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# CULTURAL RESOURCES REPORT COVER SHEET

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Restoration Project Area, Jefferson County, Washington

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45JE275

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# AN ARCHAEOLOGICAL SURVEY OF THE OAK BAY COUNTY PARK SHORELINE RESTORATION PROJECT AREA, OAK BAY, JEFFERSON COUNTY, WASHINGTON

by

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## MANAGEMENT SUMMARY

The Jefferson County Marine Resources Committee (MRC) is considering a shoreline restoration effort in a portion of Oak Bay County Park in northeastern Jefferson County. The proposed project area is located within the boundaries of the recorded archaeological site 45JE275, a shell midden deposit known to contain human remains. While the actions being considered are limited to the removal of a road bed, a boat launch ramp, a rock bulkhead, and the fill materials associated with these features in the project area, the MRC is appropriately cautious about possible impacts to cultural deposits during these activities and has therefore asked Wessen & Associates, Inc. to investigate this area and offer recommendations regarding their plan.

This survey and assessment of the Oak Bay County Park Shoreline Restoration Project Area has found that potentially significant shell midden deposits representing 45JE275 are present immediately beneath the fill deposits in nearly all portions of this area. No potentially significant cultural materials were observed within the fill. Fill thickness varies somewhat, but it is between 20 and 35 centimeters (8 to 14 inches) in almost all areas. The fill deposits underlying the current park access road, the boat launch ramp, and the associated rock bulkhead along the road's southern (i.e., shoreward) margin are effectively protecting the shell midden deposits. Thus, removal of these features will expose an extensive area of archaeological materials within the park. Such an action will result in erosion to potentially significant cultural deposits and create a situation where vandalism to these deposits may also occur.

We therefore believe that the removal of the road, the boat launch ramp, the underlying fill deposits, and the associated rock bulkhead in Oak Bay County Park has the potential to create a significant problem for archaeological resources in the 45JE275 site area. If the MRC wishes to pursue the above-noted actions, it should develop some other mechanism or structure which will ensure the stability of the cultural deposits in the park. If an appropriate stabilization plan cannot be implemented, the MRC should seriously consider abandoning its idea of removing the road, the boat launch ramp, the underlying fill deposits, and the associated rock bulkhead in Oak Bay County Park.

The cover picture is an aerial view of the large spit on the northwest side of Oak Bay. The Oak Bay County Park Shoreline Restoration Project Area is essentially the area marked by the road which extends from the upper left margin of this image to the small boat launch ramp near the center of the near shoreline. View is to the northwest.

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## 1 INTRODUCTION

The Jefferson County Marine Resources Committee (MRC) is considering a shoreline restoration effort in a portion of Oak Bay County Park in northeastern Jefferson County. The proposed project area is located within the boundaries of the recorded archaeological site 45JE275, a shell midden deposit known to contain human remains. While the actions being considered are limited to the removal of a road bed, a boat launch ramp, a rock bulkhead, and the fill materials associated with these features in the project area, the MRC is appropriately cautious about possible impacts to cultural deposits during these activities and has therefore asked Wessen & Associates, Inc. to investigate this area and offer recommendations regarding their plan. The field work portion of the study was undertaken by Gary Wessen, Ph.D. on 14 June 2010.

This report describes the background, goals, methods, fieldwork, findings, conclusions, and recommendations of our study of the Oak Bay County Park Shoreline Restoration Project Area. Field notes and photographs taken during the study are on file with Wessen & Associates, Inc.

## 2 BACKGROUND

The background for this study includes consideration of the project area, and its environmental, cultural, and archaeological settings.

### 2.1 Project Area

The Oak Bay County Park Shoreline Restoration Project Area is located along a portion of the northwestern shoreline of Oak Bay in Jefferson County (see Figure 1). Specifically, it is located in the northwest quarter of Section 7, Township 30 North, Range 1 East. The Parcel Number is: 962700102.

It is a long narrow sub-rectangular area in the southwestern corner of Oak Bay County Park (see Figure 2). It is approximately 1,000 feet long and varies from approximately 40 to 100 feet in width. Thus the total area is approximately 2.4 acres. This portion of the park is built upon a large low lying spit which separates Oak Bay from a large salt marsh and lagoon known as the Little Oak Bay Lagoon. An access road - - known as Portage Way - - a campground, and associated boat launch ramp have been developed on the spit (see Figures 3 and 4). Virtually the entire project area is marked by built features. The principal feature is a paved access road which runs the length of the project area close to the Oak Bay shore. The road bed has been built on an unknown thickness of fill materials and the shoreline margin of the road alignment has been armored with rock and concrete rubble. The boat launch ramp is at the northern end of this road and 14 campsites have been developed along the road's interior margin in the area to the south of the boat launch. Whether additional fill materials underlie the campsites is unknown.

