

APPENDIX D

Cultural Resources

This page left blank intentionally

EXECUTIVE SUMMARY

This report documents a study which identified the known archaeological history of 26 proposed habitat restoration projects located in the City of Portland, Oregon and the results of visits made by a Tetra Tech archaeologist to each site to visually inspect each restoration site for archaeological resources and the likelihood for buried archaeological deposits. Sites likely to hold archaeological materials were tested per SHPO survey regulations, those sites deemed not likely were subjected to a less intense testing regimen to identify site conditions as well as the likelihood for the presence of cultural resources. This study supports the Lower Willamette River Ecosystem Restoration General Investigation Study. The purpose of that study is to assist the US Army Corps of Engineers, the Port of Portland, and the City of Portland to formulate, evaluate, and screen potential solutions to significant ecosystem degradation problems in the lower Willamette River watershed identified in the feasibility study that was performed during the first phase of that project.

An archaeologist from Tetra Tech completed cultural resource investigations of each proposed habitat restoration project (Figure 1) during the week of 9/28-10/2 2009 and on 3/25 2010. Pedestrian survey was used to evaluate each restoration site. This study was not intended to identify all cultural resources present at each project site but rather a step to determine if any archaeological resources could be impacted by implementation of the proposed restoration activities. The remains of piers are the only significant artifacts and features remaining at several of the restoration sites, most sites did not appear to hold any cultural materials due to setting or disturbances.

Subject Property: The subject property is made up of 26 individual sites where a specific action or set of actions will take place in an effort to restore native habitats and ecosystem balance. The sites are identified in Figures 2 through 6.

Subject Property Locations:

Sections: 23, 33, 35, 36	Township: <u>2 North</u>	Range: <u>1 West</u>
Sections: 12, 13, 5, 22	Township: <u>1 North</u>	Range: <u>1 West</u>
Sections: 5	Township: <u>1 North</u>	Range: <u>1 East</u>
Sections: 22, 28, 33	Township: <u>1 South</u>	Range: <u>1 East</u>
Sections: 19, 21, 29	Township: <u>1 South</u>	Range: <u>2 East</u>
Sections: 2	Township: <u>2 South</u>	Range: <u>1 East</u>

USGS Quad maps:

Sauvie Island (7.5')
Linnton (7.5')
Portland (7.5')
Lake Oswego (7.5')
Gladstone (7.5')

Elevation: 19-300 Feet above Mean Sea Level

Nearest water bodies: Willamette River, Columbia Slough, Tryon Creek, Johnson Creek

Owner(s): Various public and private entities

Archaeological sites within or adjacent to the project area:

35MU15	35MU20	35MU21	35MU22	35MU44
35MU46	35MU47	35MU48	35MU49	35MU50
35MU51	35MU52	35MU60	35MU110	35MU111
35MU114	35MU117			

National Register of Historic Places (NRHP) Properties within or adjacent to the project area:

No properties eligible for or listed in the National Register of Historic Places fall within any of the restoration sites. No new historic properties were identified as a result of this investigation. Project work is proposed on several known archaeological sites, which are listed in Section 5.1.

Historic Properties will be affected by this project.

No new historic properties were identified as a result of this investigation. Project work is proposed on several known archaeological sites, which are listed in Section 5.1.

We recommend that the proposed restoration project proceed as proposed.

The project manager and the on-site inspectors for the project should be familiar with the attached unanticipated discoveries protocol and should have a copy on site for the responsible construction superintendent to carry. This plan should be reviewed ahead of time so the project managers may address questions regarding the identification of cultural material or the process to follow should any questionable material be encountered during construction. The unanticipated discoveries protocol should be provided to contractors during the bid process so they are aware of this process when they develop their estimates.

If an accidental discovery is made during ground-disturbing activity, work shall be stopped immediately, and a qualified archaeologist shall assess the find and decide upon the nature and extent of future investigation and recovery. If human remains are discovered, the Multnomah or Clackamas County Coroner's Office shall be contacted immediately.

