

CULTURAL RESOURCES REPORT COVER SHEET

DAHP Project Number: 2024-02-01232

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Title of Report: Cultural Resources Assessment for the Lake Forest Park Lakefront Improvements Project 17345 and 17347 Beach Dr NE, Lake Forest Park, King County, Washington

Date of Report: February 2024

County: King Section: 10 Township: 26 Range: 4E

Quad: East Edmonds Acres: 1.91

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 #:

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Cultural Resources Assessment for the Lake Forest Park Lakefront Improvements Project 17345 and 17347 Beach Dr NE, Lake Forest Park, King County, Washington

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Management Summary

ASM Affiliates, Inc. (ASM) contracted with the DCG/Watershed to conduct a cultural resources assessment for the proposed Lake Forest Park Lakefront Improvements Project 17345 and 17347 Beach Dr NE in Lake Forest Park, King County, Washington. The proposed project consists of acquiring and developing a 1.91-acres adjacent to the Lyon Creek Waterfront Preserve. The project includes funding through the Washington State Recreation and Conservation Office using the Washington Wildlife and Recreation Program (PRISM Project #20-1862). The purpose of the assessment was to evaluate the project for the potential effects on archaeological or historic resources. ASM's efforts included a literature review of site forms and previous cultural resources reports on file at the Washington State Department of Archaeology and Historic Preservation as well as pertinent environmental, historic, and ethnographic maps and documentation; a field inventory of the Project area; and preparation of this technical report to fully document the results of the inventory in compliance with Governor's Executive Order 21-02.

During the assessment ASM identified historic structures at 17345 and 17347 Beach Drive. Although the structures are over 50 years old and thus represents a historic resource, they have previously been determined ineligible for the National Register of Historic Places (Borth 2021).

1. Introduction

This report presents the results of a cultural resources assessment conducted by ASM Affiliates, Inc. (ASM) for the Lake Forest Park Lakefront Improvements Project 17345 and 17347 Beach Dr NE in Lake Forest Park, King County, Washington. The project consists of acquiring and developing a 1.91-acres adjacent to the Lyon Creek Waterfront Preserve. The project includes funding through the Washington State Recreation and Conservation Office (RCO) using the Washington Wildlife and Recreation Program (WWRP) under PRISM Project #20-1862. The purpose of the assessment was to evaluate the project for the potential effects on archaeological or historic resources. ASM's efforts included a literature review of site forms and previous cultural resources reports on file at the Washington State Department of Archaeology and Historic Preservation (DAHP) as well as pertinent environmental, historic, and ethnographic maps and documentation; a field inventory of the Project area; and preparation of this technical report to fully document the results of the inventory in compliance with Governor's Executive Order 21-02 (EO 21-02). During the assessment ASM identified historic structures at 17345 and 17347 Beach Drive. Background research determined the structures spanning both properties has previously been determined ineligible for the NRHP.

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

Project Description and Background

The City of Lake Forest Park (the City) will use a grant from the RCO to acquire 1.91 acres on the northwest shores of Lake Washington. Goals for the project are to increase the park acres to population ratio, provide water access for the community while also providing pedestrian park access located approximately 350-feet off the highly used Burke-Gilman Trail. The purchase of this property will provide active and recreational access to grassy park land, approximately 150-feet of sandy beach, a dock, and the lake for local and regional park usage.

Currently, the property has one single family residence, built in 1930, as well as smaller cabin style structures, and garages on the property built from 1931-1937. The City plans to retain the main house as a potential community gathering place and one or two cabins to recognize the historic significance of the property combined with education. A bathroom and picnic shelter(s) would also be looked at to replace the existing cabin and garage that are in poor condition. The grassy area will be kept open for water access and recreation use. Currently the City is in the early stage of the project which is a rigorous planning process with community involvement. In 2024, using RCO funding, the City will conduct selective demolition and architectural deconstruction and salvage of several cabins and the carport. This initial phase of demolition will have little to no ground disturbance. Detail design and construction will also continue in upcoming years that the City applies for additional funding.

One single-family residence and six cottages on the subject properties were evaluated for the NRHP in 2021. These structures were determined ineligible under Criterion A, B, C, D.

DAHP and Tribal Consultation

At the time of reporting the RCO is the lead state agency for this project and will coordinate with DAHP and Tribal cultural resources staff for cultural resources compliance. The project is being funded through the RCO's Recreation and Conservation Funding Board under PRISM Project #20-1862. If federal funding for the project is acquired, then the RCO will work with the agency to conduct government to government consultation.