The MRC is currently considering the removal of the road bed, boat launch ramp, other paved surfaces, and the fill materials in the project area, but the depth of the ground disturbance required to conduct these actions is unknown at this time. What lies immediately beneath the fill in the project area is also unknown. While the fill materials may have been placed upon



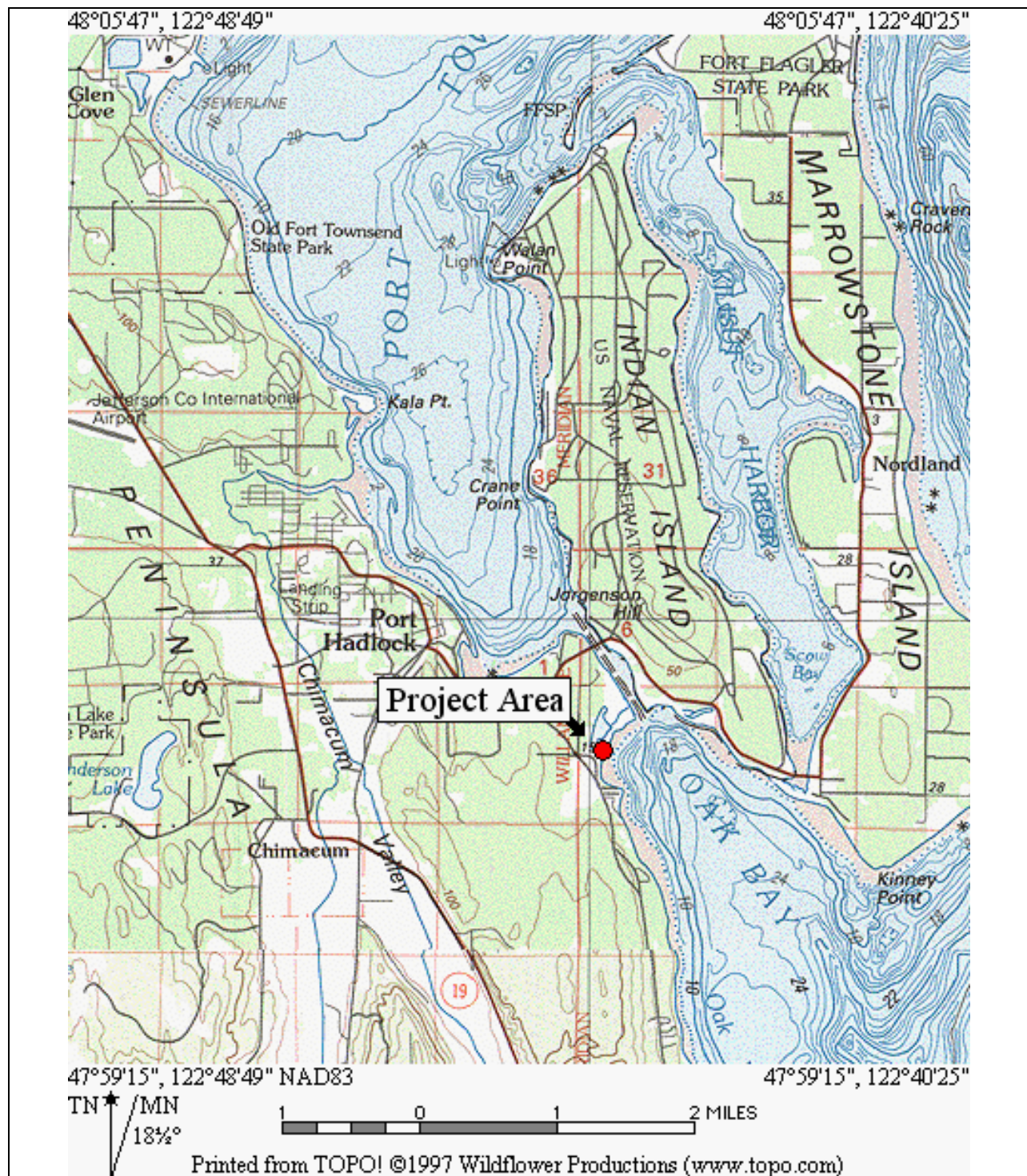


Figure 1 The Location of the Oak Bay County Park Shoreline Restoration Project Area, Jefferson County, Washington.





Figure 2 The Oak Bay County Park Shoreline Restoration Project Area, Jefferson County, Washington.





Figure 3 The Oak Bay County Park Shoreline Restoration Project Area, Jefferson County, Washington. View is to the southwest.



Figure 4 The Oak Bay County Park Shoreline Restoration Project Area, Jefferson County, Washington. Note the boat launch ramp on the shoreline in the middle distance. View is to the northeast.

naturally-occurring beach deposits, it is also possible that some or all of the fill materials in this portion of Oak Bay County Park overlies cultural deposits which are a portion of 45JE275.

## 2.2 Environmental Setting

The Oak Bay County Park Shoreline Restoration Project Area occupies a portion of a low lying sand and gravel spit which extends northeastward from the northwestern shoreline of Oak Bay. The maximum height of the landform is approximately 13 feet above sea level and this elevation includes approximately 0.5 to 1 foot of fill material. The spit separates Oak Bay from a large salt marsh and lagoon known as the Little Oak Bay Lagoon. It should be noted that this spit was formerly a low isthmus which connected the west side of Oak Bay with the southwestern corner of Indian Island. A canal was dug across a portion of this isthmus - - opening a shipping route between Oak Bay and Port Townsend Harbor - - in 1915 (see Section 2.3.2). The very low lying character of the area makes it especially vulnerable to shoreline erosion and this process has extensively altered it. An analysis conducted by Todd et al. (2006) suggests that more than 60% of the landform has been lost since 1871. Shoreline erosion has also resulted in considerable damage to some of the park's infrastructure; the boat launch ramp is no longer usable. There are no surface fresh water resources in the project area or anywhere else on the spit. The closest naturally-occurring fresh water source is the mouth of Little Goose Creek, which drains into Little Oak Bay Lagoon at a point approximately 400 feet to the northwest of the western end of the project area.