Table of Contents

Figures.....	5
SECTION 1.0 INTRODUCTION.....	6
SECTION 2.0 LOCATION AND ENVIRONMENTAL SETTING.....	7
2.2 GEOLOGY AND STRATIGRAPHY	13
2.3 CLIMATE	13
2.4 FLORA.....	13
2.5 FAUNA.....	13
2.6 PRESENT LAND USE AND LAND DISTURBANCE	14
SECTION 3.0 CULTURAL SETTING	17
3.1 PREHISTORIC CULTURAL CHRONOLOGY	17
SECTION 4.0 METHODS	22
4.1 CULTURAL RESOURCES RECORDS CHECK	22
4.2 TRIBAL NOTIFICATIONS.....	22
4.3 FIELD SURVEY.....	22
SECTION 5.0 RESULTS	22
5.1 CULTURAL RESOURCES RECORDS CHECK	22
5.2 FIELD SURVEY	26
SECTION 6.0 DISCUSSION	27
6.1 Archaeological Assessment of the Restoration Sites.....	27
SECTION 7.0 CONCLUSIONS	35
SECTION 8.0 RECOMMENDATIONS.....	36
SECTION 9.0 CERTIFICATION.....	37
SECTION 10.0 REFERENCES.....	38

Figures

Figure 1. Project Location.....	7
Figure 2. North Mainstem of the Willamette river. This reach stretches from RM 10.0 to RM 0.0 (Balch Creek Confluence to Columbia River). Seven restoration sites along the north mainstem exist.	8
Figure 3. Columbia Slough. Kenton Cove to Willamette River (RM 0.5).	9
Figure 4. South Mainstem of the Willamette River. This reach stretches from River Mile (RM) 17.0 to 14.0 (Sellwood Bridge to)	10
Figure 5. Tryon Creek. Marshall Park to Willamette River (RM 20.5). This reach consists of Tryon Creek from its confluence with the Willamette River to the upstream extent of Marshall Park. Six restoration sites along Tryon Creek watershed exist.	11
Figure 6. Johnson Creek. Bell Station to Willamette River (RM 18.5). Four restoration sites in the Johnson Creek watershed exist.	12

SECTION 1.0 INTRODUCTION

In support of the Lower Willamette River Ecosystem Restoration General Investigation Study, a Tetra Tech archaeologist completed a file review and on the ground site survey of 26 proposed restoration sites. The file review took place on 9/30/2009 and 3/25/2010. The site surveys took place on 9/28-10/2 2009 and on 3/25 2010. Sites likely to hold archaeological materials were tested per SHPO survey regulations, those sites deemed not likely were subjected to a less intense testing regiment to identify site conditions as well as the likelihood for the presence of cultural resources.

The purpose of this study is to assist the US Army Corps of Engineers, the Port of Portland, and the City of Portland to formulate, evaluate, and screen potential solutions to significant ecosystem degradation problems in the lower Willamette River watershed. As part of that study the impact to cultural resources is addressed by this report.

The National Historic Preservation Act (NHPA) of 1966 and the National Environmental Policy Act (NEPA; 42 USC 4321-4370c) requires that historic properties be considered in federal undertakings. Cultural resources are defined as:

- Historic properties protected under the NHPA, as amended (16 USC 470-470);
- Cultural items protected under the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (25 USC 3001-3013);
- Archaeological resources protected under the Archaeological Resources Protection Act (ARPA) of 1979 (16 USC 470aa-47011);
- Sacred sites, to which access is provided under the American Indian Religious Freedom Act (AIRFA), in Executive Order (EO) 13007; and
- Collections and associated records in 36 CFR 79, Curation of Federally-Owned and Administered Collections.

The federal regulations regarding historic properties are specified in 36 CFR Part 800, Protection of Historic Properties. Requirements set forth in NEPA, NHPA, ARPA, NAGPRA, AIRFA, 36 CFR 79, EO 13007, and their implementing regulations define the Army's compliance responsibilities for management of historic properties and other cultural resources. Regulations applicable to the Army's management of cultural resources include those promulgated by the Advisory Council on Historic Preservation and the National Park Service (NPS). Army Regulation 200-4, Cultural Resources Management, specifies Army policy for cultural resources management.

SECTION 2.0 LOCATION AND ENVIRONMENTAL SETTING

Each proposed restoration project is found within the city limits of Portland, Oregon in Multnomah and Clackamas Counties. The study area consists of the lower Willamette River mainstem from its confluence with the Columbia River upstream to its confluence with Johnson Creek at River Mile (RM) 18.5, as well as key tributaries including Tryon Creek, Johnson Creek downstream of Powell Butte, and Columbia Slough.