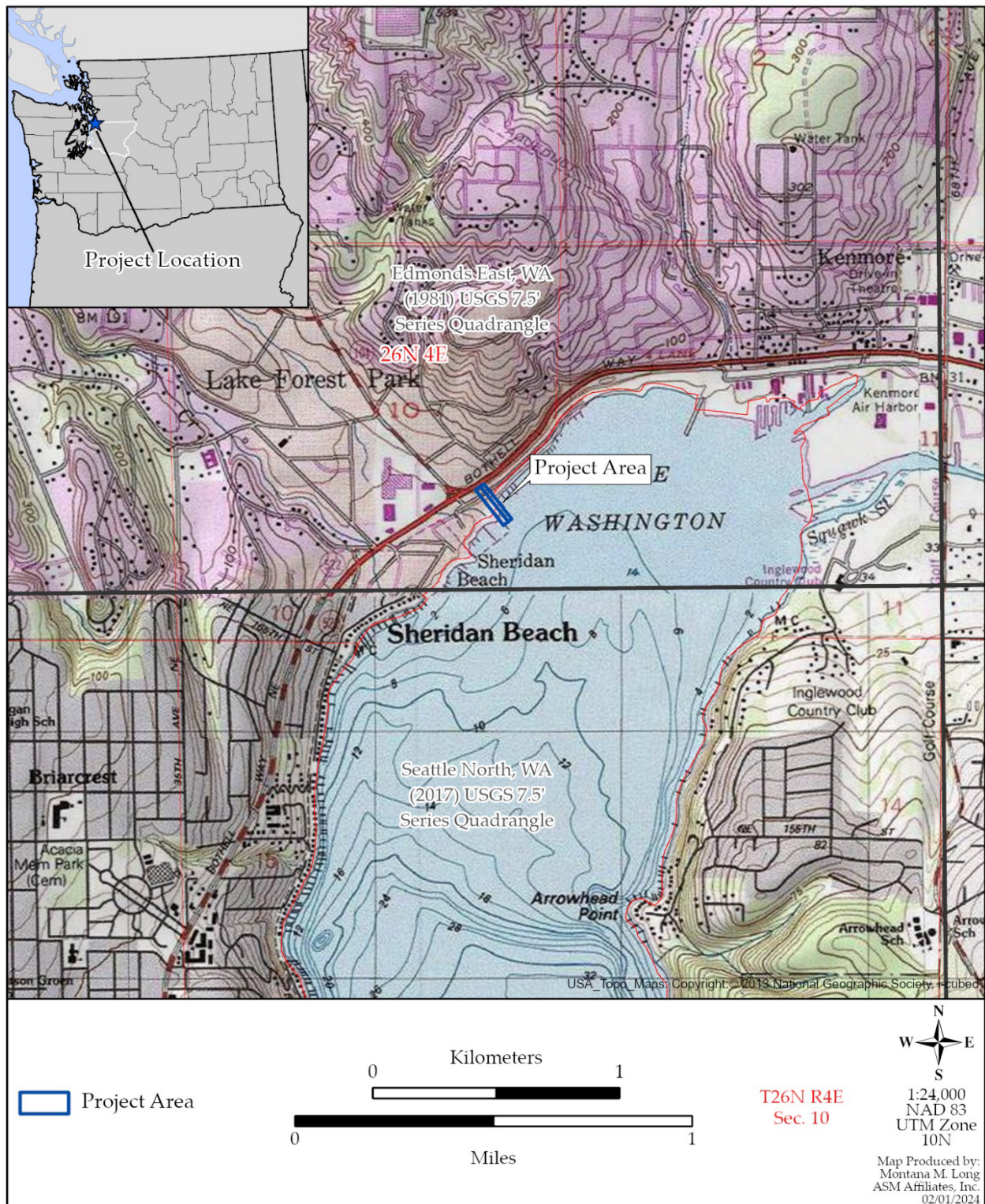


Figure 1. Lakefront Property Project APE Location

2. Archaeological Context

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

Environmental Setting

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

Vegetation patterns in western Washington shifted at least three times in the past 14,000 years due to regional climate changes in the Pacific Northwest. The northern Puget Sound was characterized by a cool, dry climate between approximately 13,000 and 12,000 B.P. Vegetation at this time included grasslands within open forests of sparse lodgepole pine (*Pinus contorta*), sedges (Cyperaceae), sagebrush (*Artemisia* sp.), and an assortment of herbs (Barnosky et al. 1987; Brubaker 1991; Whitlock 1992). Regional climate warmed by approximately 12,000 B.P., and Douglas fir (*Pseudotsuga menziesii*) and western hemlock (*Tsuga heterophylla*) became integrated with the existing forest (Whitlock 1992). From approximately 12,000 to 7000 B.P., regional climate became much drier, characterized by higher summer temperatures and an increase in severity and frequency of summer droughts (Barnosky et al. 1987; Brubaker 1991; Whitlock 1992). The regional environment changed to a cooler, moist marine climate after 6000 B.P. An increase in summer precipitation and a decrease in summer temperatures accompanied an increase in the relative abundance of western red cedar (*Thuja plicata*) and western hemlock, culminating in a forest dominated by western hemlock and Douglas fir (Brubaker 1991; Whitlock 1992). Early General Land Office surveys documented stands of fir, hemlock, maple, alder, and cedar with a dense understory including salal and vine maple in the current project vicinity (United States Surveyor General 1867a, 1880).

The Project is located along the northern bank of Lake Washington. Soils mapped in the project location are Urban land Alderwood complex (Soil Survey Staff 2023). These soils form on hillslopes from glacial drift or outwash over dense glaciomarine deposits. The typical sediment profile of these soils is as follows:

- *A - 0 to 7 inches: gravelly sandy loam*
- *Bw1 - 7 to 21 inches: very gravelly sandy loam*
- *Bw2 - 21 to 30 inches: very gravelly sandy loam*
- *Bg - 30 to 35 inches: very gravelly sandy loam*
- *2Cd1 - 35 to 43 inches: very gravelly sandy loam*
- *2Cd2 - 43 to 59 inches: very gravelly sandy loam*

Cultural Setting

This section briefly reviews the precontact, ethnohistoric, and historic cultural sequence of the project vicinity. This is a summary of how pertinent investigations in the general region have contributed to the understanding of past utilization of the project area.

Precontact Context

The antiquity of human occupation in North America has been the subject of considerable debate, and several sites have been suggested to represent very early occupation of the Americas (Davis et al. 2019; Dillehay and Collins 1988; Dillehay and Meltzer 1991; Fariña 2015; Guidon and Delibrias 1986). The most widely accepted current model is that humans first entered the western hemisphere between approximately 16,000-15,000 B.P., with a second migration of proto-Clovis peoples occurring between 1,000-2,000 years later (e.g., Pitblado 2011; Waters and Stafford 2014). Humans probably migrated into the Puget Sound region as glaciers retreated during the Late Pleistocene. Limited archaeological evidence, characterized by lithic artifacts, including the distinctive Clovis type fluted projectile points and Western Stemmed Tradition stemmed and foliate bifaces, exists for these early populations in the Pacific Northwest region (Ames and Maschner 1999; Beck and Jones 2014; Carlson 1990; Kopperl 2016; Moss 2011). Cultural deposits dating between ca. Cal BP 12,000-10,000 from the Bear Creek Site (45KI839) north of Lake Sammamish represent an example of the Late Pleistocene-Holocene transition in Western Washington. Artifacts recovered from the site include projectile points, bifaces, scrapers, and retouched flakes comparable to those identified in Western Stemmed Tradition lithic assemblages. Evaluation of the Bear Creek Site lithic assemblage indicates a cultural continuity between the Late Pleistocene and Holocene populations in the region (Kopperl 2016).