The unpaved surfaces in the immediate vicinity of the Oak Bay County Park Shoreline Restoration Project Area are mantled with sand and gravel. There are no bedrock outcrops within the project area or elsewhere nearby. A very thin organic soil may be present on some of the higher portions of the landform, but the Jefferson County Soil Survey classifies the entire area as "Coastal Beach" (McCreary 1975). Introduced fill materials have been placed in the project area to support the construction of park facilities. Most of the latter appear to be coarse sands, gravel, cobbles, and boulders. Some concrete and asphalt rubble has also been placed here.

Almost all of the project area itself is mantled with either a paved roadbed, very compact fill materials immediately adjacent to the roadbed, the boat launch ramp, or the rock bulkhead. As such, the only vegetation in the area are small 'pockets' of invasive grass and weeds. The natural spit surface just beyond the west side of the project area is thickly covered with a low marine shoreline plant community dominated by pickleweed (*Salicornia virginica*) and orache (*Atriplex patula*).

No wildlife observations were made during the field work, but it is assumed that the area hosts, or formerly hosted, most animals common to nearshore areas in northeastern Jefferson County.

Finally, while this discussion of the project area's environmental setting has focused on its current and recent conditions, it is also worthwhile to briefly consider the broader character of past environments here. All of northeastern Jefferson County was covered by the Cordilleran Ice Sheet in the Late Pleistocene, but the Oak Bay area was probably ice free by ca. 12,000 to 14,000 years ago (Porter and Swanson 1998). A recent reconstruction of Late Pleistocene and Holocene sea level history for the eastern Strait of Juan de Fuca suggests that relative sea levels may have been as much as 400 feet higher ca. 14,000 years ago, but they fell rapidly after this time and were significantly below the modern level from approximately 11,000 to 5,000 years ago

(Gowan 2007). The modern sea level has probably been in place for approximately the last 3,000 to 5,000 years. Thus, the project area was probably below sea level for a brief period during the Late Pleistocene, but it has been at least slightly farther from the marine shoreline for much of the Holocene. While there have been significant changes in the vegetation of this region during the Holocene, pollen data suggests that a forest community much like that of the early historic period has probably been present in the vicinity of Oak Bay for approximately the last 3,500 to 5,000 years (Whitlock 1992). In sum, environmental conditions in and near the Oak Bay County Park Shoreline Restoration Project Area have probably approximated those of the early historic period for much of the second half of the Holocene. A more open (i.e., less forested) landscape was probably present prior to that time, but other characteristics of this setting were probably not dramatically different during the Early Holocene.

## 2.3 Cultural Setting

The cultural setting of Oak Bay County Park includes both the early historic and late prehistoric Native American occupants and the early historic and more recent Euro-American occupants of the vicinity of Oak Bay. Each of these groups will be briefly considered separately.

### 2.3.1 Native American Occupation

Oak Bay County Park lies within what is usually considered to be the traditional territory of the Chimakum Indians (Elmendorf 1990). They spoke a Chimakuan language and were related to the Quileute people of the western Olympic Peninsula. The Chimakum were apparently a small group who were frequently at odds with their neighbors and - - due to a combination of pressures from both neighboring Indian communities and an increasing Euro-American population - - they were largely gone by the mid 19<sup>th</sup> Century. By that time, most Chimakum territory had been occupied by the neighboring S'Klallam (sometimes rendered "Klallam" or "Clallam") Indians. There are no specific detailed ethnographic accounts of the Chimakum, but Gibbs (1877: 178) reported: "*In their modes of subsistence, habits, etc., they do not differ noticeably from their neighbors*". Thus, they were probably much like the S'Klallam and it is likely that, after ca. 1850, most surviving Chimakum were absorbed into nearby S'Klallam communities.

The S'Klallam, and undoubtedly the Chimakum, were skilled fishermen, hunters, and plant material gatherers who were knowledgeable of the subtle details of the resources available in a rich environment. Their subsistence strategy was characterized by a series of seasonal movements to exploit different seasonal resources. Typically, an annual cycle of seasonal movements included a substantial 'winter village' which served as a home base and a number of other smaller settlements which supported such activities as plant or shellfish collecting, fishing, or hunting.

The material culture of these peoples was largely indistinguishable from those of their neighbors. They were skilled artisans and technicians who produced a wide range of goods from plant, bone, and stone materials. Like all southern Northwest Coast peoples, they were noted particularly for their skill with wood and other plant fibers. Their social and ceremonial life also had much in common with that of neighboring Northwest Coast peoples. Local lineal groups were the basis for most types of economic, political, and social activities and these family-based groups controlled particular resource collection localities and owned the rights to ceremonial

properties such as dances, songs, and titles. Descent and inheritance tended to be in the male line. The lineal groups interacted and married widely, creating a broad network of extra-group and even extra-areal social ties which supported a significant amount of economic and ceremonial exchange.

