; sturgeon were speared. Fish were dried or smoked to store the meat for winter.

Marine resources such as clams, barnacles, oysters, and crabs also contributed a great deal to peoples subsistence. They were collected from large clam beds along the coast and on the islands (Tweddell 1974). Fishing and processing of the catch, as well as associated feasting, played a large and complex role in the culture of the traditional people of this area. Each part of the process was subject to cultural and religious influence. Success in fishing is related to guardian spirit power, not just for the act of fishing, but also for acquiring materials and building fishing equipment, including canoes, gear, traps, and weirs. Acquiring and maintaining gear to catch and process fish is regarded as equally as important as the ritual paraphernalia to bless the canoes and catch (AFSC 1970).

Gathering and Processing

The daily lives of the traditional people of the central Puget Sound revolved around food gathering, preparation, preserving and presentation. The abundant resources of the riverine and marine environment rewarded hard work. Foods were collected based on seasonal availability and complex social constructs developed to allow for maximum collection efficiency, redistribution, and healthy alliances within and between groups. Women, through the centuries, devised ingenious methods of gathering, preparing, and preserving food. They learned when the edibles were mature and ripe for harvesting, and they developed tools and techniques for the work. They learned which woods to use, and which kinds of fire best suited their needs; they designed and made their own cooking utensils and equipment (Batdorf 1980:4).

Plant resources comprised the bulk of the diet of peoples in the greater Snohomish River watershed. Roots of the brake fern, wood fern, dandelion, wild sunflower, cattail, and wild carrot were collected, along with wild potatoes and bulbs of the camas and wild tiger lily. Wild strawberries, blackberries, elderberries, salal berries, thimbleberries, gooseberries, huckleberries, blueberries, blackcaps, and salmonberries were collected in the summer, along with acorns and hazelnuts. Most of the food gathered in the spring and summer months was processed for storage, to be consumed during the winter when food was scarce (Haeberlin and Gunther 1930). For the Stillaguamish, these resources were especially plentiful in the Kent Prairie near Arlington and the Sauk Prairie on the Sauk River north of Darrington, which they shared with the Sauk. The Snohomish and the Sauk were known to travel to Kent Prairie as well—the Snohomish using a trail from Quilceda Creek to the prairie and the Sauk coming down the North Fork Stillaguamish River (Bruseh 1926). These prairies were regularly burned to promote the growth of berry and other harvestable plants (Blukis Onat and Hollenbeck 1981).

Among the plant resources, the cedar tree was also an integral part of traditional life that provided material for clothing, houses, transportation, and tools as well as spirit power and central stability for the traditional peoples of the Sound. “They held the supernatural cedar in high esteem, for, like the

bountiful salmon of the seas, the ubiquitous tree of the forest gave of itself to sustain and enrich their lives” (Stewart 1984:19). In the contemporary response of Salishan people to the new needs of their peoples, the cedar is once again central to maintaining identity.

The Northwest Coast people are again a positive force in the land, facing up to governments, industry and the business world – and themselves. Many are grasping the tools of education to enable them to compete...and many are focusing on the old art forms. The cedar tree is often central to that art, providing, as in the past, the raw material they need: wood, bark, roots and withes [Stewart 1984:19].

The cedar tree was part of every moment of life in traditional culture and continues to be paramount to the cultural activities of tribal members today. The respect for and importance of this tree is ubiquitous today in ceremonial life, where clothing, regalia, ritual items, firewood, functional items and indeed the buildings used for ceremonies are still made of cedar. Administrative buildings incorporate cedar, as it is still considered a cornerstone of cultural identity (Stewart 1984).

Hunting

Mammals and birds were the primary prey. Birds were successfully hunted in coastal marshlands and other wetlands. Following the traditional philosophy, much of the creature was used. Skin or fur for clothing, flesh for food, sinew and other soft tissue for various uses, bone for tools, weapons, and other functional devices such as straws. Many parts of animals and birds are also used in ceremony (Eells and Castille 1985).

Deer, elk, beaver, bear, mountain goat, wildcat, groundhog, cougar, and birds were hunted using traps, snares, nets, and sometimes bow and arrow. For those who would travel there, the Sultan Basin, north of present-day Sultan, was a popular area for elk hunting in the late summer, while mountain goat was hunted near Index (Tweddell 1974). Stillaguamish hunted mountain goat and elk in the mountains, especially near the headwaters of the South Fork Stillaguamish River. Snares set up on mountain-goat trails could last years (Bruseth 1926). Birds, especially ducks, were caught in large nets or snares. As with all other food, the majority of the meat was dried or smoked to be saved for the lean winter months (Tweddell 1974).

Material Culture

In addition to the archaeological collections and oral histories, much of what we know of traditional Coast Salish material culture derives from ethnographic collections residing in local, regional, and international museums, from the observations of ethnographers and historians, and photographs taken in the nineteenth and early twentieth centuries. However, all these sources of information have been defined by preservation biases. These biases are found in the greater preservation potential of stone and hardy materials, the interpretations made by archaeologists and ethnographers for what they found, and what they deemed important to collect or record. Much is known about stone tools due to how easily they preserve and how important they were to early archaeologists and ethnographers, and it is only the development of a more recent and broader focus on plant and other perishable materials that has provided a similar depth of knowledge.

Stone implements (lithics) were made of local or exotic stone depending on what stone types were available within a group’s use area. Exotic stone was traded for or acquired if tribal members had access to distant quarries. The stone was then flaked or ground to fashion a wide variety of tools. Knives, spear, dart and arrow tips were usually flaked and then hafted to wood or bone for hunting and processing game and plant materials. Mauls, wedges, adzes, and chisels were used for woodworking and other tasks (Eells and Castille 1985). Stone mauls and spear points were polished by placing them in a fire of fir needles then dousing it with water. Wedges made of elk horn and yew were used in conjunction with the mauls for chopping trees. Fishing barbs, toggling harpoon, combs, pins, needles,

and many other items were fashioned from animal bone, horn, antler, teeth, and shell (Haeberlin and Gunther 1930).

Salish groups relied heavily on plants to create functional, decorative, and ceremonial objects. For example, western red cedar provided wood for longhouses, canoes, and storage containers, as well as bark that, when shredded, could be woven to make clothing, capes, and head coverings. Sails made of woven cattails were occasionally used with canoes (Haeberlin and Gunther 1930). Cedar and spruce root were used along with other fiber to make baskets like those shown in Figure 9, for use when foraging or cooking, some so tightly woven that they were waterproof. Plants and trees were also used to construct elaborate fish traps and weirs (Bruseth 1926; Haeberlin and Gunther 1930).



Figure 9: Examples of the kind of baskets made by Coast Salish people, “Puget Sound Baskets” (1912) by Edward S. Curtis (Northwestern University Library 2003b).

Like many Salish groups, the peoples of the greater Snohomish River watershed wove blankets of dog and mountain goat wool, often using alder bark and hemlock to dye the wool pink (Figure 10). Feathers and fireweed were also incorporated into the blankets after being pounded soft. The woolly dogs were kept by women who were weavers, and were valuable possessions, as blankets were given as gifts at potlatch (Haeberlin and Gunther 1930; Tweddell 1974). Some clothing was made from bear and buckskin, especially men’s garments. Women wore cedar skirts and small cedar bark caps in summer and added buckskin shirts and leggings in winter. Among the many uses for marine shell, clam shell disc beads—“shell money”—were used for trade and as ear and nose adornments (Haeberlin and Gunther 1930:29).

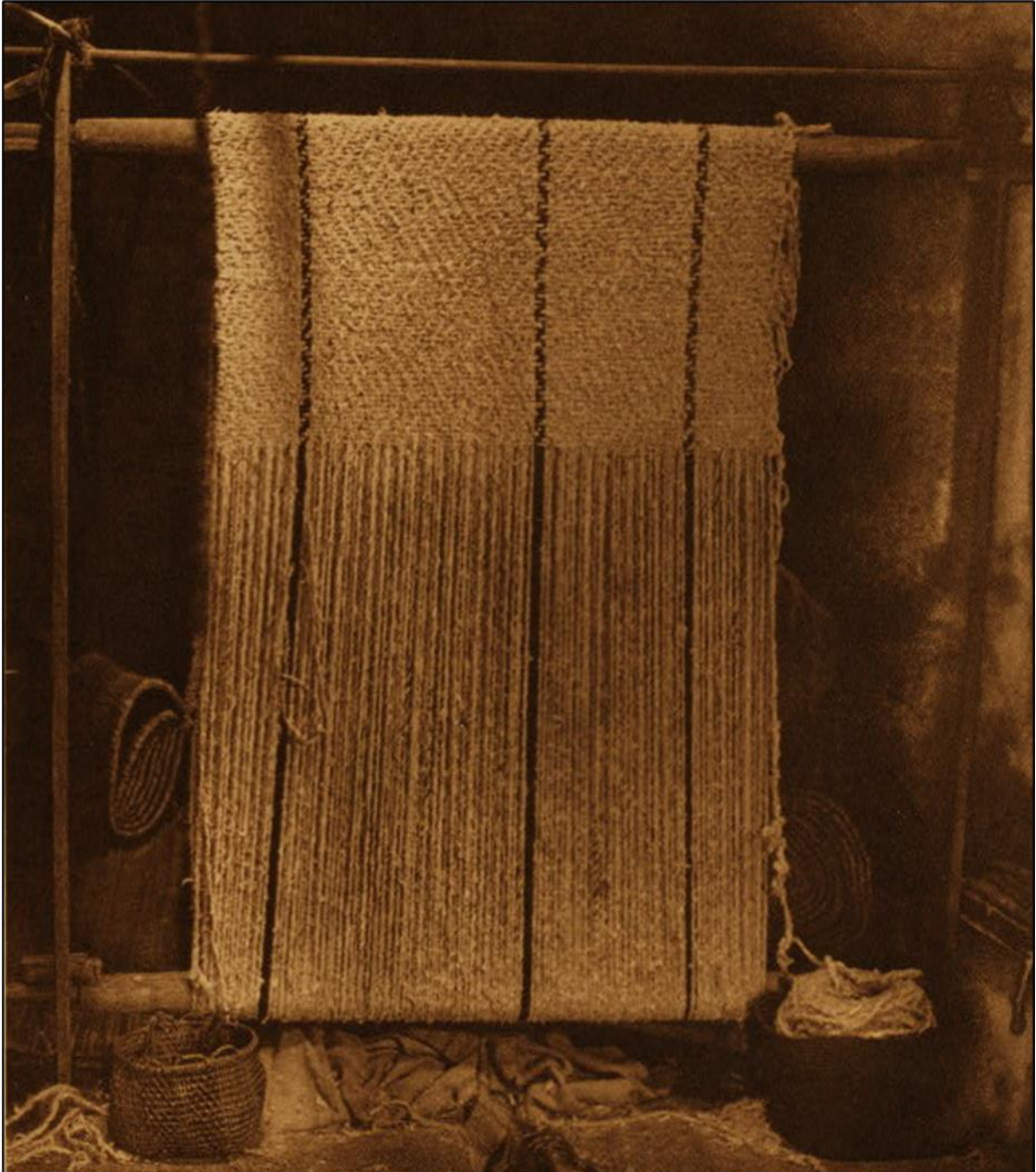


Figure 10: Example of the kind of weaving done by Salish people, “Goat-hair Blanket—Cowichan” (1912) by Edward S. Curtis (Northwestern University Library 2003c).

Ethnographic Placenames

Table 1 lists ethnographic placenames and village names near the APE, with both the ethnographer’s orthography and translation (Waterman 1920) and the Lushootseed phonetic alphabet and translation (Waterman et al. 2001). Figure 11 uses a Lushootseed phonetic alphabet where available, following Waterman et al. (2001); in all other cases Waterman’s original phonetic alphabet is used. Note also that the numbers in Figure 11 denote the general area of named places, to protect knowledge of their actual

locations. The names are listed more-or-less north to south, beginning with those along the Snohomish River, then those along the coast.

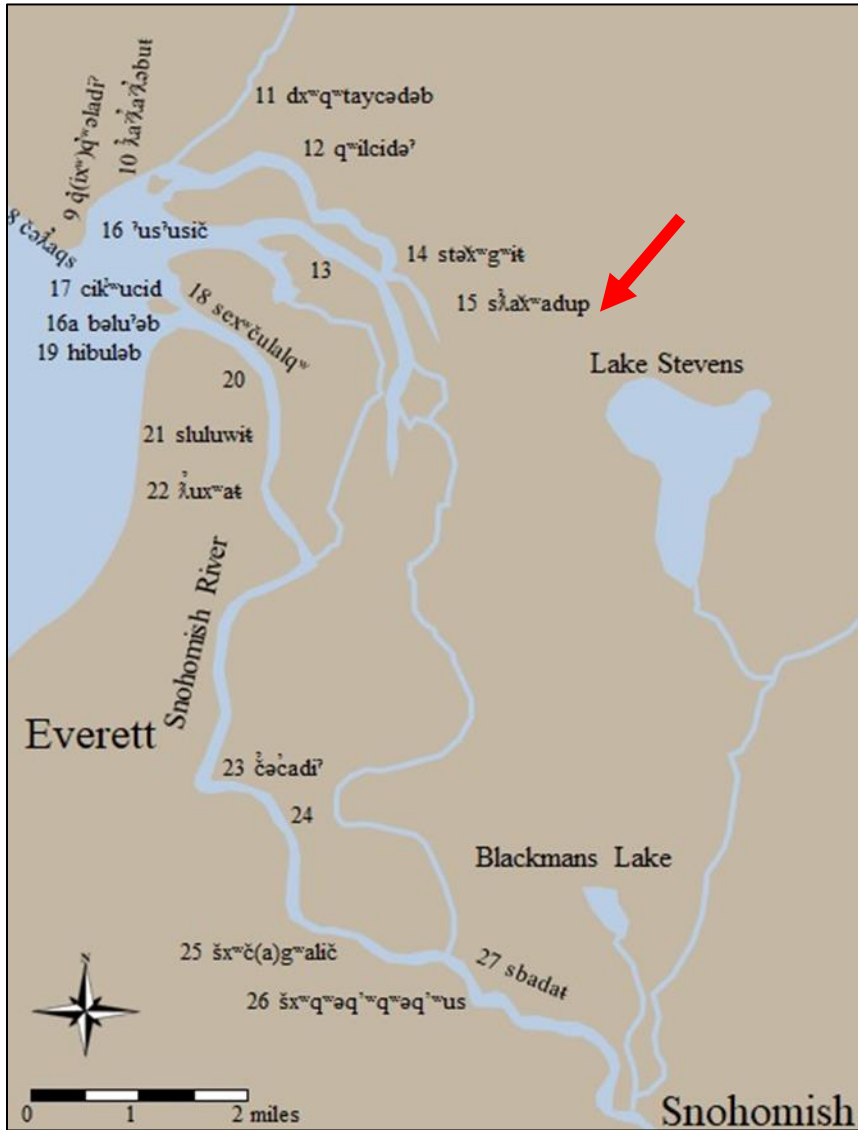


Figure 11: Map showing Waterman's place names, approximate Project location shown with red arrow (after Waterman 1920).

Table 1: Place names and translations from Waterman (1920). Map numbers refer to Figure 11.

| Waterman Place Name | Map | Translation | Description |
|------------------------|-----|--|--|
| <i>Tcet!a'ks</i> | 8 | Rocky promontory | The promontory at the north side of the entrance to the Snohomish River Delta. |
| <i>q!kwa'ladi</i> | 9 | The inner part of the bay; up river flap | The bight in the coastline just east of Priest Point. |
| <i>TlatLEbtLabu'L</i> | 10 | Place of many little cedar canoe mats | A place near the shore east of reference #9. |
| <i>Tuxqwota'itsdEb</i> | 11 | Sturgeon place | Quilceda Creek. |

| Waterman Place Name | Map | Translation | Description |
|----------------------------|------------|---|--|
| <i>Kw l lsi'da</i> | 12 | Emptying through an elbow | Ebey's Slough, one of several large waterways cutting across the delta of the Snohomish River. |
| <i>La'La</i> | 13 | Dragging something through, touching the sides of the passage | Steamboat Slough. |
| <i>stE'x'gw l L</i> | 14 | Plowing through with a canoe | A narrow isthmus that is very marshy, separating Ebey's Slough from Steamboat Slough. |
| <i>StL!a'hadup</i> | 15 | Bushy | Union Slough, narrow waterway lying closer to the harbor than #14. |
| <i>Os'a's l tc</i> | 16 | Chasing a fish here and there | An estuary where Steamboat Slough and Union Sloughs come together. |
| <i>PE'ls l b</i> | 16a | Boiling | A place at the mouth of the main channel of the river. |
| <i>Ctcqo'tsid</i> | 17 | That which chokes up the mouth of something | A small island lying on the north side of the river mouth. |
| <i>SExwtculalkw</i> | 18 | None given | A sharp point of land running out toward the island in reference #17. |
| <i>Hibu'lub</i> | 19 | Place where water boils out of the ground | A village site just at the south side of the mouth of the Snohomish River. |
| <i>SEqwsu'sub</i> | 20 | Gathering something together in a string | A small promontory with a slough behind it, running almost parallel to the shore. |
| <i>Slu'luw l L</i> | 21 | Little perforation for a canoe | A narrow channel passing behind an island. |
| <i>tL'o'hwaL</i> | 22 | A cold spring | A spot on the river bank opposite the town of Everett. |
| <i>Tcts!adi</i> | 23 | Something sharp sticking out | A promontory opposite the town of Lowell, produced by a sharp turn in the river. |
| <i>HwEqw'qwl Lqed</i> | 24 | Head of something moving about | A place above Lowell where the slough strikes off from the river. |
| <i>Ctcgwa'll tc</i> | 25 | The outer edge of something | A high land along a margin of the river. |
| <i>cqwEqw!Eq!-os</i> | 26 | Two white cliffs | A place where the river makes an S-shaped bend, producing two sharp headlands. |
| <i>Sba':daL</i> | 27 | Eddy | A place in the river near the town of Snohomish. |

Summary

This overview has barely sketched traditional lifeways. The Salish People thrived for millennia and developed a rich and complex culture within an environment that supported a large population prior to immigrant contact and the devastation of disease and political oppression. Despite these hardships the peoples of the region have resiliency and continue to fight for renewed political and economic power, at the same time working to preserve and maintain traditional cultural knowledge and beliefs.