The earliest archaeological evidence of Holocene exploitation in the Puget Sound region is commonly classified as the Olcott complex. The Olcott complex began around 10,000 B.P. and continued to as late as 4000 B.P., although the chronology of this complex is poorly understood, with various classifications, terminologies, and subdivisions utilized within the literature. These sites are generally recorded on river and streams terraces, with the Olcott type site (45IS14) recorded on the South Fork of the Stillaguamish River upstream from its confluence with Jim Creek. Large cobble tools and leaf-shaped projectile points, often heavily weathered, typically characterize Olcott sites. However, there is no consensus on the typology of Olcott tools, and similar artifacts are recorded in sites dated to the

2. Archaeological Context

Late Holocene as well. The Buse Timber Sales Site (45SN303) documented along the South Fork of the Stillaguamish River at the current City of Granite Falls represents one of the only stereotypical Olcott complex sites firmly dated to the Early Holocene. The Olcott artifacts indicate a subsistence strategy concentrating on large game hunting and plant food gathering, while the location of Olcott sites on river and stream terraces infers a fishing element (Carlson 1990; Chatters et al. 2011; Kidd 1964; Mattson 1985; Nelson 1990). The early and middle period for the Middle Green Basin is poorly represented archaeologically, however changing environmental conditions likely influenced subsistence practices. Prior to about five-thousand years ago, the Auburn vicinity was a tidal estuary of the Green River, and local inhabitants may have exploited marine resources. Environmental conditions changed abruptly 5,700 years ago when a massive lahar from Mt. Rainier (Osceola Mudflow) swept down the ancestral White River valley covering the Enumclaw Plateau with a massive deposit of rock and mud and extending the Auburn delta northward to Kent. The event transformed the Enumclaw Plateau into a massive level prairie, and likely affected resource procurement strategies on both the Muckleshoot and Covington plateaus.

As the regional climate shifted to a drier pattern and sea levels stabilized by 5000 B.P., people living in the Pacific Northwest Coast region increasingly relied on marine intertidal resources for subsistence (Ames and Maschner 1999:88-89), although sedentary seasonal winter settlements based on the storage of marine resources may have appeared on the Northwest Coast as early as 7000 B.P. (Cannon and Yang 2006). The specialized fishing industry characteristic of the Puget Sound region and the Pacific Northwest Coast in general solidified in the region after 2500 B.P. (Ames and Maschner 1999). Plank houses and specialized fishing implements, including toggled harpoons, appeared in the archaeological record of the Puget Sound region during that time, and were likely accompanied by an increased reliance on and surplus storage of salmon and harvested shellfish (Ames and Maschner 1999; Nelson 1990). Large shell midden sites also appeared in the archaeological record at this time and continued into the ethnohistoric period (Ames and Maschner 1999:89), as did small, notched projectile points potentially indicative of bow-and-arrow technology (Ames and Maschner 1999:200; Nelson 1990; Rorabaugh 2019, Rorabaugh and Fulkerson 2015).

Ethnohistoric Context

Native groups living in the Puget Sound region at the time of contact generally spoke one of two Lushootseed dialects, Northern and Southern. These groups all spoke languages assigned by linguists to the Coast Salish language family (Suttles and Lane 1990:485-486). Although there were distinct differences in the practices of speakers of various dialects, and even within groups speaking the same dialect, the people living in the Puget Sound region shared many cultural traits, including a dependence on marine resources, particularly salmon and shellfish, as their primary basis of subsistence, as well as extensive woodworking and basketry technologies. Gill and dip nets, basket traps, weirs, harpoons, and gaff hooks were utilized to catch fish, while shellfish were collected by hand or with digging sticks. Wooden implements, including boxes, water containers, and other domestic items were crafted using adzes, mauls, and wedges made of stone, antler, and wood. Cedar bark was utilized extensively for several purposes, including clothing, basketry, bedding, and cordage. People often occupied winter residences consisting of cedar plank longhouses, although some people lived in similar villages year-round. They also utilized seasonal resource procurement systems, using cedar dugout canoes, trail networks, and portable shelters when traveling to fishing, hunting, shellfish-collecting, and berry-gathering areas in the spring, summer, and early fall. Animals

hunted include deer, elk, bear, mountain goat, beaver, seal, and waterfowl, and were taken with bow and arrows, clubs, harpoons, pitfalls, deadfalls, and nets. In addition to food, animal resources also provided clothing, bedding, and tools. Numerous types of roots, berries, nuts and other plants were gathered for subsistence as well as medicinal purposes (Gibbs 1877; Haeberlin and Gunther 1930; Smith 1941; Suttles and Lane 1990; Waterman 1973; Waterman and Greiner 1921). Puget Sound groups maintained expansive trading networks within the region, as well as south to the Columbia River, north into present-day Canada, west to the Pacific Coast, and eastward across the Cascade Mountain Range, and they established complex religious, economic, and social structures that were made possible by a surplus of stored marine resources (Holm 1990; Hymes 1990; Suttles and Lane 1990).

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The nearby Sammamish River, a river feeding Lake Washington, was home to the Southern Lushootseed speaking Sammamish (Gibbs 1877:179; Smith 1941:207; Suttles and Lane 1990:486). The Southern Lushootseed speaking Duwamish and Suquamish, as well as the Northern Lushootseed speaking Snohomish also utilized the project area. An ethnographic Duwamish village is documented at the mouth of McAleer Creek on Lake Washington just west of the project area. (Haeberlin and Gunther 1930:7-10; Spier 1936:42; Suttles and Lane 1990:486; Waterman 1973).