Relatively little is known about Chimakum settlements, but limited documentation is available for a few locations. Of particular relevance to the present study, a hydrographic map of the Oak Bay area prepared by Charles Wilkes in 1841 shows a Native village on the shoreline immediately to the northeast of the Oak Bay County Park Shoreline Restoration Project Area. This village straddled the low narrow low isthmus which formerly connected the west side of Oak Bay with the southwestern corner of Indian Island (see Section 2.2). An important portage route across the isthmus was also located here. Unfortunately, however, while the village is shown on his map, his journal entries for this area do not comment on the village (Blumenthal 2009), nor does it appear to be noted in any other early historic and ethnographic source. We are therefore left with only that information which can be inferred from the map. The map shows five houses and it is possible that this is an accurate indication of how many structures were present in 1841. The Wilkes map also labels the Oak Bay side of the landform “Leku Beach” and it is possible that “Leku” was the name of this settlement. No information is available regarding how long this village was occupied, but it is not unreasonable to suggest that it may have become a S'Klallam community around - - or shortly after - - the time it was observed by Wilkes<sup>1</sup>.

### 2.3.2 Euro-American Occupation

The earliest Euro-American history of the vicinity of Oak Bay is not well documented. George Vancouver, who visited and named Port Townsend in 1792, was probably the first white man to visit the area (Meany 1957). He gave the name “Oak Cove” to what is now known as Oak Bay, but there are no indications that he actually explored the vicinity of the Project Area. Charles Wilkes visited the area in 1841 and he called it “Port Lawrence” (Blumenthal 2009). While Wilkes made a hydrographic map - - and noted the presence of an Indian village (see Section 2.3.1) - - his journals indicate that little effort was made to explore the lands around the bay. Henry Kellett passed here briefly in 1846 and used Vancouver's name for the place, but he changed “Oak Cove” to “Oak Bay” (Hitchman 1985). The name “Oak Bay” appears to have been used regularly after that time.

The first Euro-American settlement in the vicinity of Oak Bay was at Port Hadlock, approximately one mile northwest of the project area (JCHS 1966). Samuel Hadlock acquired 400 acres in this area in 1870 and laid out what was later to become the Town of Hadlock. In 1884, Hadlock and several associates began efforts to develop a saw mill here and construction of a large mill complex began the following year. This mill operated until 1913, when it was destroyed by a fire. A large plant which produced alcohol from saw dust was constructed just to the south of Hadlock in 1910, but it closed when the nearby mill closed (Fish 1985). Despite these setbacks, the community continued to slowly grow and it is now a town with approximately 2,000 residents.

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<sup>1</sup> This village is not shown on either the 1856 U.S. Coast Survey Map or the 1859 U.S. General Land Office map of the Oak Bay area, but we are not convinced that this is strong evidence that a settlement is no longer present.



Against this backdrop, we know relatively little about the history of the immediate vicinity of the Oak Bay County Park Shoreline Restoration Project Area. An 1856 U.S. Coast Survey Map of the Oak Bay area does not clearly show any settlers or built features within or near the project area<sup>2</sup>. The 1859 U.S. General Land Office map of the Oak Bay area does not show any settlers, agricultural fields, or built features within or near the project area. Whatever the significance of the rectangular area on the 1856 U.S. Coast Survey Map may be, this feature persists on later maps until at least 1900 (Kent 2004a). By 1900, Samuel Hadlock and an individual identified only as “R. O. Kerr” have some connection to this property, but the nature of their presence is uncertain. We also know that both J. F. Winton and Joe Wah had farms in the Oak Bay area by the late 19<sup>th</sup> Century, but it is unlikely that either of them had a presence within the present project area.

While the presence of early historic homes and farms on the low spit where the project area is located seems unlikely, other built features began to appear by the late 1890s. Recall that the spit was formerly a low isthmus which connect the west side of Oak Bay with the southwestern corner of Indian Island (see Section 2.2). A road extending from the vicinity of Port Hadlock to the southeastern corner of Indian Island - - across this isthmus - - was present by the 1890s and this road was improved shortly after Fort Flagler was established at the northern end of Marrowstone Island in 1899 (Wessen 2009). While detailed information regarding the precise location of this road’s alignment across the county park is not available, it must have been close to - - or possibly even the same as - - that of the present paved road in the project area. A much larger and more significant feature was established when the Portage Canal was dug across the isthmus in 1915 (Hermanson 2002). This canal opened a shipping route between Oak Bay and Port Townsend Harbor and severed the old road connection between Port Hadlock to the southeastern corner of Indian Island. The southern end of the Portage Canal is located approximately 1,100 feet northeast of the Oak Bay County Park Shoreline Restoration Project Area.

This study has not documented the history of Oak Bay County Park, but documents on file with Jefferson County suggest that the first park development actions probably occurred during the 1950s.

## 2.4 Archaeological Setting

Appreciation of the archaeological context of the present study requires a brief review of the history of archaeology in Northeastern Jefferson County, followed by a somewhat more detailed consideration of previous archaeological activities at 45JE275.