Exploration and Immigration

The first documented exploration of the Pacific Northwest was a Spanish expedition in 1592, led by Greek-born Apostolus Valerianos, more commonly known as Juan de Fuca, after whom the entrance to the Salish Sea is named. Between 47° and 48° north latitude—after entering a “broad Inlet of the Sea” de Fuca traveled for “twentie dayes ... passed divers Ilands ... went on Land in divers places, and ... saw some people on Land, clad in Beasts skins” (Purchas 1906 [1625]:416).

Some of the earliest English-language records of this region come from George Vancouver’s exploration of the Salish Sea. On June 4, 1792, he went ashore in the vicinity of Tulalip, near today’s Everett, Washington, and claimed for King George III the coast south to 39° 20’ N, which had been his first landfall. Vancouver was convinced of the historical justification of his claim and his maps all show British Territory from about 39° north latitude northward (Hayes 1999:85). The southern portion of the Salish Sea is named after Vancouver’s lieutenant, Peter Puget.

Beginning in the late eighteenth century, introduced diseases took an enormous toll on Northwest Coast Native American populations. Estimates of mortality range from 30 to 90 percent, with the higher estimate being the more likely result of several successive catastrophic episodes of, especially, smallpox (Boyd 1994, 1998; Campbell 1991).

The Hudson’s Bay Company

The first Europeans to stay for any length of time in the Puget Sound area were traders, trappers and explorers associated with the Hudson’s Bay Company (HBC). From the 1820s through to the 1860s, HBC employees regularly traveled and traded around the Puget Sound (Harmon 1998:28–29). Tribes around Puget Sound took benefit from trading and bartering with HBC, and many were hired as guides. Fort Nisqually was established in 1833 at the southern end of Puget Sound, the first European settlement on Puget Sound (Bagley 1915). Using the Naches, Snoqualmie, and Yakima passes through the Cascades, even the Yakima people traded with HBC at Fort Nisqually and Fort Langley, to the north. The influence of HBC in the Puget Sound was felt by native people and immigrants alike (Suttles and Lane 1990:499–500).

Fort Nisqually was handed over to the US in 1846 after a treaty between Great Britain and the United States had ostensibly settled the dispute over the Oregon Country; however, that treaty was vague as to possession of the islands that straddled the new boundary—including San Juan Island. The HBC took advantage of the confusion, built a log trading post on San Juan Island, and for several years traded with the resident Native American population for fish, which they salted and transported in barrels that they made on site (Bailey-Cummings and Cummings 1987).

At Garrison Bay, the HBC also began a new venture, Bellevue Farm, which was a salmon fishing station and sheep ranch. In 1859 a dispute led to HBC officials demanding the arrest of an American settler. The United States responded by sending sixty-six soldiers to set up a garrison at the southern tip of the island. The British countered with warships and more soldiers. By September 1859 there were three warships with numerous guns and roughly two thousand men on the British side, and nearly five hundred Americans, although fewer cannons. A joint military presence was negotiated (McDonald 1990). In 1860 the HBC charter expired, and British claims to land south of the 49th parallel were laid to rest.

The Donation Land Claim Act of 1850

The pace of immigrant settlement was encouraged by the US 31st Congress, with the 1850 passage of Statute 496, an unnamed Act known by various names, most commonly as the Donation Land Claim

Act, which legitimized a practice originally set in motion by the territorial Provisional Government in 1843 (Robbins 2022). The Act was

to create the Office of Surveyor-General of the Public Lands in [the] Oregon [Territory], and to provide for the Survey, and to make Donations to Settlers of the said Public Lands. ... granted to every white settler or occupant of the public lands, American half-breed Indians included ... three hundred and twenty acres of land, if a single man, and if a married man ... the quantity of one section, or six hundred and forty acres, one half to himself and the other half to his wife, to be held by her in her own right ... [US Statute 496, September 27, 1850]

The law explicitly excluded African Americans and Hawaiians. Prior to its enactment Territorial Delegate Samuel Thurston had told Congress that extinguishing Indian title was the “first prerequisite step” to settling Oregon’s land question, so Congress had earlier authorized commissioners to negotiate treaties with that would, among other things, remove Native Americans from their land (Robbins 2022).

Treaties, allotments, assimilation and reorganization

What followed were the 1854 Treaty of Medicine Creek, the 1855 Treaties of Point Elliott, Point No Point, Neah Bay, Yakama, and Walla Walla, and the Quinault Treaty of 1856, by which the American government promised Native American tribes continued resource procurement rights, ‘land reservations’ (for some, but not all of the tribes), and a one-time payment. Ancestors of members of the Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians, and the Tulalip Tribes signed the Treaty of Point Elliott. Once the treaties were in place, settlement and commercial exploitation of previously tribal lands proceeded almost unfettered. In addition, several subsequent acts of federal legislation created the circumstances that would hasten the already severe breakdown of Tribal lifeways that followed European-introduced disease pandemic in the 1770s that killed nearly 90% of the region’s original inhabitants (Boyd 1994).

The signatories of the Point Elliott Treaty were assigned to one reservation, originally called the Snohomish Reservation, in the area around Tulalip Bay. The name of the reservation was changed to Tulalip due to the location (Dover and Fitzpatrick 2015). Though the federal government intended for all the signatories of the Point Elliott Treaty to be moved to one reservation several groups refused and fought for their own reservations. Many members of the signatory tribes followed the directives to move, but some stayed on or moved back to their use areas, purchasing land and retaining traditional ties with each other and their traditional areas (Blukis Onat and Hollenbeck 1981).

After signing the Point Elliott Treaty, the tribes were given a year to move to the new reservation. When the first groups arrived at the reservation, they expected to be greeted by a tribal agent and resources guaranteed by the treaty, instead, they were greeted by the shores of Tulalip Bay, an area too small, with too few resources for the estimated 1,500 people who were to live there (Dover and Fitzpatrick 2015). The treaty had been signed in 1855, but was not ratified by Congress until 1859, delaying the goods and services promised by the United States government until two years after ratification (Blukis Onat and Hollenbeck 1981). Tribal elders recall compounding hardships after moving to the reservation due to limited water and food, overcrowding, and strict rules set by the government meant to “civilize.” These rules did not allow the residents of the new reservation to build their traditional longhouses, forced them to clear land for farming, and restricted them to the reservation boundaries to prevent them from traveling to traditional clamming, fishing, hunting, and gathering areas—this led to mass hunger, starvation, and illness. Throughout these hardships, the peoples of the greater Snohomish River watershed have found ways to survive and form strong community bonds.

With the purpose of encouraging Tribal members to adopt the ways of the dominant culture—to assimilate them—the Dawes Act of 1887 provided “for the allotment of lands in severalty to Indians.”

The most charitable reading of this act was that it was intended to break the tradition of tribal communalism that most immigrants believed was an obstacle to their ‘progress’ and assimilation into US society; more accurately it as a continuation of efforts ultimately to take even the Reserve lands from the original inhabitants. Those who wished to take part were given either a portion of the reservation on which they lived, or, if their tribe had no reservation, a plot of land in or near their traditional use areas. In both cases the individual was granted US citizenship. Regardless of the reason, fragmentation and fissioning of traditional communities was the inevitable result, which was made worse by provisions of the legislation that enabled eventual sale of the land to non-tribal people. In the 47 years between its enactment and its dismantling, the Dawes Act was responsible for reducing the acreage under Native title from 138 million to just 48 million (Newcomb 2012).

The disastrous effects of the Dawes Act did not go unnoticed. As part of F.D. Roosevelt’s New Deal in the 1930s, the Indian Reorganization Act (IRA) (1934) was intended to redress some of the worst effects of the efforts at assimilation. It was:

[a]n Act to conserve and develop Indian lands and resources; to extend to Indians the right to form business and other organizations; to establish a credit system for Indians; to grant certain rights of home rule to Indians; to provide for vocational education for Indians; and for other purposes.

Although the IRA also restored rights to land and minerals, it was a temporary and controversial measure and by the end of WWII the federal government was back asserting their dominance including the continued abusive practice of removing children from their families and placing them in ‘Residential Schools,’ where they were forced to speak only English and taught only Euro-American history and culture. Only in the 1970s was this system dismantled, but the loss of cultural memory that it brought about was and is devastating, to say nothing of the intergenerational persistence of accumulated trauma it visited on the children who were subjected to this practice (see, e.g., Brave Heart and DeBruyn 1998).

Industry and infrastructure

Several large-scale commercial undertakings underpinned and dominated economic development and fueled immigration in the region during the nineteenth and early twentieth centuries: construction of transcontinental railroads, logging and sawmilling, mining, and hydroelectric power projects. The Northern Pacific Railway was the first transcontinental route to Puget Sound, completed in 1883 with its terminus at Tacoma. 1893 saw completion of the Great Northern Railway, which terminated in Seattle and was the only privately funded such railway in US history. These railways and their local spurs promoted economic growth and prompted the founding and development of small, coastal sawmill towns throughout the region. Timber harvested locally, or rafted by sea and river, was milled and loaded on trains for transport to the east.

Marysville

The City of Marysville lies near Possession Sound and the mouth of the Snohomish River between the lower reaches of Quilceda and Allen Creeks, just a few miles north of the City of Everett. In 1855, Washington Governor Isaac Stevens negotiated a treaty with the Skykomish, Snohomish, Snoqualmie, Stillaguamish and other groups at Point Elliott near present-day Mukilteo. The treaty provided that traditional territory be relinquished in return for fishing, hunting and gathering rights, money, and non-monetary payments of education and healthcare, and assigned groups to the small Tulalip Indian Reservation adjacent and to the west of Marysville (Governor’s Office of Indian Affairs 2001).

The boundaries of the Tulalip Indian Reservation were defined in 1873 and lands were allotted to individual people between 1884 and 1909 under the authority of the General Allotment Act, also called

the Dawes Severalty Act (Lane 1975:16). Under the Indian Reorganization Act of 1934, the Tulalip Tribes were organized (Tulalip Tribes 2014).

In the late 1880s railroad magnate James J. Hill proposed Everett as the terminus of the Great Northern transcontinental railroad, causing land speculation in the Everett vicinity to escalate. Investor John D. Rockefeller began buying land around Everett, drawing people to the area. Rail construction in Snohomish County amounted to more than ten million dollars between 1888 and 1893 (Interstate Publishing Company 1906:299). The Seattle and Montana Railway tracked through Marysville in 1891, the same year the town was incorporated (City of Marysville 2017). In 1892, the Stimson Lumber Company built a railroad south to Marysville (Interstate Publishing Company 1906:374). Everett lost its potential as a rail port city when the railroad terminus was routed to Seattle, about the time of the global economic Panic of 1893.

Following the Panic, economic conditions improved, and lumber mills in the area were back in operation by 1895 (Baker 1967; Berry 1985). Blackman Brothers, who had opened their first sawmill on the Snohomish River in 1884, added engine service to their logging road in 1886 (Interstate Publishing Company 1906:347; Snohomish Historical Society 2017). Capitalizing on the mining potential of the area, Rockefeller gained control of the Monte Cristo and Pride of the Mountains mines approximately 45 miles east of Marysville, as well as the United Concentration Company's holdings, which were consolidated (Interstate Publishing Company 1906:285). This put the Everett & Monte Cristo Railroad to work, leading to organization of the shingle industry (Wilhelm 1904:8).

The founder of Marysville, James P. Comeford, filed the town plat in 1885 after operating a trading post on the Tulalip Reservation for six years (Dougherty 2007). In 1890 Marysville had 47 dwellings, 14 business houses, two shingle mills and one sawmill (Interstate Publishing Company 1906:347). The Marysville Shingle Company was formed in 1899 (Interstate Publishing Company 1906:299). One hundred homes were built in Marysville between 1902 and 1904 and at this time Marysville was home to four shingle mills, one sawmill, a foundry and a machine shop (Wilhelm 1904:8-9). In 1906, businesses included the Dexter Mill Company, the Harrington Shingle Company, the Marysville Mill Company and the Smith Manufacturing Company (Wilhelm 1906:149).

In the 1920s, Marysville became known for their strawberry fields, which had begun springing up throughout Marysville and neighboring areas (Dougherty 2007). At its peak, there were as many as 2,000 acres used for strawberry production (Dougherty 2007). Snohomish County Berry Growers Association was a co-op established to help farmers navigate the difficulties in marketing their berries (Dougherty 2007). The Marysville Strawberry Festival began in 1932, and still continues annually.

By 1950, Marysville's population was 2,259 (Dougherty 2007). At this time, the town boundaries had largely remained the same as when they were originally platted (Dougherty 2007). However, by 1954, Marysville approved its first annexation, evidence of a desire in Marysville to expand (Dougherty 2007). However, a terrible freeze in 1955 devastated that year's berry crops, and the strawberry industry in Marysville struggled to recover (Dougherty 2007). Subsequently, in the 1960s, many Marysville residents opted to commute for better employment opportunities in Everett and Seattle. The completion of Interstate 5 through Marysville later in the 1960s helped ease the work commutes for residents. Following completion of I-5, which connected Everett to Bellingham, traffic through Marysville increased. Numerous local small businesses in Marysville were replaced by chain stores and increasingly popular fast-food restaurants.

In 1992, the Tulalip Casino was built, and in 2002 the Tulalip Tribes established the Consolidated Borough of Quil Ceda Village, directly south of the casino. This included shopping, entertainment and

food options that were 100% tribally funded (Riddle 2008; Quil Ceda Village 2017). Today, Marysville is a growing suburban community accessible to both Everett and the Skagit Valley.

History of the APE

In 1883 N.L. Rogers obtained 157.25 acres of land which includes the entire APE (Bureau of Land Management [BLM] General Land Office [GLO] 2023) (Figure 12). No census information could be found for this person. There is mention of a Lee Rogers, a logger, and co-owner of the White House Hotel at the Stillaguamish forks (Oakley 2007); however, no further information is available to confirm or deny a connection.

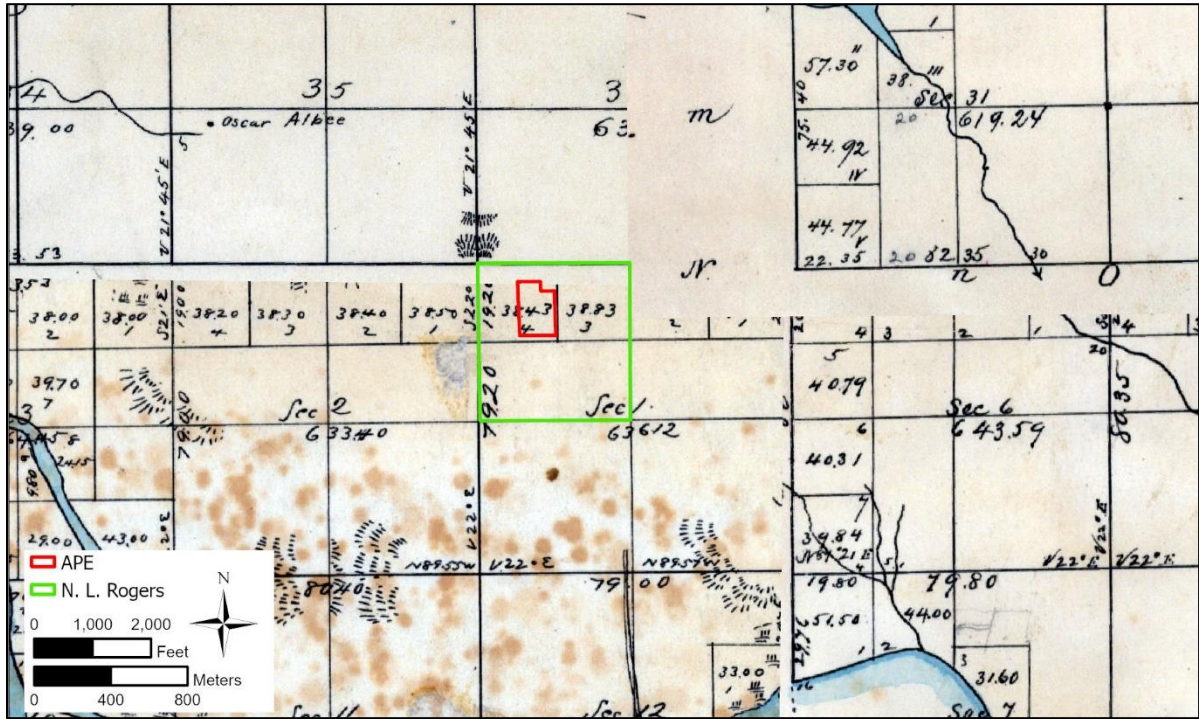


Figure 12: General Land Office maps from 1869, 1881, 1882, and 1878 showing early land ownership in Project vicinity.