Contact with Euro-American populations resulted in extensive changes to the Native communities. Smallpox and other diseases greatly reduced Native populations in the Puget Sound region, and land claims by Euro-Americans, as well as the establishment of reservations, removed several Native groups from their traditional territories, limiting access to their customary hunting and fishing areas (Suttles and Lane 1990). The United States, under Washington Territorial Governor Isaac I. Stevens, established several reservations designed for the forced relocation of Native Americans living along Puget Sound in the middle of the nineteenth century (Marino 1990:169). In 1855, several representatives of numerous Northern and Southern Lushootseed-speaking tribes, including the Duwamish, Sammamish, Snohomish, and Suquamish, signed the Treaty of Point Elliott, resulting in the creation of the Tulalip and Port Madison reservations (Lane 1974, 1975a, 1975b, 1975c; Marino 1990; Ruby and Brown 1986).

Historic Context

Non-natives first arrived in the Puget Sound region in the late 1700s. The first non-natives to travel south of the Strait of Juan de Fuca were explorers, followed by fur traders and missionaries. British explorer George Vancouver explored and charted the shores of Puget Sound in the 1790s (Meany 1957). The Wilkes expedition, sponsored by the United States, conducted further exploration in 1841 (Meany 1926). The British-owned Hudson's Bay Company established Fort Nisqually in 1833 and maintained the British trading tradition with native Puget Sound groups (Carpenter 1986). The United

2. Archaeological Context

States took sole possession of the Oregon Country including what is now Washington State in 1846, and by the early 1850s, Euro-Americans began streaming into Puget Sound, first seeking timber and then lands to establish homes and farms. The United States Congress established Washington Territory in 1853, and Washington gained statehood in 1889 (Whitfield 1926).

The project area at Lake Forest Park was first surveyed in 1859 on behalf of the Surveyor General's Office. The original survey depicts the north end of Lake Washington, similar to how it appears today, although it seems that the Eastern tip of the lake has been modified since the original survey. The original survey includes a network of streams that branch off McAleer Creek and Lyon Creek near the project area which do not seem to exist anymore. The survey does not include any structures, roads, trails or other cultural modifications (Bureau of Land Management 2021).

The project area was first allotted to Fred Drew on September 15, 1865, under the Scrip Warrant act of 1855 (Bureau of Land Management 2021). The Scrip Warrant Act of 1855 allowed the General Land Office to pay veterans or their heirs for their military service with land warrants (Department of Veteran Affairs 2023). The warrant was awarded to Clemente Villaronga of the United States Navy who assigned their warrant to Fred Drew, although neither the patent nor military warrant documenting the transaction describe Fred Drew's specific relationship to Clemente Villaronga (Bureau of Land Management 2021).

The earliest map of the project area available from the USGS is a map of the Snohomish Quadrangle from 1895. At that time, the project area and its surroundings had very few structures, and very little urban or industrial development, however, even as far back as 1895, the Pacific Railroad and Washington State Highway 522 passed very close by the project area (United States Geological Survey 1895). A USGS map of the Seattle Special Quadrangle from 1909 depicts the project area as marsh/grassland (United States Geological Survey 1909).

Atlases published by the Anderson Map Company in 1907, and by the Kroll Map Company in 1912, depict the project area without significant alteration, although by 1907, the Puget Mill Company owned the property directly North and South of the project area along the shore of Lake Washington (Anderson 1907, Kroll 1912). A map created by Metsker Maps in 1936 shows the area surrounding the project area heavily developed and divided into small tracts. Tracts containing the project area are unlabeled. The area may have been considered a part of Sheridan Beach which is just South of the project area along the shore of Lake Washington. A note points to the approximate location of the project area that reads "Lk. For. Waterfront Add." This may indicate the creation utilization or plans to utilize the project area as a waterfront (Metsker 1936).

A USGS map of the Edmonds East Quadrangle from 1954 depicts the project area, however, the project site is in a portion of the map marked red, which means that only landmark buildings are shown. The highlighting indicates that structures have already been built in the project area at this time. Unfortunately, we are not given any specific information on the map. By 1954, Beach Dr. had been constructed, including the portion that the project site is connected to. In 1954, the Pacific Railroad was still present and passed along the Northwest side of the project area, directly between Bothell Way

and Beach Dr. (United States Geological Survey 1953). The version of this map that was revised in 1968 shows docks added to the shore of Lake Washington, probably including the dock inside the project area. The docks are colored purple, meaning that they were added to the map sometime between 1953 and 1968 (United States Geological Survey 1968).

The main structure at 17345 Beach Dr. NE, was built in 1930 as a single-family residence. Two of the accompanying cabins were built in 1933. In 1937, three more cabins and the structure which now serves as a carport were constructed at 17347 Beach Dr. A sixth cabin was constructed at 17347 Beach Dr. in 1953. The property was purchased by Forterra NW in 2019, then by the City of Lake Forest Park in 2021 and then obtained by Washington State in 2022 (King County Department of Assessments 2022). The ownership history of the property at 17345 prior to 2019 is nearly identical to the ownership history of the property at 17347, indicating that both of these properties were typically owned together (King County Department of Assessments 2022).

Previous Research

A records search of documents on file at the DAHP revealed 10 cultural resources studies conducted within 1 mile of the Lake Forest Park (Appendix A). Most of the studies did not find any evidence of significant cultural resources or archaeological sites. The closest previous study to the project area was an archaeological pedestrian survey conducted in 2007 in preparation for the modification of the Burke Gilman Trail. The APE of this project passed within 20 meters of the project area. No cultural resources were discovered during this survey (Zuccotti 2007). An archaeological survey was conducted on the North shore of Lake Washington, 600 meters from the project area. During this survey, the ground soil was found to largely consist of artificial fill and natural stratigraphy was heavily disturbed (Breidenthal and Gerrish 2020). Other nearby subsurface surveys observed loamy fine sand subrounded cobbles and high levels of disturbance due to development (Boggs et al. 2009, Lahren 2013).