### 2.4.1 Archaeological Research in Northeastern Jefferson County

While the total body of archaeological research to have been conducted in northeastern Jefferson County is not great, a significant amount of that effort has occurred in the general vicinity of Oak Bay. Unfortunately, very little of this work has been conducted on Oak Bay

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<sup>2</sup> Kent (2004a:5) notes a faint unlabeled rectangle on this map - - in the approximate location of the present project area - - and suggests that it might represent an agricultural field. While we do not know the significance of this faint unlabeled rectangle, we believe that an agricultural field here is not likely for two reasons. First, we have no evidence of settlers in the Oak Bay area in 1856. Second, this landform is essentially a sand and gravel bar. It is very unlikely to have had more than a very thinly developed organic soil and, as such, it seems an unlikely setting for agricultural activities.

itself, but a number of studies occurred on Indian Island and additional efforts have been conducted on Marrowstone Island and at various locations in or near Port Hadlock. Archaeological research in this area has also been a relatively recent phenomenon. Both Harlan Smith (1907) and Albert Reagan (1917) reported the presence of archaeological sites at various locations on the northeastern Olympic Peninsula, but both apparently spent little, if any, time in Jefferson County. Smith did not report any sites in Jefferson County. Reagan reported only a single site in Jefferson County; it is located near Port Townsend.

The first archaeological efforts near Oak Bay were conducted on Indian Island by an individual named G. L. Coale in 1956. Little is known about this person or their activities, but it is likely that he or she was a student at the University of Washington at that time. The first documented survey effort on the island was conducted by Richard Daugherty and Pete Rice in 1975. They recorded 11 archaeological sites and their efforts led to a large data-recovery excavation at 45JE16, a shell midden site located at Walan Point (Blukis Onat 1976). Additional survey work was done on the island about 15 years later (Hess and Blukis Onat 1990) and a second significant excavation was conducted at 45JE6, at Bugge Spit, in the late 1990s (Davy and Nachmanoff 1999). Both the Walan Point and Bugge Spit efforts provided ample documentation of Native use of this area during the last ca. 2,200 years.

Additional archaeological survey efforts at other locations near Oak Bay after the Daugherty and Rice study include work in Fort Flagler State Park (Luttrell 1999) and elsewhere on Marrowstone Island (Berger 2006 and Wessen 2009) and in the vicinity of Port Hadlock (Larson 1989 and Wessen and Waterhouse 1990). The first archaeological survey on Oak Bay itself was conducted by Ron Kent in 2004 (see Section 2.4.2). These surveys recorded a small number of additional prehistoric and early historic sites, but made no effort to evaluate any of them. To date, the only significant investigations of archaeological deposits anywhere in northeastern Jefferson County are the above-noted efforts at Walan Point and Bugge Spit.

#### 2.4.2 Previous Archaeological Activities at 45JE275

Awareness of the presence of archaeological materials in Oak Bay County Park is a very recent phenomenon. While local historians and Native American residents of this region have known of a important portage route across the isthmus which was present here before the excavation of the Portage Canal in 1915, no effort was made to investigate the archaeological potential of this area until 2004. In fact, part of the impetus for the 2004 effort appears to have been an observation made by an Army Corps of Engineers biologist that what appeared to be cultural deposits were visible in a recent erosional exposure in the park (Kent 2004a). Army Corps archaeologists quickly followed up this report. A subsequent reconnaissance survey investigated much of Oak Bay County Park and this effort led to the recording of an extensive archaeological site which was assigned the number 45JE275 (Kent 2004b). 45JE275 is assumed to represent the village shown in the 1841 Charles Wilkes map (see Section 2.3.1).

The 45JE275 site area, as described by Kent, extends the entire length of the low spit where Oak Bay County Park is located. Thus, the entire Oak Bay County Park Shoreline Restoration Project Area is located within 45JE275. The site's reported dimensions are approximately 2,130 feet long by up to 330 feet wide. Kent adds that the site may actually extend still further to the southwest onto private property just beyond the edge of the park. No probing of the cultural deposits was conducted in 2004, so their thickness is not known. The site record (Kent 2004b), however, notes that shell midden materials were "*found by digging small*

*holes with a trowel... along the west side of an area of fill*'. This suggests that the cultural deposits are present at, or very close to, the surface in areas where fill materials are not present. The 2004 inspection did not offer a basis to date the site, but it is likely that it represents late prehistoric to early historic occupation. Thus, 45JE275 is probably at least broadly contemporaneous with most other known shell midden sites on the northeastern Olympic Peninsula.

There has been no further formal study of 45JE275, but two more recent events in this area provide additional important insights into this site area. Both events involve the presence of human remains here. The first recent event occurred early in 2007. A visitor to Oak Bay County Park encountered and collected a human mandible which was subsequently turned in to the Jefferson County Sheriff's Department (Nole, personal communication). The precise location of this find is not known, but examination of the specimen indicates that it was exposed on an intertidal surface. The second event occurred in late May of this year. Excavations associated with the installation of a septic system on private property immediately to the southwest of the park exposed shell midden deposits and an apparently intact grave (Kaehler, personal communication). This find occurred in the area where Kent had early suggested that additional cultural deposits were probably present.

In sum then, while relatively little is still known about 45JE275, it is clear that this is a very large archaeological site. Kent's observation that it is probably larger than the area he mapped in 2004 has been shown to be correct and the complete extent of the cultural deposits here remains uncertain. The recent events also demonstrate that human remains are present in the site area. This is not surprising. Human remains have been encountered at many late prehistoric to early historic sites in this region.