4.3 Previous Archaeology

Franz Boas was the first archaeologist to work in the Pacific Northwest, and was notably the leader of the Jesup North Pacific Expedition, of which Harlan I. Smith (1900, 1903, 1907) was also a part. After the expedition, Smith continued to do extensive work in Washington and Canada. From this point to the 1970s, archaeology in the Pacific Northwest was driven by academic interest in precontact peoples, and by public interest in antiquity that, in part, museum collections satisfied. Archaeologists used a mix of excavation, survey, and the ethnographic record to find sites and make inferences about past cultures. The American Antiquities Act of 1906 and the National Historic Preservation Act of 1966, as amended, made federal agencies and those undertaking federally funded projects consider their impact on archaeological sites and historic structures; this was the beginning of public-sector archaeology. It was not until the creation of the Environmental Protection Agency, the passing of the National Environmental Policy Act, and litigation involving them, which mandated environmental reviews for federally funded projects. It was really at that time that cultural resource surveys became more common. Since that time a variety of regulations and policies here in Washington State have broadened the scope of archaeological and architectural survey. This burgeoning industry is now known as cultural resource management (CRM). As part of the report preparation, and to aid in planning, cultural resource

managers review background research to inform past land use of an area and therefore what evidence of past use is near or within a project area. Knowing the location and type of previously recorded archaeological or historic sites, and the risk of encountering sites are invaluable information to the archaeologist and project proponents alike.

For general overviews of the archaeology and cultural resources of the Pacific Northwest, see Ames (1995, 2003, 2005a, 2005b), Ames and Maschner (1999), Borden (1950, 1951, 1975), Butler and Campbell (2004), Carlson (1990), Matson and Coupland (1995), Matson et al. (2003), Meltzer (2004), and Smith and Fowkes (1901). The central Puget Sound has been the focus of much archaeological work due in part to the rapid growth of Seattle. In addition to those cited in the next two sections, more recent archaeological overviews can be found in Blukis Onat and Kiers (2007a, 2007b), Lewarch and Larson (2003), Lewarch et al. (2005, 2006), Mattson (1989), Miss and Campbell (1991), Mitchell (1990), Nelson (1990), Stein (1984), and Stein and Phillips (2002).

Previously Recorded Archaeological Sites

Records of five archaeological sites within about one mile of the APE are on file at the Washington State Department of Archaeology and Historic Preservation (DAHP). A short description of the sites is provided below and summarized in Table 2

45SN681—the remnants of a partially collapsed poultry barn and a completely collapsed well house, with underground pipes running from the well house to other structures on the property approximately 0.5 miles from the APE. The barn is an English barn with hand-formed concrete footings and many windows to allow light in for the birds. The original roof was replaced but the replacement has since collapsed. Poultry farming was a major economic driver in the early twentieth century in Snohomish County, and the barn is typical of the type and style used for constructing these farms (Steinkraus 2017a).

45SN683—a low-density large cobble and small boulder scatter about 0.5 meters tall, though it is not a pile, about a half mile from the APE. The scatter is within a historic agricultural area, near a barn, house, animal shed, and fencing for animal pens. It is in the vicinity of sites *45SN681* and *45SN683*, and property HPI 7.9760. Is most likely related to agriculture (Steinkraus 2018).

45SN682—comprises two linear trenches up to one meter deep that contain 6 inch-diameter ceramic and concrete pipes, along with at least three U-shaped 2-inch steel pipes. The trenches are at the edge of an apple orchard about 0.7 miles from the APE (Steinkraus 2017b).

45SN646—a historic rectangular barn, made of wood and iron nails with vertical plank siding and a wood shake roof, about 0.8 miles from the APE. The barn is similar to poultry and small animal barns constructed in the early- to-mid twentieth century, but at the time of recording was in a state of disrepair (Diedrich 2015).

45SN484—*Basalt Flake* is a tertiary flake isolate encountered about 0.8 miles from the APE in potentially disturbed soil (Carrilho 2009).

Table 2: Previously recorded archaeological sites within one mile of the APE.

| Site # | Type | Distance (Miles) | Author, Year | NRHP Eligibility |
|---------|---|------------------|------------------|--------------------------------|
| 45SN681 | Historic Agriculture | ~0.5 | Steinkraus 2017a | Not Eligible |
| 45SN683 | Historic Agriculture, Historic Cairn/Rock Feature | ~0.5 | Steinkraus 2018 | Not Eligible; Survey/Inventory |

| Site # | Type | Distance (Miles) | Author, Year | NRHP Eligibility |
|---------|----------------------|------------------|------------------|------------------|
| 45SN682 | Historic Object(s) | ~0.7 | Steinkraus 2017b | Not Eligible |
| 45SN646 | Historic Agriculture | ~0.8 | Diedrich 2015 | Not Eligible |
| 45SN484 | Precontact Isolate | ~0.8 | Carrilho 2009 | Survey/Inventory |

Previous Cultural Resources Surveys

There are sixteen reports on file with DAHP from previous cultural resource surveys within one mile of the APE; they are listed below in Table 3, along with annotations for those that included subsurface investigation such as shovel test pits (ST), machine tests (MT) or monitoring. ERCI has completed two projects in this area, one 2 miles west (Bush 2007) and one 4.5 miles east (Bush and Smart 2009); these reports are also on file with DAHP and are listed in Table 3.

Table 3: Previous cultural resource reports on file with DAHP.

| Author | Title | Date |
|----------------------|---|------|
| Maass | <i>Cultural Resources Technical Report for The Everett Delta Pipeline Project</i> Pedestrian and subsurface survey. No cultural resources. | 2000 |
| Regan | <i>Letter to Marsha Tolon RE: TAD NN, SR 9, Jet 56th Street SE and 42nd Street NE traffic operation improvements</i> No subsurface investigation. No cultural resources. | 2000 |
| Juell | <i>Heritage Resources Investigations for the Everett Delta Lateral Pipeline Project: Pipeline Realignment, New Work Areas, and Access Road Corridors, Snohomish County, Washington.</i> 52 STs. No cultural resources. | 2003 |
| Hamilton | <i>Cultural Resources Assessment For The SR 9 Lake Stevens Weigh Station Project Snohomish County, Washington</i> 3 STs. No cultural resources. | 2004 |
| Weitzel | <i>Archaeological Monitoring for Construction of Northwest Pipeline Company Everett Delta Natural Gas Pipeline Lateral, Snohomish County, Washington</i> Monitoring. No cultural resources. | 2004 |
| Bush | <i>Archaeological Investigation Report – Blue Heron Slough Conservation Bank, Marysville, Washington</i> 20 MTs. No cultural resources. | 2007 |
| Bush and Smart | <i>Archaeological Investigation Report: Pilchuck River Riparian Restoration and Fish Habitat Enhancement Project, Snohomish County, Washington.</i> 52 STs. No cultural resources. | 2009 |
| Jordan et al. | <i>Cultural Resources Inventory Report SR 9 Lundeen Parkway to SR 92.Project. ICF Jones & Stokes.</i> 51 STs. 45SN521, one Cryptocrystalline Silicate flake, recorded (1.2 miles from project area). | 2009 |
| Piper and Smith | <i>Phase 2 Cultural Resources Assessment for the Sedro Woolley-Horse Ranch Transmission Line Upgrade. Skagit County and Snohomish County. Washington.</i> 529 STs. 10 archaeological sites, 45SN484 recorded. | 2009 |
| Mather and Arthur | <i>Archaeological Survey and Assessment for the Proposed Development of Parcel 29050200300900, 35th Street Northeast and 71st Avenue Northeast, Marysville, Snohomish County, Washington.</i> 18 STs. No cultural resources. | 2014 |
| Deidrich and Hushour | <i>Cultural Resources Assessment of the Belle Haven Development Project, Marysville, Snohomish County, Washington.</i> 14 STs. 45SN646 recorded. | 2015 |
| Baldwin et al. | <i>Cultural Resources Assessment for the Hannah’s Vista Project, Marysville, Snohomish County, Washington</i> 39 STs. No cultural resources. | 2016 |

| Author | Title | Date |
|-------------------|---|-------------|
| Homan and Perkins | <i>Cultural Resources Survey for 2016 Snohomish District Priority Wood Pole Replacement Project, Snohomish County, Washington</i> No subsurface investigation. No cultural resources. | 2016 |
| Schultze et al. | <i>Lake Stevens School District Early Learning Center and Elementary School Project Cultural Resource Inventory and Monitoring and Inadvertent Discovery Plan, Snohomish County, Washington</i> 39 STs. No cultural resources. | 2016 |
| Steinkraus | <i>Cultural Resources Survey for the Patey PRD Project, Snohomish County, Washington.</i> 27 STs. 45SN681, 45SN682, and 45SN682 recorded. | 2017c |
| Baldwin et al | <i>Cultural Resources Review of PSE’s Proposed Marysville Natural Gas Reinforcement Phase 2 Project (107057925), 83rd Avenue, Marysville, Washington</i> No subsurface investigation. No cultural resources. | 2019 |
| Baldwin and Berry | <i>Cultural Resources Review of the Proposed Kings Court Subdivision Project, Marysville, Washington</i> 17 STs. No cultural resources. | 2020 |
| Berry and Baldwin | <i>Cultural Resource Assessment for the Prospector 2 Planned Residential Development Project, Marysville, Washington</i> 59 STs. No cultural resources. | 2021 |

Previous Cemetery Reports

The record of one cemetery within three miles of the APE is on file with DAHP.

45SN380—*Ferry Cemetery* is a historic cemetery about 2.8 miles from the APE. It is associated with the town of Ferry but was heavily disturbed by pipeline work in 1956 and 1972. A single gravestone from 1894 and 15 potential graves were recorded during a site visit by members of the Lake Stevens Historical Society Cemetery Committee, which a year later placed crosses on the potential graves. A site visit in 2004 noted that the site had become overgrown and there was no sign of the gravestone or the crosses (Allen 2004).

National Register of Historic Places Properties

Record of one National Register property within three miles of the APE is on file with DAHP.

45SN347—*Grimm House* is approximately 2.7 miles from the APE. The Rucker Brother’s Lumber Company built it for mill workers in 1904 and named it after Paul Grimm, a millwright involved in constructing the main mill in the City of Lake Stevens, one of the largest mills in the country. Grimm later purchased the house, and his family lived there until 1968, when it was sold. This is the only remaining company house built by the Rucker Brothers; the period of significance is from 1904 to 1926 (McGuire and Whistell 1994).

State Heritage Barn Properties

Record of one barn on the Washington State Heritage Barn Register within three miles of the APE is on file with DAHP. A short description is provided below.

45SN535—*Howard Weiser Farm* is about 2.1 miles from APE. Howard Weiser purchased the farm in 1925; he used the farm for growing vegetables to supply his restaurant at the Monte Cristo Hotel in Everett and as living quarters for some of his employees. The barn was used for vegetable washing and as a living area, but was later converted to a chicken coop. Weiser sold the farm sometime before 1964 (Heineck and Heineck 2009).

Archaeological Expectations

The APE is between two water resources and east of numerous precontact place names and villages. Given the APE's proximity to five historic sites and one precontact site, and its location between water sources, there is a moderate probability of encountering precontact, protohistoric, and historic cultural resources.

Based on the proximity of the previously recorded historic sites, there is potential to encounter historic cultural resources during subsurface testing. We would expect to encounter isolated historic artifacts associated with agriculture, logging, and residential use.

5.0 METHODS

This section provides details on the archival research and fieldwork methods that Equinox Research and Consulting International Inc. (ERCI) employed in support of the Project. The research undertaken for the Project uses best-practice archaeological survey techniques to record the presence or absence of moderate to large archaeological sites, with the expectation that we may also find isolated artifacts or features, or small artifact scatters. When sites or isolated artifacts are discovered ERCI records them on DAHP forms in accordance with the *Washington State Standards for Cultural Resources Reporting*.

5.1 Archival Research

ERCI researchers

- Reviewed site forms and reports of previous archaeology on file at DAHP
- Reviewed other archaeological reports and related documents on file at the ERCI offices in Mount Vernon, Washington
- Reviewed published information on the precontact, traditional Native American and historic land use in and around the APE
- Reviewed the Snohomish County Assessor's records
- Reviewed General Land Office maps.

5.2 Fieldwork

Fieldwork entailed a pedestrian surface survey and subsurface shovel testing. The pedestrian survey was carried out in conjunction with the subsurface survey. The technicians walked slowly over the APE, pausing at alternating changes of direction to look backwards at trees and the ground surface. While surveying, in addition to the possibility of surface artifacts, archaeologists were watching for culturally modified trees, moss covered building foundations (concrete and rock) and surface features such as cache pits, cultural depressions, wood building foundations and rock cairns. ERCI also photographed and documented three structures on the property.

Shovel Tests (ST) consisted of cylindrical pits dug by hand using round-nosed shovels, approximately 50 centimeters (cm) in diameter, ranging up to 100 cm deep. STs were abandoned before reaching the maximum possible depth due to, among other factors, large cobbles or boulders, large roots or groundwater, or when at least a 10 cm depth of unaltered sterile glacial sediments have been excavated. All excavated sediments were passed through ¼-inch mesh hardware cloth shaker screens.

Any artifacts recovered were described and photographed, then returned to the same ST from which they came. Fragments of animal skeletal remains were immediately photographed and digital images transmitted electronically to Alyson M. Rollins, MA, ERCI's biological anthropologist, who confirmed whether or not the remains were human.

ST location overview photographs were taken, along with photographs of their sedimentary profiles. Once documentation was complete STs were backfilled with the excavated sediments and the surface restored to its original grade. No samples were removed from the APE. Sediments encountered were characterized and recorded on paper, and activities photographed using digital cameras or phones. ST and other locations were obtained using a Global Positioning System (GPS) high-accuracy receiver. Field notes, digital photographs and GIS shape files are stored at ERCI's offices in Mount Vernon, Washington.

ST locations were determined using a judgmentally based strategy due to vegetation density, obvious ground disturbances, and standing water. Matrix descriptions and the ST log are available in Appendix 1. Appendix 2 contains the photograph log, and Appendix 3 contains the Unanticipated Discoveries Protocol (UDP).

6.0 RESULTS

On February 14 and 15, 2023, ERCI carried out an archaeological survey of the APE that included a pedestrian survey and subsurface survey with 51 STs. Leah Koch-Michael, MA, Aleta R. Baxley, BA, Emma S. Dubois, BA, and Fiona L. Koehnen, BA, conducted the fieldwork. The weather was cold and sunny, snow was on the ground on the first day; it had melted by the second day.

6.1 Pedestrian Survey

February 14 and 15, 2023, ERCI archaeologists carried out a pedestrian survey concurrent with the subsurface survey (Figure 14). Surface visibility was poor, as there was some snow on the ground, some standing water, and vegetation covering the surface (Figure 15–Figure 16). When the snow had melted, leaf litter and grass were observed to obscure the surface. Multiple boulders were seen on the surface throughout the APE—none contained signs of cultural modification or marking. Vegetation in the APE includes blackberries, salmonberries, and alder, maple, holly, and cedar trees.

In the northern parcel, machine paths and marks were evident on the surface (Figure 17), a small area had been graveled and appeared to be a staging area (Figure 18). It was also forested, with some standing water in the northwest. A drainage ditch running east to west divided the northern parcel (00590700021202) from the two southern parcels (Figure 19). In the middle parcel, a second shallow drainage ditch ran north–south and emptied into the east–west ditch. The two southern parcels contained houses and outbuildings, small sheds, abandoned vehicles, a boat, and various residential detritus.