The subject properties were the focus of a Historic Property Inventory completed in 2021. The study looked at the seven structures, spanning both properties and determined them ineligible for the NRHP (Borth 2021).

Previously Recorded Cultural Resources

Previous studies have resulted in the recordation of two archaeological sites within 1 mile of the Lake Forest Park Project Area (Appendix B). The Railway Grade of the Seattle, Lake Shore and Eastern Railroad site (45KL541) contains numerous segments of historic railroad features including intact railroad grade and trestles as well as other associated features and artifacts (Hudson and Nelson, 1997). The Wurdemann House (45KL598), which is located directly Northeast of the project area and has historic significance as a landmark and architectural model (Saunders, 1990).

45KL451

The Railway Grade of the Seattle, Lake Shore, and Eastern Railroad (SLS&E) site is a series of historic railway grade segments and artifact deposits associated with the SLS&E, which has been abandoned since 1974. The site is located along portions of the Snohomish County Centennial Trail as well as

along the Eastern shore of Lake Sammamish and extending into North Bend. Another leg of the SLS&E Railroad passed along the North and West shore of Lake Washington into Seattle, directly adjacent to and less than 20 meters from the Lake Forest Park Project Area. Railroad grade, intact portions of track, railroad trestles, timber beam supports and communication poles with insulators as well as discarded railroad artifacts such as railroad ties, railroad spikes and coal deposits have been documented at various parts of the site. Related artifacts such as historic glass bottles have also been documented. Both Surface and subsurface artifacts between 30-80 cm below the surface have been documented. Documented features and artifacts can be dated as far back as 1896 and as recent as the mid-20th century. This site is significant to the Lake Forest Park Project Area due to its proximity to the area. Additionally, both areas are in close proximity to former railroads that operated at the same time, so it is likely that the Project Area could include similar artifacts and features to those found at 45KL451 (Hudson and Nelson, 1997).

45KL598

The Wurdemann House is a private residence located at 1706 Bothell Way NE, Lake Forest Park WA 98155. The house property is located 50 meters from the Lake Forest Park project area, directly across Bothell Way NE and Beach Dr NE. The Wurdemann House was built in 1914 and was one of the first residences built in Lake Forest Park. The house was intentionally designed to inspire future development by bringing attention to the area and giving it a sense of style and prestige. It is the largest and considered to be the most impressive residence in the area (Saunders 1990). The Wurdemann House is 2738 square feet, and its design is based on the Mediterranean Villa style, which was popular at the time of its construction. Its property also contains gardens and a cottage intended for a live-in gardener. From an architectural standpoint, the Wurdemann House is a technical feat as well as an example of architectural ideals of the period in which it was built. Due to the impressive nature of the home, and the social activity of its various owners, the home has served as a landmark and community center since its creation. The Wurdemann House's direct ties to the rise of urbanism and residence in the area make it not only a significant site on its own, but potentially impactful to the Lake Forest Park project area (Saunders, 1990).

3. Research Design and Field Methods

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

Research Design

Several factors contribute to expectations concerning the likelihood of locating cultural resources within the project area. Recorded cultural resources, landform characteristics, documented land use, and previous archaeological work discussed in the preceding chapter all contributed to those expectations. The DAHP predictive modeling has determined the project APE is within an area of “very high” risk for cultural resources. The project area is along the shores of Lake Washington. An ethnographic Duwamish village is documented at the mouth of McAleer Creek on Lake Washington just west of the project area. People living at the creek mouth likely utilized the entire watershed during fishing, hunting, and plant gathering forays. Lushootseed place names documented for Lake Washington as well as the mouth of the creek support this assumption. Cultural resources associated with resource procurement activities in project area could include stone tools, ground stone implements, hearth features, fire-modified rock concentrations, culturally modified trees, terrestrial faunal remains, and fish bone.

Historic period cultural remains in the project area could represent those associated with the existing 1930’s building as well as the railroad activities. These activities could have produced resources such as railroad debris and domestic refuse characterized by bottle glass, ceramics, brick, metal, and food remains; these resources would most likely date from the late nineteenth to the mid-twentieth century.

Field Methods

ASM Archaeologists Lane Larson and Austin Baker conducted the fieldwork for the cultural resources assessment of this project. Fieldwork consisted of both surface and subsurface examination of the project area (Figure 2). A total of 12 shovel test pits (STPs) were conducted within the project area. STPs were excavated throughout the property and were dug to a maximum depth of 100 centimeters below the surface (cmbs) and were between 45 and 50 centimeters in diameter. The depth of STP excavations was most commonly limited by water infiltration, tree roots, gravels, and glaciomarine sediments. In general, STP excavations were terminated between 80-100 cmbs. All sediments from STPs were screened through a 1/4-inch hardware mesh. All excavation results were documented on ASM forms, which include provenience, cultural material descriptions, information on sediment type, termination depth, and general observations. All excavations were backfilled after documentation. The location of all subsurface excavations was recorded on project maps. Digital photographs recorded the general condition of the survey area and the character of sediment deposits observed in subsurface investigations. Results from STP excavation are in Appendix C.