### 3 RESEARCH DESIGN

The activities described in this report represent a limited program of site survey designed to clarify two basic conditions regarding the distribution of potentially significant archaeological resources within that portion of 45JE275 which lies within the proposed Oak Bay County Park Shoreline Restoration Project Area. The research design of the study included both a clear statement of goals and an identified set of appropriate methods.

#### 3.1 Research Goals

The goals of this effort, as noted above, were to obtain answers to two basic questions regarding the distribution of potentially significant archaeological resources within that portion of 45JE275 which will be effected by the shoreline restoration actions currently being considered by the MRC. The first question is: Are re-deposited cultural materials present within the fill sediments which underlie the road, shoreline armoring, and other paved surfaces in the Oak Bay County Park Shoreline Restoration Project Area? The second question is: What lies immediately beneath the fill in the project area? The principal focus of the second question can be understood to be asking: Were the fill materials placed upon naturally-occurring beach deposits, or do they directly overlie cultural deposits which are a portion of 45JE275. Clarification of these two issues has important implications for the proposed shoreline restoration actions.

To these ends, the investigation reviewed the entire project area and considered adjoining areas. The effort was descriptive and documentary in nature. As such, the articulation of study findings within any particular proposed regional cultural framework was not a high priority.

Similarly, the study results cannot be considered to be a test of any particular model of prehistoric settlement and subsistence patterns or other cultural process dynamics.

### 3.2 Research Methods

The work plan for this study relied upon standardized archaeological techniques. The effort consisted of background research and field activities, including both a ground surface inspection and a limited program of investigating subsurface deposits.

Background research for the study included the review of relevant documents on file with the Department of Archaeology and Historic Preservation, the Jefferson County Library, and discussions with the Cultural Resource Coordinator for the Jamestown S'Klallam Tribe.

A surface inspection of the project area was considered to be an important first step of the field work, although it was understood that this action would offer only limited insights with respect to the study's goals. Surface visibility was known to be limited as much of the project area was known to be covered by either paved surfaces or rock and concrete rubble used to armor the shoreline. Moreover, both of the research questions which directed the study address conditions which are either within, or below, the fill. Given its relatively small size, the surface survey was designed to employ a judgmental (rather than a transect interval) approach, but I was confident that all portions of the project area and adjacent areas in the park would be addressed.

Following the surface inspection, subsurface testing would occur. Testing would be conducted by digging small test pits. Since the fill deposits were known to be very compact and to contain a significant quantity of rock, hand dug test pits were not considered to be a practical approach and the digging was conducted with a small backhoe using a bucket with a straight edge. Sediment was removed in shallow 'peels' under the supervision of the archaeologist. Each test pit was dug until the bottom of the fill deposit was reached and the material underlying it could be examined. Excavation stopped at this point, however, and no probing of the underlying deposit occurred. Selected samples of the fill were screened through 1/4 inch hardware mesh in order to facilitate the recognition of any cultural materials which might be present. The represented depositional structure at each test pit exposure was recorded, but no materials were collected. All test pits were back-filled immediately after examination.

### 3.3 Practical Expectations

The background review and prior experience at nearby locations in northeastern Jefferson County suggested that there was a significant potential for encountering archaeological materials during the work we proposed to conduct in the Oak Bay County Park Shoreline Restoration Project Area. Archaeological materials could be encountered in either, or both, of two distinctly different situations: within the fill and immediately below it. We had no basis to evaluate the potential for archaeological materials within the fill. Such materials were likely to be present if cultural deposits had been used as a source for the fill. Unfortunately, no information about the source of the fill is available. Thus, we were aware that this could be the case, but could not make a judgment regarding how likely it was. Alternatively, we felt that the potential for encountering intact cultural deposits and/or features immediately below the fill was relatively high. Two different types of cultural deposits and/or features seem possible. First, we have noted that the alignment of the current park access road is probably either the same, or close to, the alignment of the ca. 1890s road connecting Port Hadlock to Indian Island. Thus, it is possible that evidence of



this older road bed could be present beneath the fill supporting the current road. Still more likely are shell midden deposits representing 45JE275. Indeed, the entire Oak Bay County Park Shoreline Restoration Project Area is within the boundaries of 45JE275. While very little is known about this site, we do know that it probably represents a Native village which was present at this location until at least 1841. Thus, cultural deposits could be expected to be present at, or very close to, the natural surface of this landform. Such an interpretation assumes, however, that cultural deposits are continuous across the 45JE275 site area and that these deposits were not subsequently destroyed by shoreline erosion and/or earlier historic activities in this area.

#### 4 FIELD ACTIVITIES AND FINDINGS

Fieldwork activities conducted at the Oak Bay County Park Shoreline Restoration Project Area occurred on 14 June 2010. This date was selected in order to benefit from an unusually low tide. There was a -3.1 tide at 12:25 in the afternoon on this day. The weather was excellent and all fieldwork activities were conducted by Gary Wessen, Ph.D. I was accompanied by Gabrielle LaRoche of the MRC and Kathy Duncan, Cultural Resources Specialist for the Jamestown S'Klallam Tribe.