Close to the western boundary of the APE, a large blackberry thicket appeared to have a small structure within it; modern cut lumber was observed protruding out of it (Figure 20). The blackberry thicket also partly covered some boulders, and appeared to have at least some residential debris in it—milled lumber with a bracket attached and some netting could be seen at the edges (Figure 21). We are recommending archaeological monitoring of the removal of this vegetation and subsequent grading to make sure no relic structures are in this dense vegetation. If there are relic structures in there they should be recorded before removal.

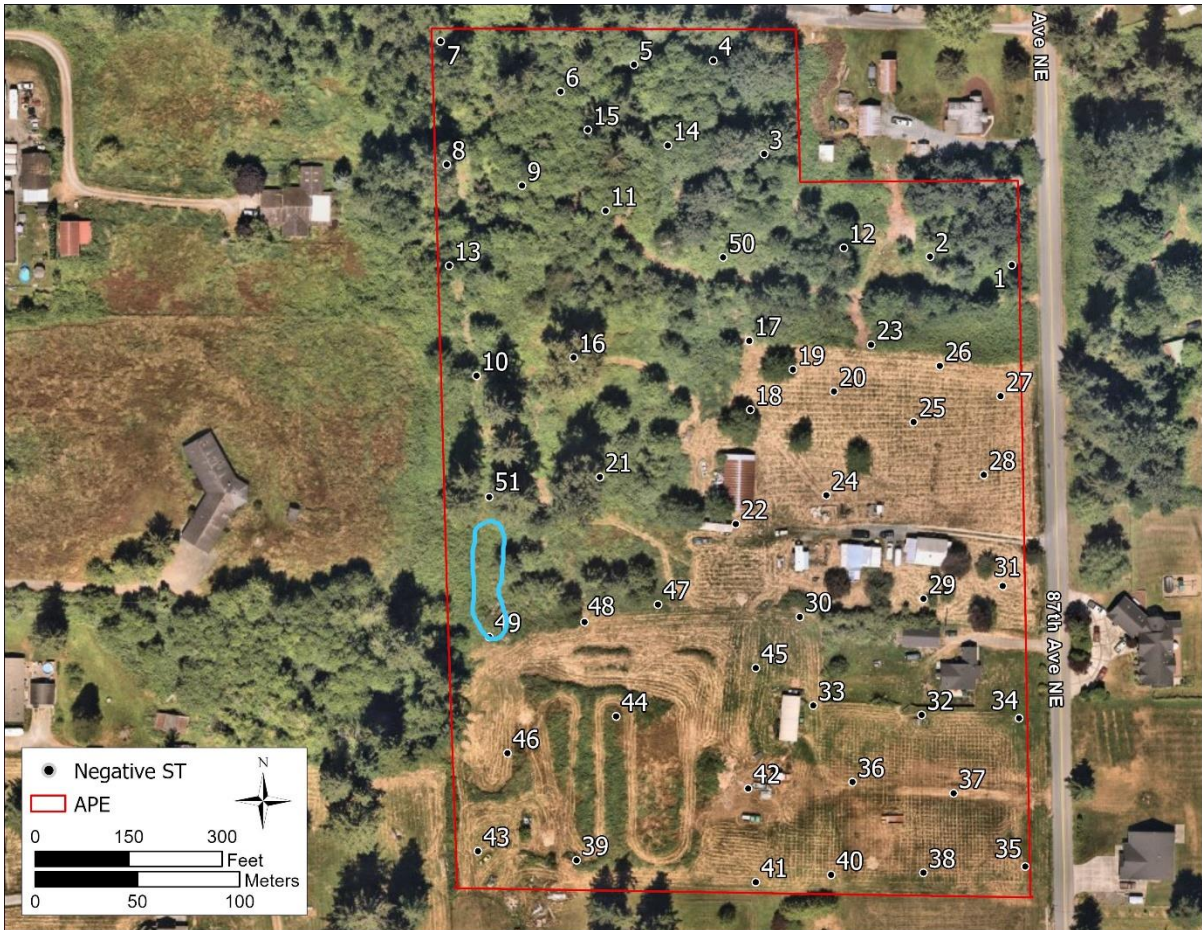


Figure 13: Archaeological Monitoring Area in blue between shovel probes 49 and 51.

In the southwest portion of the APE is an informal motocross racetrack with a berm (Figure 22); multiple cars and car parts were nearby. Nondescript and modern residential objects and refuse were encountered on the surface throughout the property (Figure 23).

No protected cultural resources were encountered.

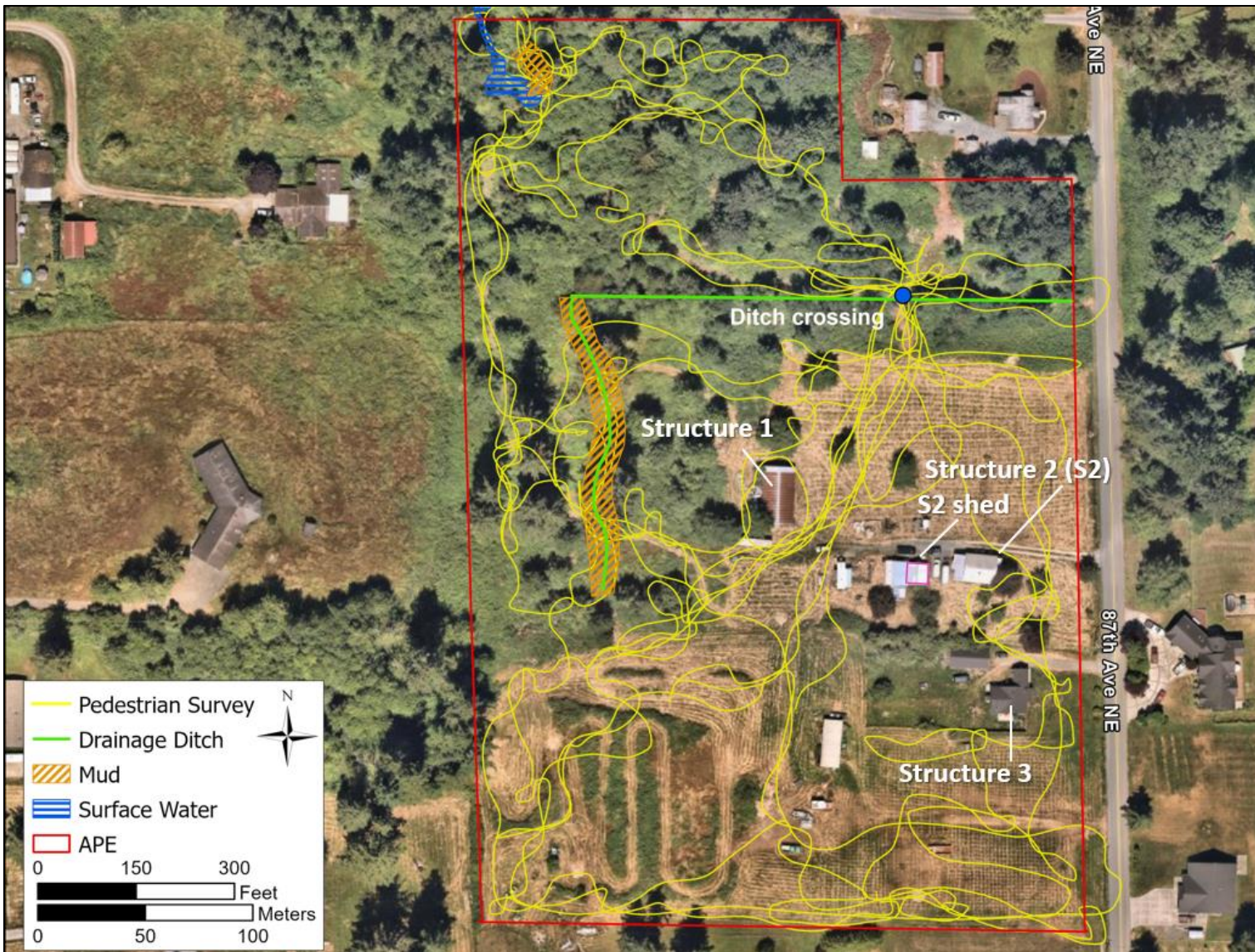


Figure 14: Sketch map showing pedestrian survey route.



Figure 15: View north, standing water along pedestrian survey route.



Figure 16: View south, trees, blackberries, and slope near western boundary.



Figure 17: View east, machine cleared path with snow.



Figure 18: View southwest, gravelled staging area.



Figure 19: View northwest, drainage ditch crossing and debris on surface.



Figure 20: View north, milled lumber beneath blackberry thicket.



Figure 21: View south, large blackberry thicket with debris beneath.



Figure 22: View east, berm in southwest of APE.



Figure 23: View east, refuse on surface near house at 4112 87th Avenue NE.

6.2 Subsurface Survey

On February 14 and 15, 2023, ERCI archaeologists excavated 51 STs across the APE (Figure 24–Figure 26).

Four distinct sedimentary matrices were identified during the survey: Matrix 1 (M1), a very-dark brown to dark yellowish-brown glacial till that was found both intact and disturbed; M2, a pale-brown to light yellowish-brown intact glacial till; M3, a light olive brown imported fill; and M4, a very-dark brown local fill. All but six STs were terminated early; most due to the level of groundwater, others due to impassable cobbles or roots, loose compaction of sediment, and in one case a utility line.

Sediment profiles were mostly consistent in the APE, 32 out of 51 STs contained only M1. Eleven out of 51 STs contained M1 overlying M2. The remaining 8 STs had varying profiles consisting of all matrices; STs 35–37, 40, 42–44, 48, and 49 contained some amount of fill, and were found close to the southern boundary and southwest corner of the APE. In STs 12, 21, 24, 35, 42, 47, and 48 no intact sediments were observed; All were fill matrices or disturbed sediments. Full sedimentary matrix descriptions are in Appendix 1. Annotated sediment profiles can be seen in Figure 27–Figure 29.

Nonhuman mammal bones were encountered in ST 36 and ST 40 in M4 (Figure 30–Figure 31). Animal skeletal remains were immediately photographed, and digital images transmitted electronically to Alyson M. Rollins, MA, ERCI’s biological anthropologist, who confirmed they were nonhuman.

Nondiagnostic refuse and refuse of indeterminate age was encountered (Figure 32–Figure 33). Refuse included three colorless glass fragment, two colored glass fragments, four ferrous metal fragments, four wire nails, 10 plastic fragments, two pieces of fabric, a brick fragment, a concrete fragment, and metal debris. All of the refuse was encountered in disturbed M1, M3, and M4.

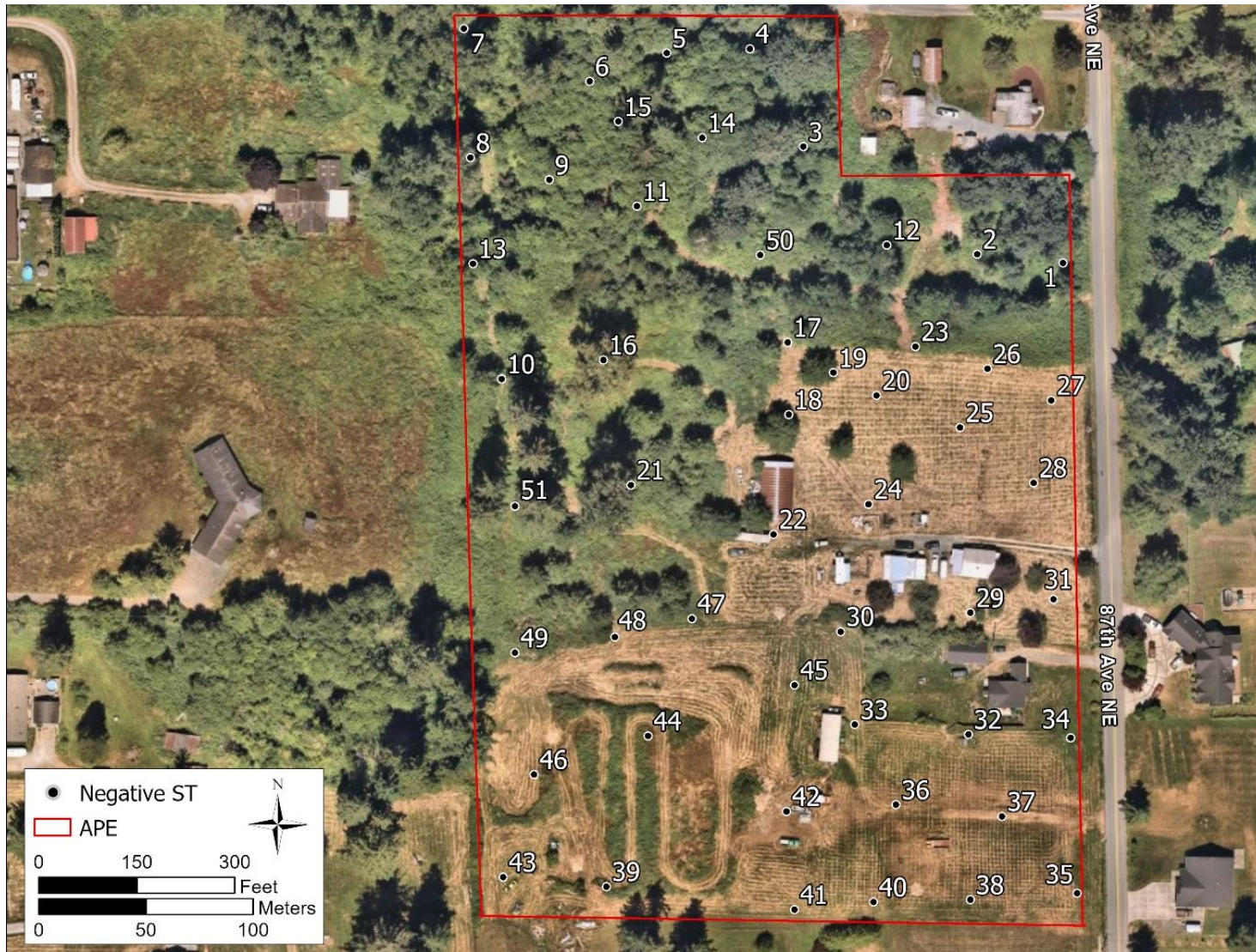


Figure 24: Sketch map showing ST locations.



Figure 25: View west, ERCI at ST 6.



Figure 26: View west, ERCI at ST 27.

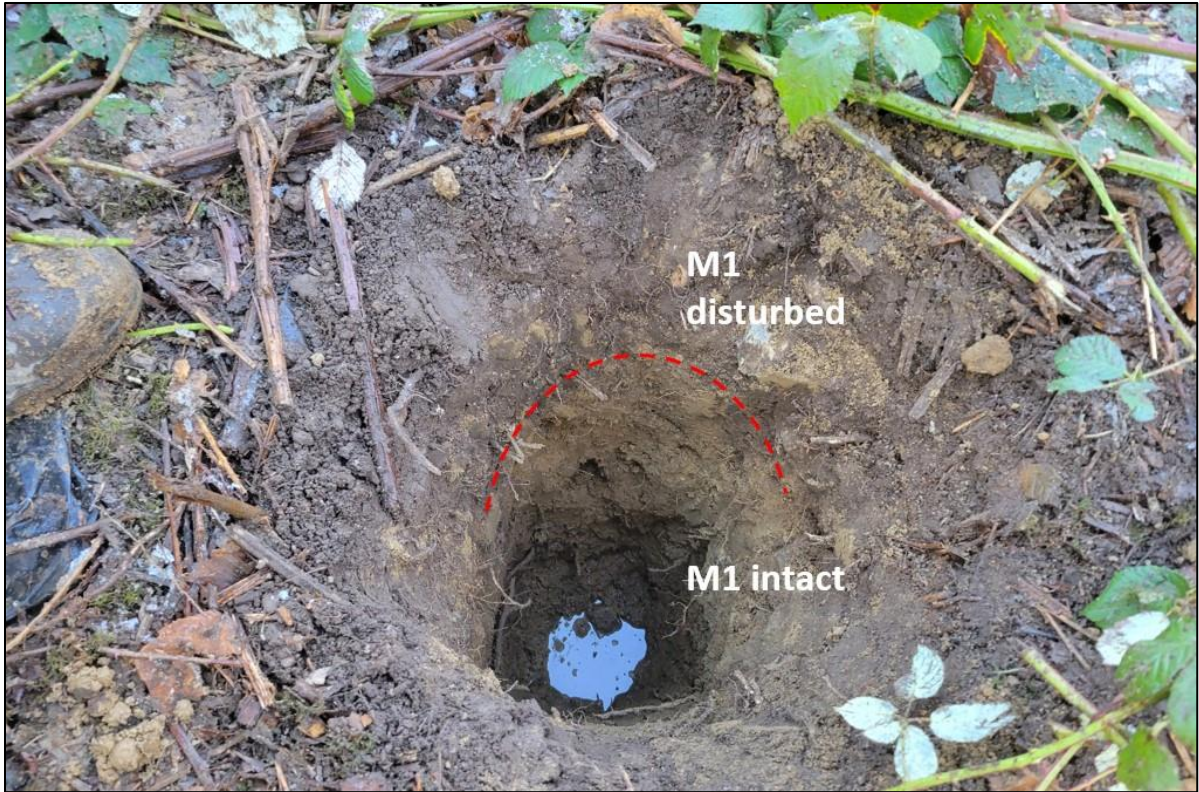


Figure 27: View west, ST 2 profile showing M1.