2. Archaeological Context

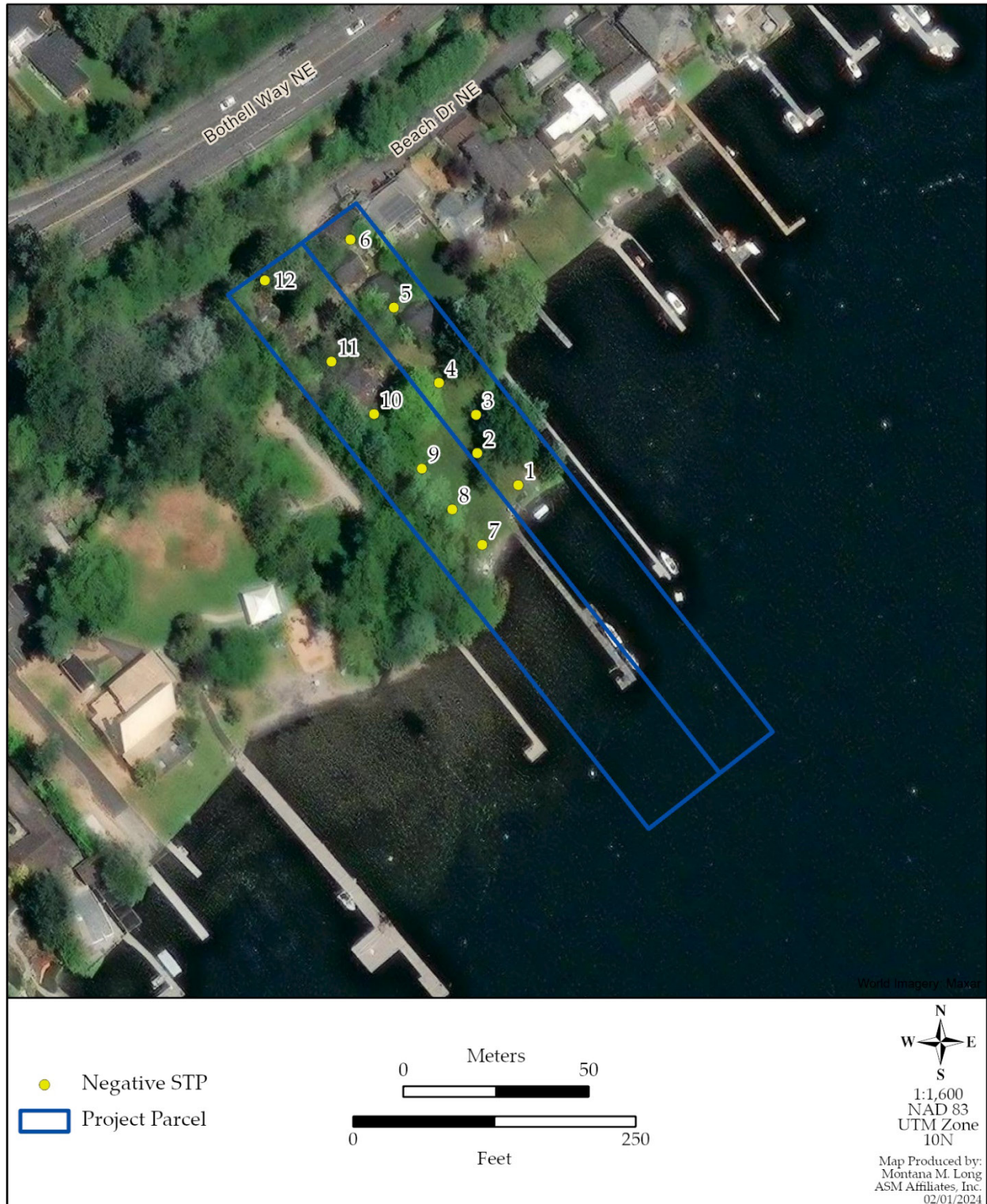


Figure 2. Field Results

4. Field Results

ASM completed both pedestrian and subsurface surveys of the project area. No significant cultural resources were encountered. The project is located on the northern tip of Lake Washington in Lake Forest Park, Washington (Figure 3). The project area consists of several residential lots with multiple houses and other structures. Some of the structures within the project area were previously evaluated for HPI, the remaining structures that appeared to be older than 50 years were photographed for further documentation. Vegetation on the property was consistent with a residential neighborhood and included Western Red Cedar and Fir trees, Rhododendrons, Camellias, several large Oak trees, and other various shrubs and small trees (Figure 4).



Figure 3. Southwest Overview of the Project Area.



Figure 4. Northwestern Overview of the Project Area.

Pedestrian Survey

ASM completed a pedestrian survey of the ground surface within the project area. The archaeologists scanned the ground surface looking for evidence of cultural resources. The archaeologists also inspected the surface for areas of past ground disturbances including buried utilities, old foundations, surface manipulation and past excavation within the project area. The ground surface was negative for any cultural resources. There were however some items that would have been associated with the structures such as old plastic pathway lighting and plastic gardening tools. These items are modern and do not represent a protected cultural resource.

Subsurface Survey

ASM completed the excavation of 12 STPs throughout the property. During STP excavations the archaeologists noted a consistent soil profile made up of 3 distinct layers (Figure 5). The first layer consisted of dark brown silty sand with very few rounded gravels; this layer is typical for a topsoil. Beneath this, a layer consisting of grayish brown sand with rounded to subrounded gravels overlaying a layer composed of grey sand with rounded to subrounded gravels. Modern plastic refuse, woody debris and nails were often found in this layer. The lower layer of each STP consisted of a bluish gray sand. Water filled up the bottom of most STPs, limiting the depth of the excavations. Several of the STP excavations were limited by roots and compaction. These STPs were located near some of the houses and were on or near extremely compact gravel driveways. STP 3 contained a large decaying piece of wood containing multiple rusted nails (Figure 6).



Figure 5. STP 7 Showing Typical Sediment Profile



Figure 7. Woody Debris and Nails in STP 3

5. Conclusions and Management Recommendations

ASM Affiliates, Inc. (ASM) contracted with the DCG/Watershed to conduct a cultural resources assessment for the proposed Lake Forest Park Lakefront Improvements Project 17345 and 17347 Beach Dr NE in Lake Forest Park, King County, Washington. The proposed project consists of acquiring and developing a 1.91-acres adjacent to the Lyon Creek Waterfront Preserve. The project includes funding through the Washington State Recreation and Conservation Office using the Washington Wildlife and Recreation Program (PRISM Project #20-1862). The purpose of the assessment was to evaluate the project for the potential effects on archaeological or historic resources. ASM's efforts included a literature review of site forms and previous cultural resources reports on file at the Washington State Department of Archaeology and Historic Preservation as well as pertinent environmental, historic, and ethnographic maps and documentation; a field inventory of the Project area; and preparation of this technical report to fully document the results of the inventory in compliance with Governor's Executive Order 21-02.