The initial fieldwork activity was the ground surface inspection. This effort investigated the entire project area and its immediate vicinity. Small quantities of shell midden materials and exposures of organically-stained deposits were noted in a number of locations in the park, although none were found in the immediate vicinity of the built features (e.g., the road bed or the boat launch ramp). The distribution of these materials and deposits generally approximated that reported earlier by Kent (2004). The failure to find evidence of 45JE275 in close proximity to the built features in the project area was not considered surprising as these surfaces offered poor ground surface visibility conditions. Almost all of project area is mantled with either pavement, gravel, or larger rock and/or concrete rubble.

After the ground surface inspection, subsurface conditions at the proposed Oak Bay County Park Shoreline Restoration Project Area were examined by digging test pits. All of the pits were dug with a small backhoe. A total of nine pits were dug (see Figure 5). Pits were dug at approximately 100 foot (30 meter) intervals along the margins of the park road. While large variations were not expected, we decided to alternate the pits in order to sample both sides of the road. As such, five pits were located close to the Oak Bay shoreline (i.e., between the edge of the pavement and the associated rock bulkhead) and four pits were dug on the lagoon side of the road. Individual pits were approximately 3 feet (1 meter) long and 1 foot (0.33 meter) wide.

Eight of the nine pits (Test Pits 1 through 8) produced very consistent results. Digging at each of these locations revealed approximately 8 to 14 inches (20 to 35 centimeters) of fill materials overlying a potentially intact shell midden deposit (see Figure 6). The character and structure of the fill varied somewhat, but a basic pattern is present at all eight of these locations. The uppermost portion of the exposed profile at these locations is approximately 0.5 to 1 inch of relatively well-sorted gravel. This material is rounded to subrounded in the central and northern portions of the project area and angular in the south. The gravel overlies from one to three layers of gravelly coarse sand which ranges in color from dark yellowish brown (10YR3/4) to very dark grayish brown (10YR3/2). The lowermost fill deposit directly overlies a black (2.5YR5/2) medium sand with a low to moderate density of highly fragmented marine shell, FCR, and charcoal. The latter is the shell midden deposit. The stratigraphic boundary at the base of the fill



Figure 5 The locations of test pits in the Oak Bay County Park Shoreline Restoration Project Area, Jefferson County, Washington.





Figure 6 A typical exposure of potentially intact shell midden deposit beneath fill materials in the Oak Bay County Park Shoreline Restoration Project Area, Jefferson County, Washington.

was always smooth and very abrupt, and small lenses of the midden matrix were occasionally noted within the lower portion of the overlying fill. The fill deposits were generally free of cultural material, although a single machine-made wire nail and a small fragment of plastic flagging tape were found within them. The midden deposit was not sampled, so information about its contents and thickness are not available.

The only departure from this pattern was observed at Test Pit 9, at the southwestern end of the project area. This pit exposed approximately 28 inches (70 centimeters) of fill deposits which overlie a gray (5Y5/1) gravelly coarse sand with occasional subrounded small cobbles and a low to moderate density of highly fragmented marine shell. (Most of the shell fragments in this deposit have rounded - - water-rolled - - edges, unlike those in the shell midden deposit, which have sharp edges). I believe that the gray gravelly coarse sand at the bottom of this test pit is probably a naturally-occurring beach deposit.

A few observations can be made about the test findings. First, I am confident that the shell midden deposit exposed immediately beneath the fill materials at eight of the nine test locations represents the 45JE275 site area reported earlier by Kent (2004). The very flat smooth upper boundary of the midden, and the occasional examples of small lenses of shell midden matrix within the lower portion of the fill are strong indications that the top of the cultural deposit has been graded. It is likely that this was done just before the fill was applied. Thus, it is

likely that at least a small amount of the top of midden is missing. Beyond this inferred truncation, however, I did not observe any indications that the midden which remains is disturbed. It is probably intact. The absence of a shell midden deposit at Test Pit 9 was somewhat surprising since additional shell midden deposits are known to be present on private property a few hundred feet farther to the southwest (see Section 2.4.2). I suspect that the absence of a cultural deposit at this location is due to erosion of the shoreline and that the midden probably is present just a short distance shoreward.

## 5 CONCLUSIONS AND RECOMMENDATIONS

This survey and assessment of the Oak Bay County Park Shoreline Restoration Project Area has found that potentially significant shell midden deposits representing 45JE275 are present immediately beneath the fill deposits in nearly all portions of this area. No potentially significant cultural materials were observed within the fill. Fill thickness varies somewhat, but it is between 20 and 35 centimeters (8 to 14 inches) in almost all areas. The fill deposits underlying the current park access road, the boat launch ramp, and the associated rock bulkhead along the road's southern (i.e., shoreward) margin are effectively protecting the shell midden deposits. Thus, removal of these features will expose an extensive area of archaeological materials within the park. Such an action will result in erosion to potentially significant cultural deposits and create a situation where vandalism to these deposits may also occur.

We therefore believe that the removal of the road, the boat launch ramp, the underlying fill deposits, and the associated rock bulkhead in Oak Bay County Park has the potential to create a significant problem for archaeological resources in the 45JE275 site area. If the MRC wishes to pursue the above-noted actions, it should develop some other mechanism or structure which will ensure the stability of the cultural deposits in the park. If an appropriate stabilization plan cannot be implemented, the MRC should seriously consider abandoning its idea of removing the road, the boat launch ramp, the underlying fill deposits, and the associated rock bulkhead in Oak Bay County Park.