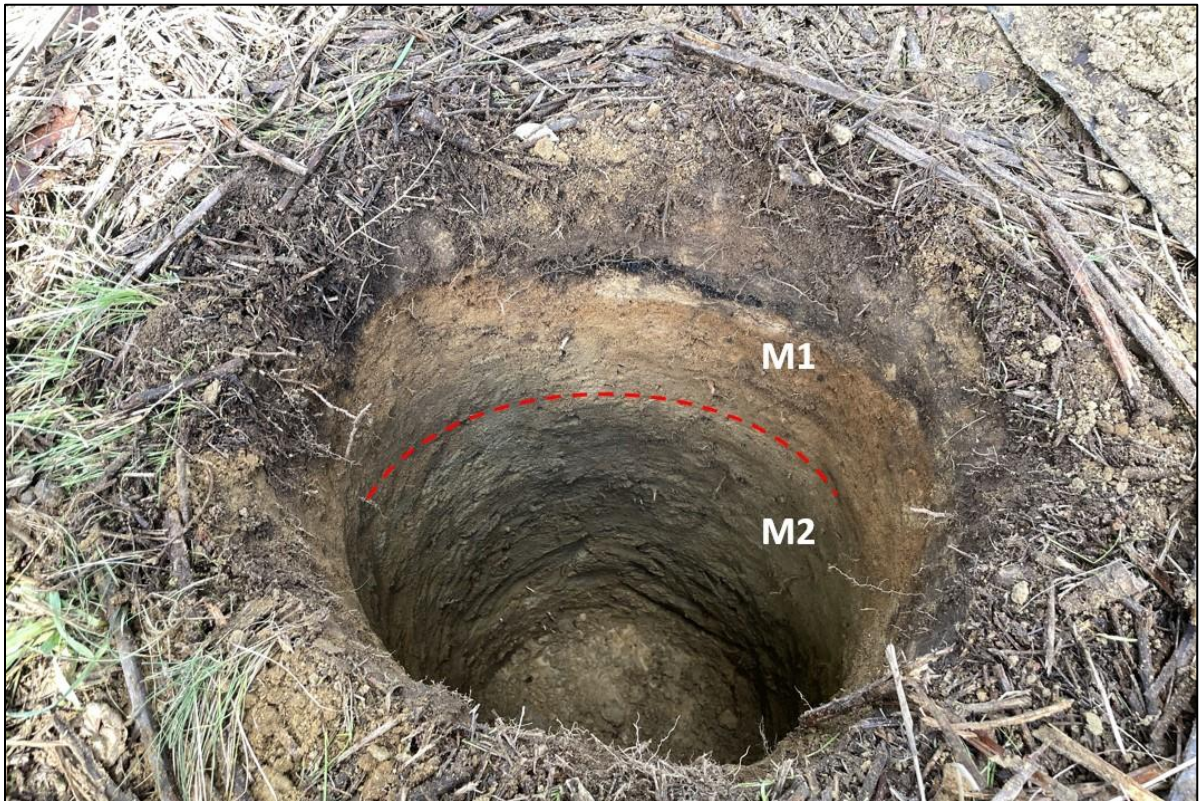


Figure 28: View north, ST 51 profile showing M1 overlying M2.

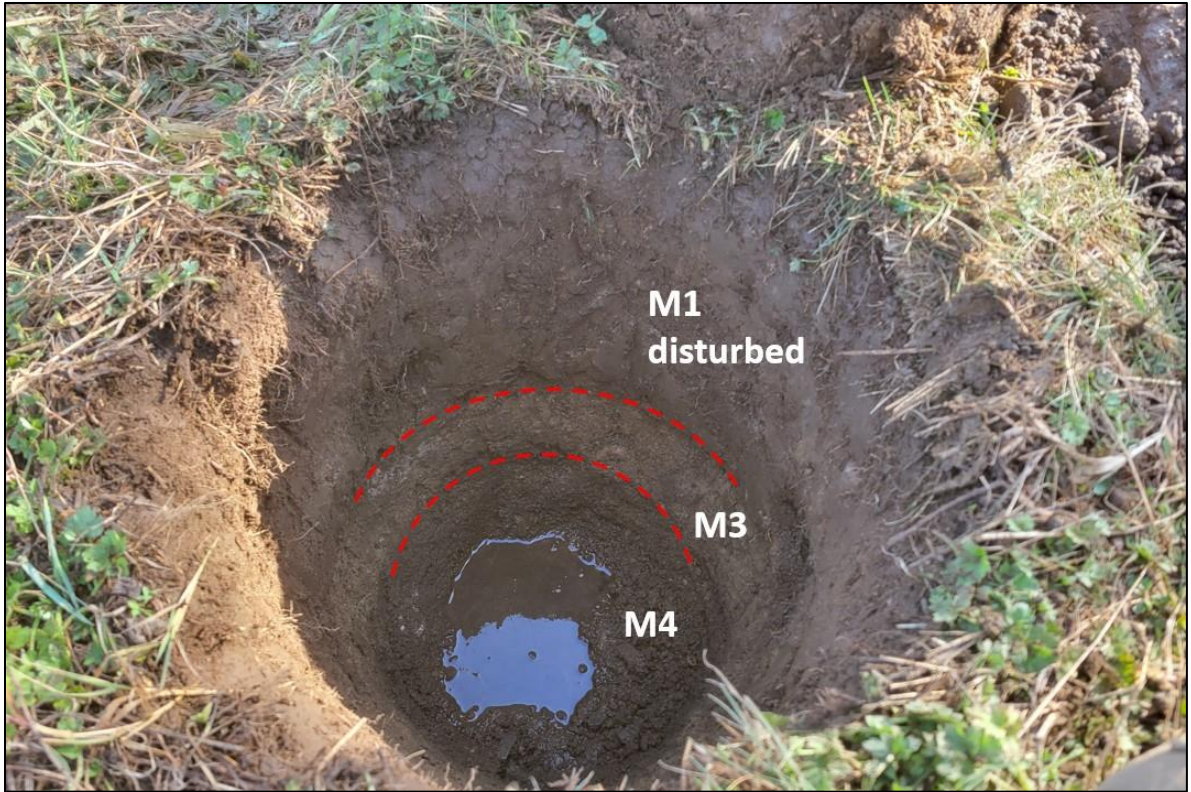


Figure 29: View east, ST 35 profile showing M1, M3, and M4.



Figure 30: Nonhuman mammal long-bone fragment from ST 36 in M4.



Figure 31: Nonhuman mammal bone from ST 40 in M4.



Figure 32: Ferrous metal debris from ST 22 in M1.



Figure 33: Two colorless glass fragments and one amber glass fragment from ST 40 in M4.



Figure 34: Terra-cotta fragment from ST 48 in M4.

6.3 Structures

During the field survey three structures built more than 50 years ago were identified.

- Structure 1, a barn/outbuilding to Structure 2, approximately 50 meters to the west of the house (Structure 2) at 4112 87th Ave NE (parcel 00590700021300)
- Structure 2, house, at 4112 87th Ave NE (parcel 00590700021300) and a small outbuilding approximately 6 meters west of the house.
- Structure 3, Garage/outbuilding to Structure 2
- Structure 4, house, at 4018 87th Ave NE (parcel 00590700022000)

Structure 1

This barn is rectangular, one-story outbuilding with a loft (Figure 14). It is on the same parcel as Structure 2 and is listed as an outbuilding in the online Snohomish County Assessor's records though building age is not listed. No permitting information is available in the PDS Online Records database for this address or parcel. Its footprint measures 60 feet by 32 feet (Figure 35–Figure 41). The shed exterior is unpainted, vertical tongue and groove siding; most boards are 4 inches wide, but vary in length. The variety of lengths and types of wood used for the siding indicates repairs over the years. Two round, wooden foundation posts are visible under the east wall, at the base (Figure 37, Figure 38). The east wall also contains a door frame and several window frames. A covered porch runs the width of the barn on its north side; the porch is partially rotten. Two closed doors with ferrous metal hinges lead inward from the porch. Abandoned musical instruments (for example, part of a drum kit) suggest that this porch may have been used for gatherings. On the west wall are a screen door and several windows; most of the shed on this side is obscured by residential refuse (e.g., a refrigerator, building materials, and Christmas decorations). The shed's south wall contains a wide doorway and two windows; the two windows on the south wall have two over two - four panes.

It was possible to look inside at the wide east doorway; more residential refuse could be seen inside, and interior walls blocked visibility to an inner area. ERCI did not enter the shed.

The structure has not been maintained but it has also not been changed since its initial construction though there are some minor repairs to the outer boards. Digital records of permits or building construction are not on the Snohomish County website.



Figure 35: View northwest, Structure 1, south elevation (left), east elevation (right), and debris.



Figure 36: View southwest, Structure 1, showing east (left) and north (right) sides.



Figure 37: View southwest, Structure 1, round foundation posts visible along base of east elevation.



Figure 38: View west, Structure 1, detail of round foundation post near northeast corner.



Figure 39: View south, Structure 1 with porch.



Figure 40: View northeast, Structure 1, showing residential debris along west (left) and south (right) sides.



Figure 41: View north, Structure 1.

Structure 2

According to Snohomish County Assessor's records, the residence at 4112 87th Avenue NE (Figure 14) was constructed in 1925 as a one-and-a-half-story building with a porch and a basement. No permitting information is on the PDS Online Records database for this address or parcel. By 2002, Richard and Florence Gumke became owners of the property. In 2003, the Gumkes transferred the property to Joann G. Sherlock. In 2006, Sherlock transferred the property back to the Gumkes. The property was then transferred between the Gumke trust and Gumke estate. In 2017, the property was transferred from the Gumke estate to Rickie and Neil Gumke, and Karmen Wood Trust, who remain the owners (Snohomish County Assessor 2023c).

The house measures approximately 30 feet by 24 feet not including the porch. The roof is relatively recent metal with the outer walls clad in horizontal shiplap wood. The west side of the structure has clapboard siding with wider boards than the other sides of the house. A basement window was visible beneath the front porch on the east side. The porch itself appears newer than the house; it was supported by unpainted concrete pier blocks and wooden posts.



Figure 42: View west, Structure 2, Structure 1 in background.



Figure 43: View southwest, Structure 2, with front porch, Structure 2 shed visible in background.



Figure 44: View southeast, Structure 2, with back porch.



Figure 45: View east, Structure 2, west elevation, and porch.



Figure 46: View northeast, Structure 2 with porch and some debris.



Figure 47: View north, Structure 2.

Structure 3

A garage/outbuilding is outside and to the east of the house (Figure 14). It is 18 feet by 18 feet, one story, and square with horizontal channel wood siding and a metal roof (Figure 48-Figure 51). There is only one small window with one sliding garage style door on one end. The paint is peeling and the walls have numerous small broken areas and obvious repairs. The shed is surrounded by residential objects and debris.



Figure 48: View northeast, Structure 3 Garage/outbuilding, with Structure 2 in the background.



Figure 49: View west, Structure 3 Shed/outbuilding.



Figure 50: View southwest, Shed/outbuilding Structure 3.



Figure 51: View south, Structure 3 Shed/outbuilding.

Structure 4

The residence at 4018 87th Avenue NE was originally constructed in 1915 as a one-and-a-half-story dwelling. In 2002, John R. and Kay J. Brooks sold the property to Ethelyn H. Michelson. In 2006, Ethelyn Michelson transferred the property to Andemoe LLC. In 2014, Andemoe LLC transferred the property to Brent and Andrea Kirk. Later in 2014, the Kirks transferred the property back to Andemoe LLC, which remains the property owner (Snohomish County Assessor 2023b). A permit for remodel, including siding, re-roofing, new foundation, and new porches was submitted September 1986 by homeowners John & Kay Brooks. In October 1986 a permit to install plumbing was also submitted to the county. An inspection notice from December 1986 lists several violations of Snohomish County building codes. It appears the application was resubmitted and not approved in September 1988.

This house is in good condition. The walls have vertical wood siding with a fresh, bright red, coat of paint (Figure 52- Figure 57). The windows and fiberglass shingle roof looks new. On the north side is an addition; it matches the rest of the house well. The renters who live there informed ERCI that the whole house had been remodeled just before they moved in, about a year ago. All visible fixtures on the exterior look modern and in good condition. Residential items like potted plants, yard art, and a few vehicles, presumably belonging to the renters, were around the outside of the structure.



Figure 52: View northwest, Structure 4.



Figure 53: View west, Structure 4.



Figure 54: View south, Structure 4 addition.



Figure 55: View southeast, Structure 4 addition.



Figure 56: View east, Structure 4, west elevation.



Figure 57: View northeast, Structure 4.

6.4 Discussion

ERCI's archaeological survey for the Residential Development for the 87th Avenue NE Townhomes Project encountered no buried archaeological resources. Given the APE's proximity to five historic sites and its location near Lake Stevens, Lake Cassidy, and local creeks there is a moderate probability of encountering precontact, protohistoric and historic cultural resources. Four structures likely constructed over fifty years ago were encountered. Structure 1 retains several aspects of integrity and should be recorded on an HPI.

During pedestrian survey, a large pile of milled lumber and residential debris overgrown with blackberries were observed. Due to the vegetation, ERCI was unable to determine whether the debris observed may represent structural remains that could be significant. We are recommending archaeological monitoring of the removal of and grading of this area (Figure 13).

The sediments encountered during subsurface survey were expected based on the recorded surface geology (Minard 1985). The imported fill and local fill were found closer to the roads and houses, likely related to development in the area. Based on the proximity of the previously recorded historic sites and past logging, there is potential to encounter subsurface historic cultural resources during construction of the townhomes. We would expect isolated historic artifacts associated with agriculture, logging, and residential use.

Such surveys are intended to yield information about moderate-to-large buried cultural deposits, and are not intended to reveal the existence of isolated artifacts, small sites or features. Although the Project is in a location with a moderate probability for archaeological sites, we did not encounter any buried archaeological objects or features. It is possible that a very small archaeological site or isolate could be encountered during construction. Such a site would require an archaeological evaluation.

7.0 MANAGEMENT RECOMMENDATIONS

No archaeological resources were identified during our fieldwork. The management recommendations that we are now providing are based on our findings from this field survey. We recommend that:

1. Structure 1 should be recorded on an Historic Property Inventory prior to its removal.
2. The removal of and subsequent grading of two overgrown wood piles along the south portion of the west APE boundary to be monitored by a professional archaeologist to be recorded prior to removal to determine if they are relic structures for recordation or just debris piles (Figure 13). A monitoring plan will need to be written and approved prior to this work.
3. The proposed Project proceed as planned, following an unanticipated discovery protocol (UDP) training given to all construction personnel by a professional archaeologist. A copy of the Unanticipated Discoveries Protocol (UDP) (Appendix 3) to be kept on site at all times.
4. In the event that any ground-disturbing activities or other Project activities related to this development or in any future development uncover protected archaeological objects or sediments (e.g., old bottles or cans, charcoal, bones, shell, stone, horn or antler tools or weapons), all work in the immediate vicinity should stop, the area should be secured, and any equipment moved to a safe distance away from the location. The on-site superintendent should then follow the steps specified in the UDP (Appendix 3).
5. In the event that any ground-disturbing activities or other Project activities related to this development or in any future development uncover human remains, all work in the immediate vicinity should stop, the area should be secured, and any equipment moved to a safe distance away from the location. The on-site superintendent should then follow the steps specified in the UDP (Appendix 3).

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9.0 APPENDICES

Appendix 1: Shovel Test Descriptions, Particle Size Classes and Matrix Descriptions

Particle Size Classes

| Scale | Clay | Silt | Sand | Gravel | Pebble | Cobble | Boulder |
|-------|---------|--------------|-----------|--------|----------|---------|---------|
| in | <.00015 | .00015–.0025 | .0025–.08 | .08–1 | 1–4 | 4–10 | >10 |
| mm | <.004 | .004–.062 | .062–2 | 2–25.4 | 25.4–102 | 102–254 | >254 |

Matrix Descriptions

- Matrix 1: 10 YR 2/2 very dark brown to 4/6 dark yellowish brown; 35% sand, 30% silt, 15% subrounded to subangular gravels, 10% subrounded pebbles, 10% subrounded to subangular cobbles; dry to wet; loose compaction; gradual interface. Intact or disturbed glacial till.
- Matrix 2: 10 YR 6/3 pale brown to 2.5 Y 6/3 light yellowish brown; 0–60% sand, 35–95% silt; 0–10% subrounded gravels, 0–5% organics; some oxidation; damp; moderate compaction. Intact glacial till.
- Matrix 3: 2.5 Y 5/3 light olive brown; 40% medium-grained sand, 25% silt, 15% angular to subrounded gravels, 15% subangular to subrounded pebbles, <5% subrounded to subangular cobbles; damp; dense compaction; abrupt interface. Imported fill.
- Matrix 4: 10 YR 2/2 very dark brown; 35% silt, 30% sand, 15% subrounded to subangular gravels, 10% subrounded pebbles, 10% subrounded to subangular cobbles; some very small amounts of oxidized material and very small carbon fragments throughout; damp to wet; dense to moderate compaction; abrupt interface. Local fill.