During the assessment ASM identified seven historic structures at 17345 and 17347 Beach Drive. Although the structures are over 50 years old and thus represents a historic resource, they have previously been determined ineligible for the National Register of Historic Places (Borth 2021).

References Cited

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

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

Anderson Map Company

- 1907 *Plat Book of King County Washington*. Anderson Map Company, Seattle.

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

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

Beale, Harriet

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

Beck, Charlotte, and George T. Jones

- 2014 Complexities of the Colonization Process: A View from the North American West. In *Paleoamerican Odyssey*, edited by Kelly E. Graf, Caroline V. Ketron, and Michael R. Waters, pp. 273-291. Texas A&M University Press, College Station.

Boggs, Brian, Chobot, Katherine and Johnson, Paula

- 2009 *Lake Forest Park Water District Water Supply Project, Lake Forest Park, King County, Washington*. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Borth, Holly

- 2021 Historic Property Inventory: 41542. Form on file at the Department of Archaeology and Historic Preservation, Olympia.

Brubaker, Linda B.

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

Bureau of Land Management

- 2021 U.S. Department of the Interior Bureau of Land Management. General Land Office Records. Electronic document <http://www.glorerecords.blm.gov/default.aspx>.

References Cited

Breidenthal, Matt and Tim Gerrish

- 2020 *Technical Memo – Cultural Resources Survey of the Log Boom Park, Kenmore, Washington.* Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Cannon, Aubrey, and Dongya Y. Yang

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

Carlson, Roy L.

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

Carpenter, Cecelia S.

- 1986 *Fort Nisqually: A Documented History of Indian and British Interaction*, Tahoma Research Services, Tahoma, Washington.

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

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

Department of Veteran Affairs

- 2023 Department of Veteran Affairs. Object 2: Bounty land warrant. Electric Document <https://department.va.gov/history/100-objects/object-2-bounty-land-warrant/>.

Dillehay, Tom, and Michael Collins

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

Dillehay, Tom D., and David J. Meltzer (Editors)

- 1991 *The First Americans: Search and Research*. ORC Press, Boca Raton, Florida.

Eronen, Matti, Tuovi Kankamen, and Matsuo Tsukada

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

Fariña, Richard A.

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

Gibbs, George

- 1877 Tribes of Western Washington and Northwestern Oregon. In *Contributions to North American Ethnology*, Vol. 1, pp. 157-241, Department of the Interior, Washington, D.C.

References Cited

Goetz, Linda and John Warner

- 1997 *Results of a Cultural Resources Assessment for the Tolt Pipeline No 2, Phase IV Project, North King County, Washington*. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Guidon, Niède, and Gaston Delibrias

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

Haeberlin, H., and E. Gunther

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

Holm, Bill

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

Hudson, Lorelea and Meg Nelson.

- 1997 45KI451 *Railway Grade of the Seattle, Lake Shore, and Eastern Railroad State of Washington*. Archaeological Site Inventory Form On file at the Washington State Office of Archaeology and Historic Preservation, Lacey.

Hymes, Dell

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

Kershner, Kate

- 2013 Covington — *Thumbnail History*. HistoryLink.org Essay 10337.

Kidd, Stuart S.

- 1964 *A Synthesis of Western Washington Prehistory from the Perspective of Three Occupation Sites*. Master's Thesis, Anthropology, University of Washington, Seattle.

King County

- 2021 King County Department of Assessments: eReal Property. Electronic document <https://blue.kingcounty.com/Assessor/eRealProperty/default.aspx>

Kopperl, Robert E. (Editor)

- 2016 *Results of Data Recovery at the Bear Creek Site (45KI839) King County, Washington, Vol. 1*. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Kroll Map Company

- 1912 *Atlas of King County, Washington*. Kroll Map Company, Seattle, Washington.

Lahren, Sylvester.

- 2013 *A Cultural Resources Survey and Presence/Absence Testing for the Lake Forest Park Water District, Lake Forest Park, King County, Washington*. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Lane, Barbara

- 1975a *Identity and Treaty Status of the Duwamish Tribe of Indians*. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.
- 1975b *Identity, Treaty Status and Fisheries of the Snoqualmie Tribe of Indians*. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Marino, Cesare

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

Mattson, John L.

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

Meany, Edmond S.

- 1957 *Vancouver's Discovery of Puget Sound*. Binford and Mort, Portland, Oregon.

Meltzer, David J., and Robert C. Dunnell

- 1987 Fluted Points from the Pacific Northwest. *Current Research in the Pleistocene*, 4:64-67.

Metsker, Charles F.

- 1936 *Metsker's Atlas of King County Washington*. Metsker Map Company, Seattle.

Moss, Madonna L.

- 2011 *Northwest Coast: Archaeology as Deep History*. Society for American Archaeology, Washington, D.C.

National Park Service

- 1995 *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*. U.S. Government Printing Office, Washington.

Nelson, Charles M.

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

O'Connor, Lee.

- 2011 *Survey Report: Historic Property Reconnaissance-Level Survey, Kenmore, Washington*. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Pitblado, Bonnie L.

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

Porter, Stephen C., and Terry W. Swanson

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

Rorabaugh, Adam N.

- 2019 Hunting Social Networks on the Salish Sea Before and After the Bow and Arrow. *Journal of Archaeological Science: Reports* 23:822-843.

Rorabaugh, Adam N., and Tiffany J. Fulkerson

- 2015 Timing of the Introduction of Arrow Technologies in the Salish Sea, Northwest North America. *Lithic Technology* 40 (1):21-39

Ruby, Robert H., and John A. Brown

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

Saunders, Kathy

- 1990 *Harry Vanderbilt Wurdemann House - National Register of Historic Places Registration Form*. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Shong, Michael, and Kenneth E. Juell

- 2004 *Cultural Resources Assessment of Puget Sound Energy's Kent-Black Diamond Road Supply Main Project Phase IA, King County, Washington*. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Smith, Marian W.