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APPENDIX A

TEST PIT SOIL LOGS

Oak Bay County Park Shoreline Restoration Project Area  
14 June 2010

Test Pit	Depth (cm)	Matrix Description	Comments
1	0 → 3	Relatively well-sorted rounded to subrounded gravel. Clear smooth lower boundary.	Fill.
	3 → 35	10YR4/3 gravelly coarse sand. Abrupt smooth lower boundary.	Fill.
	35+	2.5YR5/2 medium sand with ~ 15% subrounded gravel, a low to moderate density of highly fragmented marine shell, FCR, and charcoal.	Potentially intact shell midden deposit.
2	0 → 1	Relatively well-sorted rounded to subrounded gravel. Clear smooth lower boundary.	Fill.
	1 → 23	10YR4/3 gravelly coarse sand with irregular lenses of 2.5YR5/2 medium sand shell midden sediment. Abrupt smooth lower boundary.	Very compact fill.
	23+	2.5YR5/2 medium sand with ~ 15% subrounded gravel, a low to moderate density of highly fragmented marine shell, FCR, and charcoal.	Potentially intact shell midden deposit.
3	0 → 1	Relatively well-sorted rounded to subrounded gravel. Clear smooth lower boundary.	Fill.
	1 → 18	10YR4/3 gravelly coarse sand. Abrupt smooth lower boundary.	Fill.
	18+	2.5YR5/2 medium sand with ~ 25% subrounded gravel, a low to moderate density of highly fragmented marine shell, FCR, and charcoal.	Potentially intact shell midden deposit.
4	0 → 1	Relatively well-sorted rounded to subrounded gravel. Clear smooth lower boundary.	Fill.
	1 → 14	10YR4/3 gravelly coarse sand. Clear smooth lower boundary.	Very compact fill.
	14 → 28 - 30	10YR3/2 gravelly coarse sand. Clear wavy lower boundary.	Very compact fill.
	28 - 30 → 32	10YR6/4 well-sorted medium sand.	Very compact fill.



Test Pit	Depth (cm)	Matrix Description	Comments
	32 +	2.5YR5/2 medium sand with ~ 15% subrounded gravel, a low to moderate density of highly fragmented marine shell, FCR, and charcoal.	Potentially intact shell midden deposit.
5	0 → 2	Relatively well-sorted angular gravel. Clear smooth lower boundary.	Fill.
	2 → 21	10YR4/3 gravelly coarse sand. Abrupt smooth lower boundary.	Fill.
	21+	2.5YR5/2 medium sand with ~ 15% subrounded gravel, a low to moderate density of highly fragmented marine shell, FCR, and charcoal.	Potentially intact shell midden deposit.
6	0 → 1	Relatively well-sorted rounded to subrounded gravel. Clear smooth lower boundary.	Fill.
	1 → 18	10YR4/3 gravelly coarse sand. Clear smooth lower boundary.	Very compact fill. 1 machine-made wire nail at ~ 15 cms.
	18 → 28-32	10YR3/2 gravelly coarse sand. Clear wavy lower boundary.	Very compact fill.
	28-32 → 35	10YR6/4 well-sorted medium sand.	Very compact fill.
	35+	2.5YR5/2 medium sand with ~ 15% subrounded gravel, a low to moderate density of highly fragmented marine shell, FCR, and charcoal.	Potentially intact shell midden deposit.
7	0 → 2	Relatively well-sorted angular gravel. Clear smooth lower boundary.	Fill.
	2 → 16	10YR4/3 gravelly coarse sand. Abrupt smooth lower boundary.	Fill.
	16 → 31	10YR3/2 gravelly coarse sand. Abrupt smooth lower boundary.	Compact fill.
	31+	2.5YR5/2 medium sand with ~ 15% subrounded gravel, a low to moderate density of highly fragmented marine shell, FCR, and charcoal.	Potentially intact shell midden deposit.
8	0 → 2	Relatively well-sorted angular gravel. Clear smooth lower boundary.	Fill.
	2 → 14	10YR4/3 gravelly coarse sand. Abrupt smooth lower boundary.	Fill.
	14 → 19	10YR3/2 gravelly coarse sand. Abrupt smooth lower boundary.	Compact fill.

Test Pit	Depth (cm)	Matrix Description	Comments
	19+	2.5YR5/2 medium sand with ~ 15% subrounded gravel, a low to moderate density of highly fragmented marine shell, FCR, and charcoal.	Potentially intact shell midden deposit.
9	0 → 2	Relatively well-sorted angular gravel. Clear smooth lower boundary.	Fill.
	2 → 29-32	10YR3/2 gravelly coarse sand with ~ 20% subrounded small cobbles. Clear wavy lower boundary.	Fill. Small fragment of plastic flagging tape ~ 30 cms.
	29-32 → 34-38	10YR5/4 well-sorted medium sand with very weakly developed FeO <sub>2</sub> staining. Clear wavy lower boundary.	Fill.
	34-38 → 68-70	10YR3/2 gravelly coarse sand with ~ 10% subrounded small cobbles. Clear wavy lower boundary.	Fill
	68-70 → 86+	5Y5/1 gravelly coarse sand with ~ 5% subrounded small cobbles and a low to moderate density of highly fragmented marine shell.	Potentially intact beach deposit. (Many shell fragments have water-rounded edges.)