Shovel Test Descriptions

| ST | Depth (cm) | Dia (cm) | Matrix Description (Depths in cm) | Comments |
|----|------------|----------|---|--|
| 1 | 93 | 50 | 0–93: M1 intact, many cobbles | Negative. Terminated due to lose compaction. |
| 2 | 100 | 46 | 0–20: M1 disturbed, clear interface 20–100: M1 | Negative. |
| 3 | 70 | 50 | 0–23: M1 intact, many roots 23–70: M1 intact, fewer roots, several large cobbles, gradual lightening in color, gradual increase in water content | Negative. Terminated due to large cobbles in base. |
| 4 | 95 | 50 | 0–20: M1 intact, with organics 20–95: M1 intact, lighter color and sandier with depth, groundwater at 91 cm below surface | Negative. Terminated due to groundwater. |

| ST | Depth (cm) | Dia (cm) | Matrix Description (Depths in cm) | Comments |
|----|------------|----------|--|---|
| 5 | 65 | 48 | 0–19: M1 intact, with organics, one nondescript colorless glass fragment 19–65: M1 intact, color gradually lightens, groundwater at 64 | Negative. Terminated due to groundwater. |
| 6 | 58 | 48 | 0–11: M1 intact with organics 11–58: M1 intact, wet at base, boulder in northwest wall | Negative. Terminated due to roots. |
| 7 | 33 | 50 | 0–33: M1 intact, damp to saturated, water at 22 | Negative. Terminated due to groundwater. |
| 8 | 40 | 45 | 0–40: M1 intact, damp to saturated, gradual color change though transitioned by 25 to lighter yellowish brown color variation | Negative. Terminated due to groundwater. |
| 9 | 46 | 46 | 0–15: decomposing tree 15–46: M1 intact, lighter color variation loose comp damp to saturated | Negative. Terminated due to groundwater. |
| 10 | 100 | 47 | 0–14: M1 intact with organics 14–72: M1 intact 72–100: M2 | Negative. |
| 11 | 70 | 50 | 0–70: M1 intact | Negative. Terminated due to groundwater. |
| 12 | 63 | 45 | 0–63: M1 disturbed, gravel fill from 0–10 | Negative. Terminated due to groundwater. |
| 13 | 60 | 45 | 0–10: M1 intact, dark-brown organic-rich, clear interface 10–60: M1 intact, yellowish-brown sandier than above M1; 40% sand 25% silt subrounded to subangular pebbles and gravels | Negative. Terminated due to groundwater. |
| 14 | 65 | 45 | 0–50: M1 intact, natural carbon at 23 with some oxidization (rotting branch) 50–65: M2 | Negative. Terminated due to groundwater. |
| 15 | 83 | 55 | 0–77: M1 intact, gradual interface 77–83: M1 intact, dense compaction | Negative. Terminated due to groundwater. |

| ST | Depth (cm) | Dia (cm) | Matrix Description (Depths in cm) | Comments |
|----|------------|----------|---|--|
| 16 | 34 | 48 | 0-34: M1 intact, organic rich and very dark, groundwater at 30 below surface | Negative. Terminated due to groundwater. |
| 17 | 60 | 48 | 0-60: M1 intact | Negative. Terminated due to groundwater. |
| 18 | 40 | 48 | 0-40: M1 intact | Negative. Terminated due to groundwater. |
| 19 | 70 | 46 | 0-70: M1 intact | Negative. Terminated due to groundwater. |
| 20 | 55 | 47 | 0-55: M1 intact | Negative. Terminated due to boulder. |
| 21 | 53 | 47 | 0-53: M1, color gradually lightens, groundwater at 49 cm below surface, possibly disturbed | Negative. Terminated due to groundwater. |
| 22 | 65 | 45 | 0-30: M1 disturbed, one piece of metal with oxidation and organics darker brown than usual moderately compact; clear interface; rusted metal ~10 30-57: M1 intact, yellowish-brown west at bottom 57-65: M1 grayish silt | Negative. Terminated due to groundwater. |
| 23 | 60 | 46 | 0-60: M1 intact | Negative. Terminated due to boulder. |
| 24 | 36 | 46 | 0-34: M1, small, very-corroded metal fragment, groundwater at 30. Disturbed. | Negative. Terminated due to groundwater. |
| 25 | 60 | 50 | 0-60: M1 intact | Negative. Terminated due to groundwater. |

| ST | Depth (cm) | Dia (cm) | Matrix Description (Depths in cm) | Comments |
|----|------------|----------|---|---|
| 26 | 70 | 40 | 0–20: M1 intact with organics 20–23: M1 organics and natural carbon 23–70: M1 with larger cobbles and no roots | Negative. Terminated due to groundwater and large cobble. |
| 27 | 60 | 48 | 0–60: M1 intact | Negative. Terminated due to groundwater. |
| 28 | 80 | 47 | 0–70: M1 intact, gradual interface 70–80: M2 | Negative. Terminated due to groundwater. |
| 29 | 55 | 46 | 0–42: M1 disturbed, wire nail 0–20 42–55: M2, wet, groundwater at 49 | Negative. Terminated due to groundwater. |
| 30 | 55 | 45 | 0–22: M1 intact, dark-brown organic-rich, moderate compaction, clear interface 22–55: M1 intact, yellowish-brown moderate compaction, damp to wet | Negative. Terminated due to groundwater. |
| 31 | 72 | 48 | 0–70: M1 intact | Negative. Terminated due to groundwater. |
| 32 | 68 | 50 | 0–49: M1 disturbed, two wire nails, a white plastic fragment, and gray plastic fragment 0–30 cm below surface 49–68: M2, groundwater at 60 cm below surface | Negative. Terminated due to groundwater. |
| 33 | 70 | 45 | 0–21: M1 intact, dark brown, clear interface, moderate compaction 21–55: M1 intact, lighter color, moderate compaction, clear interface 55–70: M2 sandy dense compaction | Negative. Terminated due to groundwater. |
| 34 | 75 | 47 | 0–60: M1 intact, gradual interface 60–75: M2 | Negative. Terminated due to groundwater. |
| 35 | 65 | 50 | 0–35: M1 disturbed, clear interface 35–50: M3, clear interface 50–65: M4 | Negative. Terminated due to groundwater. |

| ST | Depth (cm) | Dia (cm) | Matrix Description (Depths in cm) | Comments |
|----|------------|----------|---|--|
| 36 | 75 | 48 | 0–8: M1, dark-brown disturbed, clear interface 8–16: M3 16–70: M4, abrupt interface, dense compaction at top, change to moderate compaction, damp to saturated, metal fragment and two plastic fragments in M4 at 33 in west wall, plastic fragment in wall, nonhuman long-bone fragment ~55 70–75: M2, dense compaction | Negative. Terminated due to groundwater. |
| 37 | 55 | 47 | 0–55: M4, black plastic from north wall at 32, groundwater at 50 | Negative. Terminated due to groundwater. |
| 38 | 71 | 50 | 0–70: M1 intact, gradual interface 70–71: M2 | Negative. Terminated due to groundwater. |
| 39 | 100 | 46 | 0–48: M1, disturbed, 30% subrounded to subangular cobbles, dark-brown silty sand with gravels and pebbles, damp, clear basal interface, at ~30 plastic and metal wire or staple fragment 48–100: M1 intact, yellowish-brown damp, gradual color change to lighter—almost gray | Negative. |
| 40 | 78 | 48 | 0–74: M4, one nonhuman mammal bone, two colorless glass fragments, one amber glass fragment, lens or disturbed M2 in northwest wall at 38 cm below surface 74–78: M2, groundwater at 76 | Negative. Terminated due to groundwater. |
| 41 | 32 | 55 | 0–32: M1 intact, sandy | Negative. Terminated due to utility. |
| 42 | 73 | 45 | 0–40: M3, dense compaction 40–73: M4, dense compaction | Negative. Terminated due to large cobble. |
| 43 | 65 | 49 | 0–27: M4, lighter color, two fabric fragments 27–42: M1 intact, dark color 42–65: M1 intact, charcoal from natural root burn 43–46 cm below surface, groundwater at 57 | Negative. Terminated due to groundwater. |
| 44 | 95 | 45 | 0–25: M4 dense compaction, damp, abrupt interface, one plastic fragment 25–43: M2 disturbed, moderate compaction, clear basal interface 43–95: M4, with pockets of M1 throughout, moderate compaction, damp to saturated | Negative. Terminated due to groundwater. |

| ST | Depth (cm) | Dia (cm) | Matrix Description (Depths in cm) | Comments |
|----|------------|----------|---|--|
| 45 | 50 | 50 | 0–50: M1 intact | Negative. Terminated due to groundwater. |
| 46 | 50 | 50 | 0–50: M1 intact, groundwater at 43, upper darker M1 may have been removed for racetrack | Negative. Terminated due to groundwater. |
| 47 | 50 | 50 | 0–50: M1 disturbed, chunks of asphalt and concrete throughout | Negative. Terminated due to groundwater. |
| 48 | 100 | 45 | 0–100: M4, brick fragment, concrete fragment, metal wire | Negative. |
| 49 | 98 | 48 | 0–44: M4, one green glass fragment, one metal nail, one metal object, four plastic fragments 44–98: M1 intact, gradual color change, groundwater at base | Negative. |
| 50 | 60 | 45 | 0–52: M1 intact, gradual interface 52–60: M2 | Negative. Terminated due to groundwater. |
| 51 | 103 | 45 | 0–12: M1 intact, organic-rich and root burn in north wall, moderate compaction, damp, clear interface 12–60: M1 intact, yellowish-brown moderate compaction, damp, very gradual interface 60–87: M2, siltier, moderate compaction, gradual interface 87–103: M2, moderate compaction | Negative. |

Appendix 2: Photograph Log

| Number | View | Description |
|----------------|-------------|--|
| 23.02.14ESD001 | N | Standing water southeast of northwest corner |
| 23.02.14ESD002 | SW | Standing water at northwest corner |
| 23.02.14ESD003 | SW | Standing water at northwest corner |
| 23.02.14ESD004 | SW | Standing water at northwest corner |
| 23.02.14ESD005 | NW | ST 7 with scale |
| 23.02.14ESD006 | NW | ST 7 without scale |
| 23.02.14ESD007 | NW | ST 7 overview |
| 23.02.14ESD008 | NW | ST 7 overview |
| 23.02.14ESD009 | NW | ST 7 overview |
| 23.02.14ESD010 | NW | ST 7 overview |
| 23.02.14ESD011 | W | ST 8 with scale |
| 23.02.14ESD012 | W | ST 8 without scale |
| 23.02.14ESD013 | W | ST 8 overview with neighbors outbuilding |
| 23.02.14ESD014 | P | Broken canning jar near ST 9 on surface |
| 23.02.14ESD015 | P | Broken canning jar near ST 9 on surface |
| 23.02.14ESD016 | NW | ST 9 with scale |
| 23.02.14ESD017 | NW | ST 9 without scale |
| 23.02.14ESD018 | E | ST 9 overview |
| 23.02.14ESD019 | N | View from western boundary |
| 23.02.14ESD020 | E | View from western boundary |
| 23.02.14ESD021 | E | View from western boundary |
| 23.02.14ESD022 | S | View from western boundary |
| 23.02.14ESD023 | W | View from western boundary south of ST 10 |
| 23.02.14ESD024 | NW | ST 13 with scale |
| 23.02.14ESD025 | NW | ST 13 without scale |
| 23.02.14ESD026 | S | ST 13 overview |
| 23.02.14ESD027 | N | ST 51 with scale |
| 23.02.14ESD028 | N | ST 51 without scale |
| 23.02.14ESD029 | S | ST 51 overview |
| 23.02.14ESD030 | NE | ST 22 with scale |
| 23.02.14ESD031 | NE | ST 22 without scale |
| 23.02.14ESD032 | N | ST 22 overview |
| 23.02.14ESD033 | N | ST 22 overview, zoomed out |
| 23.02.14ESD034 | P | ST 22 metal object |
| 23.02.14LKM001 | N | North edge of APE, shed not in APE |
| 23.02.14LKM002 | N | North edge of APE, shed not in APE |
| 23.02.14LKM003 | SW | Muddy area in northwest area of APE |
| 23.02.14LKM004 | SE | Muddy area in northwest area of APE |
| 23.02.14LKM005 | E | Muddy area in northwest area of APE |
| 23.02.14LKM006 | SE | Muddy area in northwest area of APE |
| 23.02.14LKM007 | W | ERCI at ST 6 at northwest corner of APE |

| Number | View | Description |
|----------------|------|--|
| 23.02.14LKM008 | NW | Northwest corner of APE |
| 23.02.14LKM009 | NNW | Boulder 1 near property line |
| 23.02.14LKM010 | N | Boulder 2 |
| 23.02.14LKM011 | S | Boulder 3 |
| 23.02.14LKM012 | S | Machine-cleared path along west edge in northwest corner |
| 23.02.14LKM013 | W | Machine-cleared path, toward ST 8, moving east |
| 23.02.14LKM014 | E | Machine-cleared path from ST 11 |
| 23.02.14LKM015 | SW | From path toward drainage ditch, blackberries |
| 23.02.14LKM016 | W | Path toward west, hemmed by blackberries |
| 23.02.14LKM017 | E | Path toward parking/staging area |
| 23.02.14LKM018 | S | Break in blackberries where drainage ditch is crossable |
| 23.02.14LKM019 | NNW | Drainage ditch crossing toward cars, refuse visible |
| 23.02.14LKM020 | S | Drainage ditch, cut lumber visible on right |
| 23.02.14LKM021 | NW | Blackberries north and west of staging area |
| 23.02.14LKM022 | SW | Graveled staging area |
| 23.02.14LKM023 | SE | Graveled staging area |
| 23.02.14LKM024 | NE | Dumped wood products near staging area |
| 23.02.14LKM025 | N | Edge at access road toward staging area |
| 23.02.14LKM026 | NW | Edge at access road toward staging area |
| 23.02.14LKM027 | E | Access road toward 87th Ave |
| 23.02.14LKM028 | W | From 87th Ave toward access road |
| 23.02.14LKM029 | SW | From 87th toward house |
| 23.02.14LKM030 | NW | From 87th toward property |
| 23.02.14LKM031 | SW | From 87th overview of APE south of access road |
| 23.02.14LKM032 | N | Northeast area of APE, north of access road |
| 23.02.14LKM033 | S | From access road toward house |
| 23.02.14LKM034 | N | Mossy boulders near ST 14 |
| 23.02.14LKM035 | N | ST 3 with scale |
| 23.02.14LKM036 | N | ST 3 without scale |
| 23.02.14LKM037 | N | ST 3 overview |
| 23.02.14LKM038 | N | South of ST 3 toward north neighbor |
| 23.02.14LKM039 | E | Near ST 3 along north property line |
| 23.02.14LKM040 | N | ST 14 with scale |
| 23.02.14LKM041 | N | ST 14 without scale |
| 23.02.14LKM042 | S | ST 14 overview |
| 23.02.14LKM043 | P | Control point marker along machine path |
| 23.02.14LKM044 | S | Across drainage ditch toward southwest APE |
| 23.02.14LKM045 | E | South of drainage ditch toward 87th Ave |
| 23.02.14LKM046 | SE | Toward house, overview |
| 23.02.14LKM047 | S | Toward house, overview |
| 23.02.14LKM048 | SSW | Toward house, overview |
| 23.02.14LKM049 | SW | Toward house, overview |