- 1941 The Coast Salish of Puget Sound. *American Anthropologist* 43:197-211.

Soil Survey Staff

- 2023 Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Electronic document <http://websoilsurvey.nrcs.usda.gov>.

Spier, Leslie

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

References Cited

Suttles, Wayne, and Barbara Lane

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

Thorson, Robert. M.

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

United States Geological Survey

- 1895 Snohomish Washington, 1:125,000. U.S. Geological Survey, Washington D.C.
1909 Seattle Washington, 1:125,000 U.S. Geological Survey, Washington D.C.
1953 Edmonds Washington, 1:24,000 U.S. Geological Survey, Washington D.C.
1968 Edmonds Washington, 1:24,000 U.S. Geological Survey, Washington D.C.

United States Surveyor General

- 1867a General Land Office Notes, Township 22 North, Range 5 East, Willamette Meridian. U.S. Surveyor General's Office, Olympia, Washington.
1880 General Land Office Notes, Township 22 North, Range 6 East, Willamette Meridian. U.S. Surveyor General's Office, Olympia, Washington.

Waterman, Thomas T.

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

Waterman, Thomas T., and Ruth Greiner

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

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

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

Whitlock, Cathy

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

Zuccotti, Lucy

- 2007 *Cultural Resources Investigations for the Burke Gilman Trail Redevelopment, King County, Washington*. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Appendices

Appendix A

Previous Cultural Resource Studies

Title	Author(s)	Date
Archaeological Survey for City of Kenmore Culvert Replacement	Bush and Baxley	2021
Technical Memo - Cultural Resources Survey of the Log Boom Park, City of Kenmore, Washington	Breidenthal and Gerrish	2020
A Cultural Resources Survey and Presence/Absence Testing for the Lake Forest Park Water District, Lake Forest Park	Lahren	2013
Survey Report: Historic Property Reconnaissance-Level Survey, Kenmore 2010-2011	O'Connor	2011
Lake Forest Park Water District Water Supply Project, Lake Forest Park	Boggs et al.	2009
Cultural Resource Investigations for the Burke Gilman Trail Redevelopment	Zuccotti	2007
FINAL - Cultural Resource Assessment City of Kenmore	Dugas and Robbins	2003
SR522 Corridor Improvements Project Cultural Resource Assessment, Kenmore	Dugas and Robbins	2002
Results of a Cultural Resources Assessment for the Tolt Pipeline No. 2, Phase IV Project	Goetz and Warner	1997
Bones Found During WSDOT's work on SR 522	Robinson	1996

Appendix B

Previously Recorded Cultural Resources

Trinomial	Description	Eligibility
45KI451	Railway Grade of the Seattle, Lake Shore, and Eastern Railroad	Determined Not Eligible
45KI598	Wurdemann House	Determined Eligible

Appendix C

Subsurface Excavation Results

STP	Depth (cm)	Soil Description
1	100	1-10: Dark brown fine grain sandy silt, no gravels, low compaction. Grass rootlets 10-60: Gray tan coarse grained sand, no gravels, loose compaction. 60-100: Blue gray medium grained sand, no gravels, loose compaction. Very wet
2	100	1-15: Dark brown fine grain sandy silt, no gravels, low compaction. Oak roots present. Grass rootlets 15-50: Gray tan coarse grained sand, no gravels, loose compaction. 50-100: Blue gray medium grained sand, no gravels, loose compaction. Very wet Location adjusted to avoid oak tree. STP began to fill with water while digging.
3	100	1-20: Dark brown fine grain sandy silt, no gravels, low compaction. Oak roots present. Grass rootlets 20-60: Gray tan coarse grained sand, 5-10% round gravels, loose compaction. Inclusion of wood fragments. Deposit of rusted nails, rust stained soil and decayed wood found 30cm from the surface. 60-100: Blue gray medium grained sand, no gravels, loose compaction. Very wet STP began to fill with water while digging.
4	100	1-20: Dark brown fine grain sandy silt, no gravels, low compaction. Oak roots present. Grass rootlets. Infrequent tree roots. 20-100: Blue gray coarse-grained sand, no gravels, loose compaction. Very wet. STP began to fill with water while digging.
5	100	0-100: Gray, brown medium grained loam silty loam with dark brown clay mottling 5-10% rounded gravels. Soil was sticky, heavy and waterlogged near the bottom. Bottom included rust colored mottling.
6	100	1-15: Dark brown fine grained silty clay, medium compaction, grass rootlets. 15-100: Tan gray medium grained sand, no gravels, medium-high compaction. Tan gray clay lens at 50cm. STP began to fill with water after completion, but much slower and less than other STPs.
7	84	0-17: Dark brown fine grain sandy silt, no gravels, low compaction. 17-41: Tan coarse grained sand, 5-10% round gravels, loose compaction. One pc. red plastic. 41-84: Gray medium grained sand, no gravels, medium-high compaction. Water infiltration at base.
8	91	0-13: Dark brown fine grain sandy silt, no gravels, low compaction. 13-91: Gray medium grained sand, no gravels, medium-high compaction. Water infiltration at base
9	81	0-11: Dark brown fine grain sandy silt, no gravels, low compaction. 11-60: Gray, brown medium grained sandy silt with dark brown clay mottling 60-81: Gray coarse-grained sand, 5-10% round gravels, loose compaction. Water at base.
10	94	0-21: Dark brown fine grain sandy silt, no gravels, low compaction. 21-63: Gray, brown medium grained sandy silt with dark brown clay mottling 63-94: Orangish-gray sand with 10% subrounded gravels. Water at base.
11	9	0-9: Dark brown fine grain sandy silt, gravels throughout, high compaction, terminated due to compaction.
12	34	0-34: Dark brown fine grain sandy silt and 10% gravels. Large root impasse