| Number | View | Description |
|----------------|------|---|
| 23.02.14LKM050 | W | Toward house, overview |
| 23.02.14LKM051 | N | South of drainage ditch toward northwest APE area |
| 23.02.14LKM052 | NW | South of drainage ditch toward northwest APE area |
| 23.02.14LKM053 | NE | Small drainage ditch running north to south toward main ditch |
| 23.02.14LKM054 | N | Machine path at west crossing drainage ditch |
| 23.02.14LKM055 | SW | Large conifers on slight rise along west border |
| 23.02.14LKM056 | S | Large conifers on slight rise along west border, ERCI at ST 12 |
| 23.02.14LKM057 | N | From rise, overview |
| 23.02.14LKM058 | E | From rise, overview |
| 23.02.14LKM059 | SE | From rise, overview |
| 23.02.14LKM060 | S | From rise, overview |
| 23.02.14LKM061 | N | ERCI at ST 12 |
| 23.02.14LKM062 | S | Blackberries, cut lumber |
| 23.02.14LKM063 | S | Cut lumber with scale |
| 23.02.14LKM064 | SW | Cut lumber with scale |
| 23.02.14LKM065 | SW | Other debris near cut lumber |
| 23.02.14LKM066 | NW | From wetland low area toward west edge of property |
| 23.02.14LKM067 | SSW | End of marshy area in wetland |
| 23.02.14LKM068 | SW | Toward southwest corner of property |
| 23.02.14LKM069 | NE | Boulder covered in blackberries, concrete blocking water on right |
| 23.02.14LKM070 | S | Concrete close-up |
| 23.02.14LKM071 | N | Standing water |
| 23.02.14LKM072 | E | Concrete covered by grass and blackberries |
| 23.02.14LKM073 | SW | Concrete blockage from front |
| 23.02.14LKM074 | SW | Mid-APE near west property line, wood furniture |
| 23.02.14LKM075 | SW | Abandoned car east of property line |
| 23.02.14LKM076 | W | Toward west property line, grass and blackberries |
| 23.02.14LKM077 | S | Standing water, north to south stream |
| 23.02.14LKM078 | S | Standing water, north to south stream |
| 23.02.14LKM079 | | DELETE |
| 23.02.14LKM080 | W | Boulder beneath blackberries |
| 23.02.14LKM081 | | DELETE |
| 23.02.14LKM082 | WSW | Old road leading west off property |
| 23.02.14LKM083 | W | Two blackberry mounds north of old road |
| 23.02.14LKM084 | NW | Two blackberry mounds north of old road |
| 23.02.14LKM085 | N | Lumber sitting out of south most blackberry mound |
| 23.02.14LKM086 | N | Lumber sitting out of south most blackberry mound |
| 23.02.14LKM087 | N | Lumber sitting out of south most blackberry mound |
| 23.02.14LKM088 | NE | Lumber sitting out of south most blackberry mound |
| 23.02.14LKM089 | SSW | Southwest edge of APE, construction on property to southwest |
| 23.02.14LKM090 | N | Southwest edge of APE, construction on property to southwest |
| 23.02.14LKM091 | S | Old road along west property line, toward south neighbor |

| Number | View | Description |
|----------------|-------------|--|
| 23.02.14LKM092 | N | From no trespassing sign, along west border |
| 23.02.14LKM093 | N | From southwest corner, abandoned car visible |
| 23.02.14LKM094 | E | From southwest corner, abandoned car visible |
| 23.02.14LKM095 | NE | From southwest corner, multiple cars visible |
| 23.02.14LKM096 | N | Disturbed soil near south border |
| 23.02.14LKM097 | NW | Old truck and log pile from south border |
| 23.02.14LKM098 | E | Overview of south border |
| 23.02.14LKM099 | W | Overview of south border |
| 23.02.14LKM100 | NNE | More of old road |
| 23.02.14LKM101 | W | Toward west, old truck |
| 23.02.14LKM102 | N | Overview, moving along south border |
| 23.02.14LKM103 | E | Overview, moving along south border |
| 23.02.14LKM104 | W | Overview, moving along south border |
| 23.02.14LKM105 | NW | Overview, moving along south border |
| 23.02.14LKM106 | N | Overview, moving along south border |
| 23.02.14LKM107 | W | South border from 87th Ave |
| 23.02.14LKM108 | NW | Overview from 87th Ave |
| 23.02.14LKM109 | NW | Property at eastern edge from 87th Ave |
| 23.02.14LKM110 | N | Mid-APE, vehicle with water in tire tracks |
| 23.02.14LKM111 | NW | Wood chip pile with blackberries |
| 23.02.14LKM112 | W | Wood chip pile with blackberries |
| 23.02.14LKM113 | E | Shed, boot, debris, west of house |
| 23.02.14LKM114 | NE | Blackberries and building near mid-property |
| 23.02.14LKM115 | N | Building (garage or storage) |
| 23.02.14LKM116 | NW | Building (garage or storage) |
| 23.02.14LKM117 | E | Raised berm at mid-APE along old road |
| 23.02.14LKM118 | W | From top berm (roughly 14x5 m) |
| 23.02.14LKM119 | S | From top berm (roughly 14x5 m) |
| 23.02.14LKM120 | SE | From top berm (roughly 14x5 m) |
| 23.02.14LKM121 | W | Cement pile beneath tree |
| 23.02.14LKM122 | W | ST 23 gravel on surface in foreground |
| 23.02.14LKM123 | N | Debris on lawn beside building |
| 23.02.14LKM124 | NE | Lawn toward ST 21 |
| 23.02.14LKM125 | E | Debris near home |
| 23.02.14LKM126 | W | Disturbed area along south of drainage ditch |
| 23.02.14LKM127 | S | East property edge at 87th Ave |
| 23.02.14LKM128 | W | Along south of drainage ditch from 87th |
| 23.02.14LKM129 | SW | Overview from corner of ditch and 87th Ave |
| 23.02.14LKM130 | NW | ST 26 with scale |
| 23.02.14LKM131 | NW | ST 26 without scale |
| 23.02.14LKM132 | W | ST 26 overview |
| 23.02.14FLK001 | W | ST 1 with scale |

| Number | View | Description |
|----------------|-------------|---|
| 23.02.14FLK002 | W | ST 1 without scale |
| 23.02.14FLK003 | S | ST 1 overview |
| 23.02.14FLK004 | P | Dense gravel fill and crowbar near ST 2 |
| 23.02.14FLK005 | W | ST 2 with scale |
| 23.02.14FLK006 | W | ST 2 without scale |
| 23.02.14FLK007 | E | ST 2 overview |
| 23.02.14FLK008 | W | ST 12 with scale |
| 23.02.14FLK009 | W | ST 12 without scale |
| 23.02.14FLK010 | W | ST 12 overview |
| 23.02.14FLK011 | W | ST 11 with scale |
| 23.02.14FLK012 | W | ST 11 without scale |
| 23.02.14FLK013 | W | ST 15 with scale |
| 23.02.14FLK014 | W | ST 15 without scale |
| 23.02.14FLK015 | S | ST 15 overview |
| 23.02.14FLK016 | E | ST 17 with scale |
| 23.02.14FLK017 | E | ST 17 without scale |
| 23.02.14FLK018 | N | ST 17 overview |
| 23.02.14FLK019 | N | ST 18 with scale |
| 23.02.14FLK020 | N | ST 18 without scale |
| 23.02.14FLK021 | S | ST 18 overview |
| 23.02.14FLK022 | W | ST 19 with scale |
| 23.02.14FLK023 | W | ST 19 without scale |
| 23.02.14FLK024 | W | ST 19 overview |
| 23.02.14FLK025 | S | ST 20 with scale |
| 23.02.14FLK026 | S | ST 20 without scale |
| 23.02.14FLK027 | W | ST 20 overview |
| 23.02.14FLK028 | W | ST 23 with scale |
| 23.02.14FLK029 | W | ST 23 without scale |
| 23.02.14FLK030 | W | ST 23 overview |
| 23.02.14FLK031 | N | ST 25 with scale |
| 23.02.14FLK032 | N | ST 25 without scale |
| 23.02.14FLK033 | N | ST 25 overview |
| 23.02.14FLK034 | N | ST 27 with scale |
| 23.02.14FLK035 | N | ST 27 without scale |
| 23.02.14FLK036 | W | ST 27 overview with ERCI |
| 23.02.14ARB001 | W | ST 6 with scale |
| 23.02.14ARB002 | W | ST 6 without scale |
| 23.02.14ARB003 | W | ST 6 overview |
| 23.02.14ARB004 | NW | ST 5 with scale |
| 23.02.14ARB005 | NW | ST 5 without scale |
| 23.02.14ARB006 | E | ST 5 overview |
| 23.02.14ARB007 | P | ST 5 glass |

| Number | View | Description |
|----------------|-------------|--|
| 23.02.14ARB008 | N | ST 4 with scale |
| 23.02.14ARB009 | N | ST 4 without scale |
| 23.02.14ARB010 | N | ST 4 overview |
| 23.02.14ARB011 | | DELETE |
| 23.02.14ARB012 | | DELETE |
| 23.02.14ARB013 | N | ST 10 with scale |
| 23.02.14ARB014 | N | ST 10 without scale |
| 23.02.14ARB015 | N | ST 10 overview with ERCI |
| 23.02.14ARB016 | N | ST 16 with scale |
| 23.02.14ARB017 | N | ST 16 without scale |
| 23.02.14ARB018 | S | ST 16 overview |
| 23.02.14ARB019 | N | ST 21 with scale |
| 23.02.14ARB020 | N | ST 21 without scale |
| 23.02.14ARB021 | N | ST 21 overview |
| 23.02.14ARB022 | N | ST 24 with scale |
| 23.02.14ARB023 | N | ST 24 without scale |
| 23.02.14ARB024 | E | ST 24 overview |
| 23.02.14ARB025 | P | ST 24 metal |
| 23.02.15ESD001 | W | ST 30 with scale |
| 23.02.15ESD002 | W | ST 30 without scale |
| 23.02.15ESD003 | NE | ST 30 overview with house and small shed |
| 23.02.15ESD004 | NW | ST 33 with scale |
| 23.02.15ESD005 | NW | ST 33 without scale |
| 23.02.15ESD006 | E | ST 33 overview |
| 23.02.15ESD007 | NW | ST 33 overview |
| 23.02.15ESD008 | P | ST 36 nonhuman mammal long bone fragment |
| 23.02.15ESD009 | P | ST 36 nonhuman mammal long bone fragment |
| 23.02.15ESD010 | P | ST 36 nonhuman mammal long bone fragment |
| 23.02.15ESD011 | P | ST 36 nonhuman mammal long bone fragment |
| 23.02.15ESD012 | P | ST 36 nonhuman mammal long bone fragment |
| 23.02.15ESD013 | P | ST 36 nonhuman mammal long bone fragment |
| 23.02.15ESD014 | P | ST 36 nonhuman mammal long bone fragment |
| 23.02.15ESD015 | P | ST 36 nonhuman mammal long bone fragment |
| 23.02.15ESD016 | P | ST 36 nonhuman mammal long bone fragment |
| 23.02.15ESD017 | P | ST 36 nonhuman mammal long bone fragment |
| 23.02.15ESD018 | P | ST 36 nonhuman mammal long bone fragment |
| 23.02.15ESD019 | P | ST 36 nonhuman mammal long bone fragment |
| 23.02.15ESD020 | P | ST 36 plastic fragments |
| 23.02.15ESD021 | P | ST 36 rusted metal fragment |
| 23.02.15ESD022 | N | ST 36 with scale |
| 23.02.15ESD023 | N | ST 36 without scale |
| 23.02.15ESD024 | S | ST 36 overview with ERCI |

| Number | View | Description |
|----------------|-------------|-----------------------------------|
| 23.02.15ESD025 | N | ST 39 with scale |
| 23.02.15ESD026 | N | ST 39 without scale |
| 23.02.15ESD027 | N | ST 39 overview |
| 23.02.15ESD028 | P | ST 39 plastic and metal |
| 23.02.15ESD029 | NE | ST 44 with scale |
| 23.02.15ESD030 | NE | ST 44 without scale |
| 23.02.15ESD031 | NNW | ST 44 overview with berm |
| 23.02.15ESD032 | P | ST 44 plastic |
| 23.02.15ESD033 | NE | ST 48 with scale |
| 23.02.15ESD034 | NE | ST 48 without scale |
| 23.02.15ESD035 | W | ST 48 overview with ERCI |
| 23.02.15ESD036 | P | ST 48 metal |
| 23.02.15ESD037 | P | ST 48 brick fragment |
| 23.02.15ESD038 | P | ST 48 concrete fragment |
| 23.02.15ESD039 | P | ST 48 concrete fragment |
| 23.02.15ARB001 | N | ST 29 with scale |
| 23.02.15ARB002 | N | ST 29 without scale |
| 23.02.15ARB003 | NE | ST 29 overview with ERCI |
| 23.02.15ARB004 | NW | ST 32 with scale |
| 23.02.15ARB005 | NW | ST 32 without scale |
| 23.02.15ARB006 | E | ST 32 overview with ERCI at ST 34 |
| 23.02.15ARB007 | P | ST 32 nails and plastic |
| 23.02.15ARB008 | N | ST 37 with scale |
| 23.02.15ARB009 | N | ST 37 without scale |
| 23.02.15ARB010 | NW | ST 37 overview with ERCI at ST 36 |
| 23.02.15ARB011 | NW | ST 37 overview with ERCI at ST 36 |
| 23.02.15ARB012 | P | ST 37 black plastic |
| 23.02.15ARB013 | P | ST 40 nonhuman mammal bone |
| 23.02.15ARB014 | P | ST 40 nonhuman mammal bone |
| 23.02.15ARB015 | P | ST 40 glass |
| 23.02.15ARB016 | N | ST 40 with scale |
| 23.02.15ARB017 | N | ST 40 without scale |
| 23.02.15ARB018 | NW | ST 40 overview |
| 23.02.15ARB019 | N | ST 43 with scale |
| 23.02.15ARB020 | N | ST 43 without scale |
| 23.02.15ARB021 | N | ST 43 overview |
| 23.02.15ARB022 | P | ST 43 fabric |
| 23.02.15ARB023 | N | ST 46 with scale |
| 23.02.15ARB024 | N | ST 46 without scale |
| 23.02.15ARB025 | N | ST 46 overview |
| 23.02.15ARB026 | NE | ST 49 with scale |
| 23.02.15ARB027 | NE | ST 49 without scale |

| Number | View | Description |
|----------------|-------------|--|
| 23.02.15ARB028 | N | ST 49 overview |
| 23.02.15ARB029 | P | ST 49 glass |
| 23.02.15ARB030 | P | ST 49 metal |
| 23.02.15ARB031 | P | ST 49 plastic |
| 23.02.15FLK001 | S | ST 28 with scale |
| 23.02.15FLK002 | S | ST 28 without scale |
| 23.02.15FLK003 | S | ST 28 overview |
| 23.02.15FLK004 | S | ST 31 with scale |
| 23.02.15FLK005 | S | ST 31 without scale |
| 23.02.15FLK006 | S | ST 31 overview |
| 23.02.15FLK007 | E | ST 34 with scale |
| 23.02.15FLK008 | E | ST 34 without scale |
| 23.02.15FLK009 | W | ST 34 overview with ERCI |
| 23.02.15FLK010 | E | ST 35 with scale |
| 23.02.15FLK011 | E | ST 35 without scale |
| 23.02.15FLK012 | W | ST 35 overview with ERCI |
| 23.02.15FLK013 | P | ST 35 plastic |
| 23.02.15FLK014 | P | ST 35 pipe |
| 23.02.15FLK015 | P | ST 35 colorless glass |
| 23.02.15FLK016 | S | ST 38 with scale |
| 23.02.15FLK017 | S | ST 38 without scale |
| 23.02.15FLK018 | W | ST 38 overview with ERCI |
| 23.02.15FLK019 | E | ST 41 with scale |
| 23.02.15FLK020 | E | ST 41 without scale |
| 23.02.15FLK021 | E | ST 41 overview with ERCI |
| 23.02.15FLK022 | P | ST 41 PVC |
| 23.02.15FLK023 | W | ST 42 with scale |
| 23.02.15FLK024 | W | ST 42 without scale |
| 23.02.15FLK025 | S | ST 42 overview |
| 23.02.15FLK026 | E | ST 45 with scale |
| 23.02.15FLK027 | E | ST 45 without scale |
| 23.02.15FLK028 | W | ST 45 overview |
| 23.02.15FLK029 | S | ST 47 with scale |
| 23.02.15FLK030 | S | ST 47 without scale |
| 23.02.15FLK031 | S | ST 47 overview |
| 23.02.15FLK032 | E | ST 50 with scale |
| 23.02.15FLK033 | E | ST 50 without scale |
| 23.02.15FLK034 | E | ST 50 overview |
| 23.02.15LKM001 | W | Small shed overview (Structure 2 Shed) |
| 23.02.15LKM002 | SW | Small shed overview (Structure 2 Shed) |
| 23.02.15LKM003 | S | Small shed overview (Structure 2 Shed) |
| 23.02.15LKM004 | SE | Small shed overview (Structure 2 Shed) |

| Number | View | Description |
|----------------|-------------|--|
| 23.02.15LKM005 | E | Small shed overview (Structure 2 Shed) |
| 23.02.15LKM006 | NE | Small shed overview (Structure 2 Shed) |
| 23.02.15LKM007 | N | Small shed overview (Structure 2 Shed) |
| 23.02.15LKM008 | NW | Small shed overview (Structure 2 Shed) |
| 23.02.15LKM009 | W | Small shed, closeup (Structure 2 Shed) |
| 23.02.15LKM010 | W | Small shed, closeup (Structure 2 Shed) |
| 23.02.15LKM011 | SW | Small shed, closeup (Structure 2 Shed) |
| 23.02.15LKM012 | S | Small shed, closeup (Structure 2 Shed) |
| 23.02.15LKM013 | S | Small shed, closeup (Structure 2 Shed) |
| 23.02.15LKM014 | SE | Small shed, closeup (Structure 2 Shed) |
| 23.02.15LKM015 | E | Small shed, closeup (Structure 2 Shed) |
| 23.02.15LKM016 | E | Small shed, closeup (Structure 2 Shed) |
| 23.02.15LKM017 | NE | Small shed, closeup (Structure 2 Shed) |
| 23.02.15LKM018 | N | Small shed, closeup (Structure 2 Shed) |
| 23.02.15LKM019 | N | Small shed, closeup (Structure 2 Shed) |
| 23.02.15LKM020 | NNW | Small shed, closeup (Structure 2 Shed) |
| 23.02.15LKM021 | W | Small shed door hinges (Structure 2 Shed) |
| 23.02.15LKM022 | W | Small shed, east wall window (Structure 2 Shed) |
| 23.02.15LKM023 | S | Small shed, door track, north wall (Structure 2 Shed) |
| 23.02.15LKM024 | S | Small shed, door track, north wall (Structure 2 Shed) |
| 23.02.15LKM025 | NE | Small shed, unattached door on south wall (Structure 2 Shed) |
| 23.02.15LKM026 | N | Small shed, eaves under roof (Structure 2 Shed) |
| 23.02.15LKM027 | S | Small shed overview with house (Structure 2 Shed) |
| 23.02.15LKM028 | SW | Large shed overview (Structure 1) |
| 23.02.15LKM029 | W | Large shed overview (Structure 1) |
| 23.02.15LKM030 | SW | Large shed overview (Structure 1) |
| 23.02.15LKM031 | S | Large shed overview (Structure 1) |
| 23.02.15LKM032 | S | Large shed overview (Structure 1) |
| 23.02.15LKM033 | S | Large shed overview (Structure 1) |
| 23.02.15LKM034 | SE | Large shed overview (Structure 1) |
| 23.02.15LKM035 | E | Large shed overview (Structure 1) |
| 23.02.15LKM036 | E | Large shed overview (Structure 1) |
| 23.02.15LKM037 | E | Large shed overview (Structure 1) |
| 23.02.15LKM038 | NE | Large shed overview (Structure 1) |
| 23.02.15LKM039 | N | Large shed overview (Structure 1) |
| 23.02.15LKM040 | NW | Large shed overview (Structure 1) |
| 23.02.15LKM041 | W | Large shed, southeast wall (Structure 1) |
| 23.02.15LKM042 | W | Large shed, northeast wall (Structure 1) |
| 23.02.15LKM043 | SW | Large shed, northeast corner (Structure 1) |
| 23.02.15LKM044 | S | Large shed, north wall (Structure 1) |
| 23.02.15LKM045 | S | Large shed, north wall (Structure 1) |
| 23.02.15LKM046 | SE | Large shed, north wall (Structure 1) |

| Number | View | Description |
|----------------|-------------|--|
| 23.02.15LKM047 | E | Large shed, northwest wall (Structure 1) |
| 23.02.15LKM048 | E | Large shed, west wall (Structure 1) |
| 23.02.15LKM049 | E | Large shed, southwest wall (Structure 1) |
| 23.02.15LKM050 | NE | Large shed, southwest corner (Structure 1) |
| 23.02.15LKM051 | N | Large shed, south wall (Structure 1) |
| 23.02.15LKM052 | NW | Large shed, south wall (Structure 1) |
| 23.02.15LKM053 | W | Large shed, east wall closeup (Structure 1) |
| 23.02.15LKM054 | W | Large shed, east wall closeup (Structure 1) |
| 23.02.15LKM055 | W | Large shed, east wall closeup (Structure 1) |
| 23.02.15LKM056 | W | Large shed, east wall closeup, window (Structure 1) |
| 23.02.15LKM057 | W | One centimeter diameter nail head (Structure 1) |
| 23.02.15LKM058 | W | Timber with scale (Structure 1) |
| 23.02.15LKM059 | W | Timber with scale (Structure 1) |
| 23.02.15LKM060 | W | Door, repaired and deteriorating (Structure 1) |
| 23.02.15LKM061 | W | Large shed east wall closeup (Structure 1) |
| 23.02.15LKM062 | W | Large shed east wall closeup (Structure 1) |
| 23.02.15LKM063 | W | Round post beneath east wall with scale (Structure 1) |
| 23.02.15LKM064 | SW | Round posts beneath east wall (Structure 1) |
| 23.02.15LKM065 | SW | Large shed northwest corner closeup (Structure 1) |
| 23.02.15LKM066 | S | Large shed north end closeup (Structure 1) |
| 23.02.15LKM067 | S | Large shed north end closeup (Structure 1) |
| 23.02.15LKM068 | S | Large shed north end closeup, slanted porch (Structure 1) |
| 23.02.15LKM069 | S | Large shed north end closeup, porch door (Structure 1) |
| 23.02.15LKM070 | S | Large shed north end closeup (Structure 1) |
| 23.02.15LKM071 | E | Porch decorations and beams (Structure 1) |
| 23.02.15LKM072 | S | Large shed north wall closeup (Structure 1) |
| 23.02.15LKM073 | S | Large shed north wall, roof beams (Structure 1) |
| 23.02.15LKM074 | S | Large shed north wall, support posts (Structure 1) |
| 23.02.15LKM075 | S | Large shed north wall, debris on porch (Structure 1) |
| 23.02.15LKM076 | S | Large shed north wall, second door on porch (Structure 1) |
| 23.02.15LKM077 | S | Large shed north wall, debris (Structure 1) |
| 23.02.15LKM078 | SW | Large shed north wall, west wall of porch (Structure 1) |
| 23.02.15LKM079 | S | Large shed north wall, beams at west side of porch (Structure 1) |
| 23.02.15LKM080 | SSE | Large shed northwest corner closeup (Structure 1) |
| 23.02.15LKM081 | ENE | Large shed west wall closeup (Structure 1) |
| 23.02.15LKM082 | E | Large shed west wall closeup (Structure 1) |
| 23.02.15LKM083 | E | Large shed west wall closeup (Structure 1) |
| 23.02.15LKM084 | ESE | Large shed west wall closeup (Structure 1) |
| 23.02.15LKM085 | E | Large shed west wall closeup, screen door (Structure 1) |
| 23.02.15LKM086 | E | Large shed west wall closeup, window (Structure 1) |
| 23.02.15LKM087 | E | Large shed west wall closeup, residential debris (Structure 1) |
| 23.02.15LKM088 | NE | Large shed southwest corner closeup (Structure 1) |

| Number | View | Description |
|----------------|-------------|---|
| 23.02.15LKM089 | N | Large shed southwest corner closeup (Structure 1) |
| 23.02.15LKM090 | N | Large shed south wall closeup (Structure 1) |
| 23.02.15LKM091 | N | Large shed south wall closeup (Structure 1) |
| 23.02.15LKM092 | N | Large shed south wall closeup (Structure 1) |
| 23.02.15LKM093 | N | Large shed south wall closeup (Structure 1) |
| 23.02.15LKM094 | NNW | Inside large shed from south door (Structure 1) |
| 23.02.15LKM095 | NW | Roller-hinge on south door (Structure 1) |
| 23.02.15LKM096 | NW | Inside large shed from south door (Structure 1) |
| 23.02.15LKM097 | W | Inside large shed from east door (Structure 1) |
| 23.02.15LKM098 | W | Inside large shed from east door (Structure 1) |
| 23.02.15LKM099 | W | House overview (Structure 2) |
| 23.02.15LKM100 | SW | House overview (Structure 2) |
| 23.02.15LKM101 | S | House overview (Structure 2) |
| 23.02.15LKM102 | SE | House overview (Structure 2) |
| 23.02.15LKM103 | E | House overview (Structure 2) |
| 23.02.15LKM104 | NE | House overview (Structure 2) |
| 23.02.15LKM105 | W | House overview (Structure 2) |
| 23.02.15LKM106 | NW | House overview (Structure 2) |
| 23.02.15LKM107 | W | House overview moving closer (Structure 2) |
| 23.02.15LKM108 | SW | House overview moving closer (Structure 2) |
| 23.02.15LKM109 | S | House overview moving closer (Structure 2) |
| 23.02.15LKM110 | SE | House overview moving closer (Structure 2) |
| 23.02.15LKM111 | SE | House overview moving closer (Structure 2) |
| 23.02.15LKM112 | E | House overview moving closer (Structure 2) |
| 23.02.15LKM113 | N | House overview moving closer (Structure 2) |
| 23.02.15LKM114 | NW | House overview moving closer (Structure 2) |
| 23.02.15LKM115 | W | House closeup (Structure 2) |
| 23.02.15LKM116 | WSW | House closeup (Structure 2) |
| 23.02.15LKM117 | W | House closeup, beneath front porch (Structure 2) |
| 23.02.15LKM118 | W | House closeup (Structure 2) |
| 23.02.15LKM119 | SW | House closeup (Structure 2) |
| 23.02.15LKM120 | W | House closeup (Structure 2) |
| 23.02.15LKM121 | SW | House closeup (Structure 2) |
| 23.02.15LKM122 | S | House closeup (Structure 2) |
| 23.02.15LKM123 | S | House closeup (Structure 2) |
| 23.02.15LKM124 | S | House closeup (Structure 2) |
| 23.02.15LKM125 | S | House closeup (Structure 2) |
| 23.02.15LKM126 | S | House closeup (Structure 2) |
| 23.02.15LKM127 | S | House closeup (Structure 2) |
| 23.02.15LKM128 | SE | House closeup (Structure 2) |
| 23.02.15LKM129 | SE | House closeup (Structure 2) |

| Number | View | Description |
|----------------|------|---|
| 23.02.15LKM130 | SE | Writing in cement porch block at northwest corner of house (Structure 2) |
| 23.02.15LKM131 | S | House back porch closeup (Structure 2) |
| 23.02.15LKM132 | E | House back porch closeup (Structure 2) |
| 23.02.15LKM133 | E | House back porch closeup (Structure 2) |
| 23.02.15LKM134 | E | House back porch closeup (Structure 2) |
| 23.02.15LKM135 | E | House back porch closeup (Structure 2) |
| 23.02.15LKM136 | NE | House closeup (Structure 2) |
| 23.02.15LKM137 | NE | House upper floor at back of house (Structure 2) |
| 23.02.15LKM138 | N | House closeup (Structure 2) |
| 23.02.15LKM139 | N | House closeup (Structure 2) |
| 23.02.15LKM140 | N | House closeup (Structure 2) |
| 23.02.15LKM141 | N | House closeup, south upper floor (Structure 2) |
| 23.02.15LKM142 | N | House, opening beneath house (Structure 2) |
| 23.02.15LKM143 | N | House, under front porch (Structure 2) |
| 23.02.15LKM144 | N | House front porch closeup (Structure 2) |
| 23.02.15LKM145 | SE | Jacuzzi "Hydrocel" pump and cement platform |
| 23.02.15LKM146 | NE | Hydrocel location overview |
| 23.02.15LKM147 | SW | Rectangular blackberry area on lawn northwest of house, former garden with fence posts but no fence |
| 23.02.15LKM148 | E | ERCI working |
| 23.02.15LKM149 | N | ERCI working |
| 23.02.15LKM150 | N | ERCI working |
| 23.02.22LKM001 | W | 4018 87th Avenue NE, front (Structure 4) |
| 23.02.22LKM002 | NW | 4018 87th Avenue NE, front (Structure 4) |
| 23.02.22LKM003 | N | 4018 87th Avenue NE, south (Structure 4) |
| 23.02.22LKM004 | NE | 4018 87th Avenue NE, southwest corner (Structure 4) |
| 23.02.22LKM005 | E | 4018 87th Avenue NE, back (Structure 4) |
| 23.02.22LKM006 | WNW | Front, close up (Structure 4) |
| 23.02.22LKM007 | W | Front, close up (Structure 4) |
| 23.02.22LKM008 | W | Front, close up (Structure 4) |
| 23.02.22LKM009 | W | Front, close up (Structure 4) |
| 23.02.22LKM010 | S | North side, addition (Structure 4) |
| 23.02.22LKM011 | SE | Back of addition (Structure 4) |
| 23.02.22LKM012 | SE | North side, main house (Structure 4) |
| 23.02.22LKM013 | E | Back of house (Structure 4) |
| 23.02.22LKM014 | E | Back of house, close up (Structure 4) |
| 23.02.22LKM015 | E | Back of house, close up (Structure 4) |
| 23.02.22LKM016 | NE | Back of house, close up (Structure 4) |
| 23.02.22LKM017 | NNE | South side, close up (Structure 4) |
| 23.02.22LKM018 | NE | South side, close up (Structure 4) |

Appendix 3: Unanticipated Discovery Protocol

In the event that any ground-disturbing activities or other project activities related to the 87th Townhomes Project or any future development uncover protected cultural material (see below), the following actions should be taken:

1. If the cultural material is a historic or precontact object (glass bottle, tin can, stone, bone, horn or antler tool); a historic or precontact feature (hearth, building foundation, privy), then the on-site supervisor should avoid the object, secure the location and relocate work activities to a different part of the APE. The Project manager should then call a professional archaeologist to evaluate the discovery.
2. If ground disturbing activities encounter human skeletal remains during the course of construction, then all activity will cease that may cause further disturbance to those remains. The area of the find will be secured and protected from further disturbance. The finding of human skeletal remains will be reported to the county medical examiner/coroner and local law enforcement in the most expeditious manner possible. The remains will not be touched, moved, or further disturbed. The county medical examiner/coroner will assume jurisdiction over the human skeletal remains and make a determination of whether those remains are forensic or non-forensic. If the Snohomish County medical examiner determines the remains are non-forensic, then they will report that finding to the Department of Archaeology and Historic Preservation (DAHP) who will then take jurisdiction over the remains. The DAHP will notify any appropriate cemeteries and all affected tribes of the find. The State Physical Anthropologist will make a determination of whether the remains are Indian or Non-Indian and report that finding to any appropriate cemeteries and the affected tribes. The DAHP will then handle all consultation with the affected parties as to the future preservation, excavation, and disposition of the remains.

Cultural material that may be protected by law could include but is not limited to:

- Logging, mining, railroad, or agriculture equipment older than 50 years (Figure 58)
- Historic foundations (Figure 59)
- Historic bottles, ceramics, and soldered dot cans (Figure 60, Figure 61)
- Buried cobbles that may indicate a hearth feature (Figure 62)
- Non-natural sediment or stone deposits that may be related to activity areas of people
- Stone tools or stone flakes, projectile points (arrowheads), ground stone adzes or grinding stones (abraders) (Figure 63–Figure 66)
- Bone, shell, horn, or antler tools that may include scrapers, cutting tools, wood working wedges (Figure 67, Figure 68)
- 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 (Figure 69)
- Culturally modified trees (Figure 70)
- Pictographs or petroglyphs (Figure 71, Figure 72)
- Human remains



Figure 58: Example of railroad ties for UDP.



Figure 59: Example of historic foundation for UDP.



Figure 60: Example of historic glass artifacts for UDP.



Figure 61: Example of historic solder dot can for UDP



Figure 62: Example of protected rock-lined hearth feature for UDP.



Figure 63: Example of projectile point for UDP.



Figure 64: Example of protected adze blade for UDP.



Figure 65: Example of stone tool for UDP.



Figure 66: Example of stone tool for UDP.



Figure 67: Example of bone awl for UDP.



Figure 68: Example of worked bone and spines for UDP.



Figure 69: Example of cedar bark basketry for UDP.



Figure 70: Example of planked tree for UDP.



Figure 71: Example of pictographs for UDP.



Figure 72: Example of petroglyphs for UDP.

CONTACT LIST

| Affiliation | Name | Phone | email |
|------------------------------------|-------------------|-----------------------|-------------------------------|
| Reid Development Group LLC | Mike Reid | 425-785-3651 | reid_dev@comcast.net |
| Snoqualmie Indian Tribe | Steven Moses | 425-888-6551 | steve@snoqualmietribe.us |
| Stillaguamish Tribe of Indians | Kerry Lyste | 360-682-7362 x 226 | klyste@stillaguamish.com |
| Tulalip Tribes | Richard Young | 360-716-2652 | ryoung@tulaliptribes-nsn.gov |
| Snohomish County Sheriff | | 425-388-3393 | |
| Snohomish County Medical Examiner | | 425-438-6200 | Contact.MedAdmin@snoco.org |
| DAHP State Archaeologist | Rob Whitlam | 360-890-2615 | rob.whitlam@dahp.wa.gov |
| DAHP State Archaeologist | Lance Wollwage | 360-890-2616 | lance.wollwage@dahp.wa.gov |
| DAHP Local Government Archeologist | Stephanie Jolivet | 360-628-2755 | Stephanie.Jolivet@dahp.wa.gov |
| Archaeologist (ERCI) | Kelly R. Bush | 360-661-0356 | kelrbush@equinoxerci.com |