Figure 1. Project Location

The following maps identify the specific location of each restoration site. The maps were generated by grouping restoration sites according to the water body on which they are found.

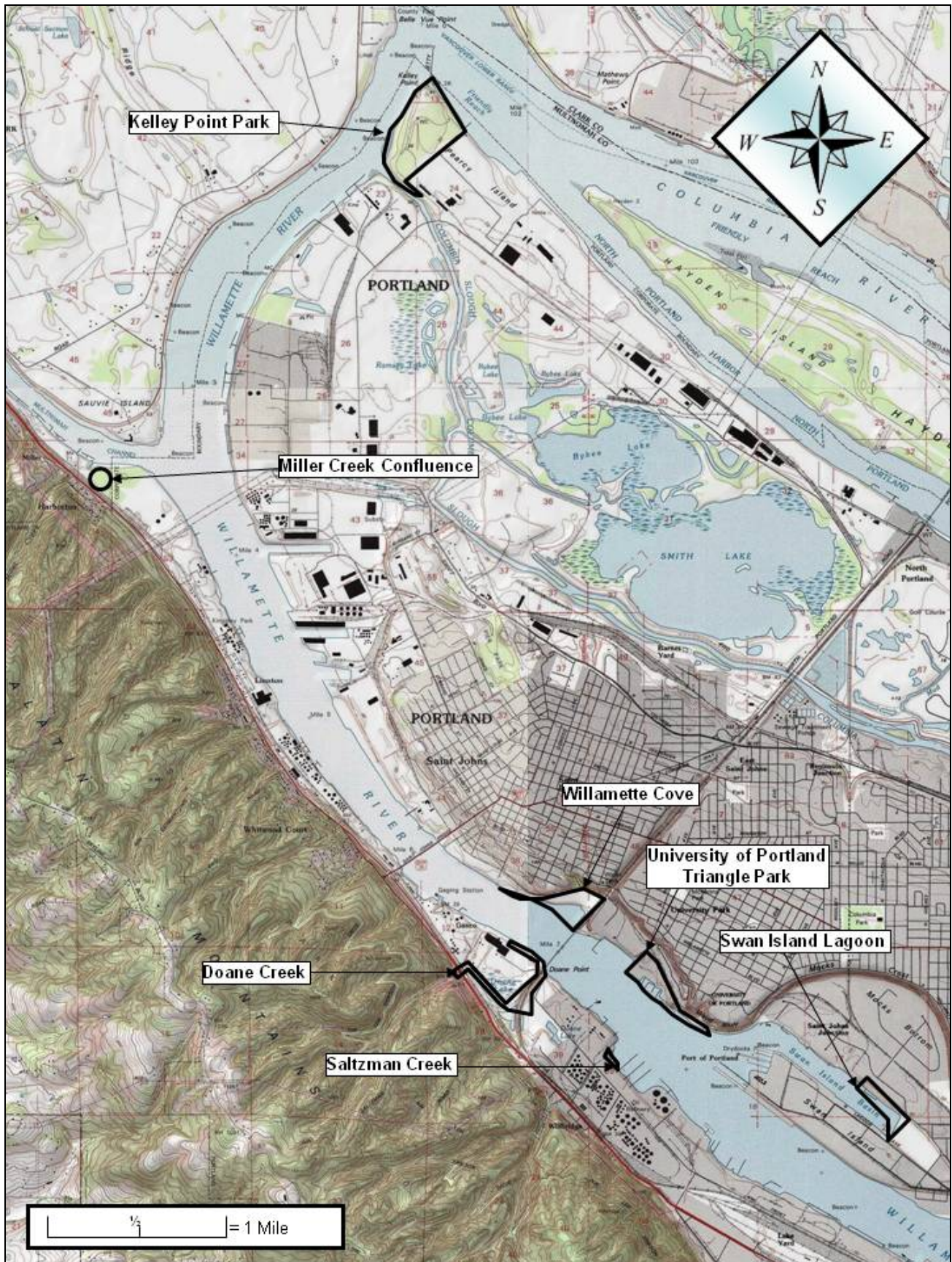


Figure 2. North Mainstem of the Willamette River. This reach stretches from RM 10.0 to RM 0.0 (Balch Creek Confluence to Columbia River).

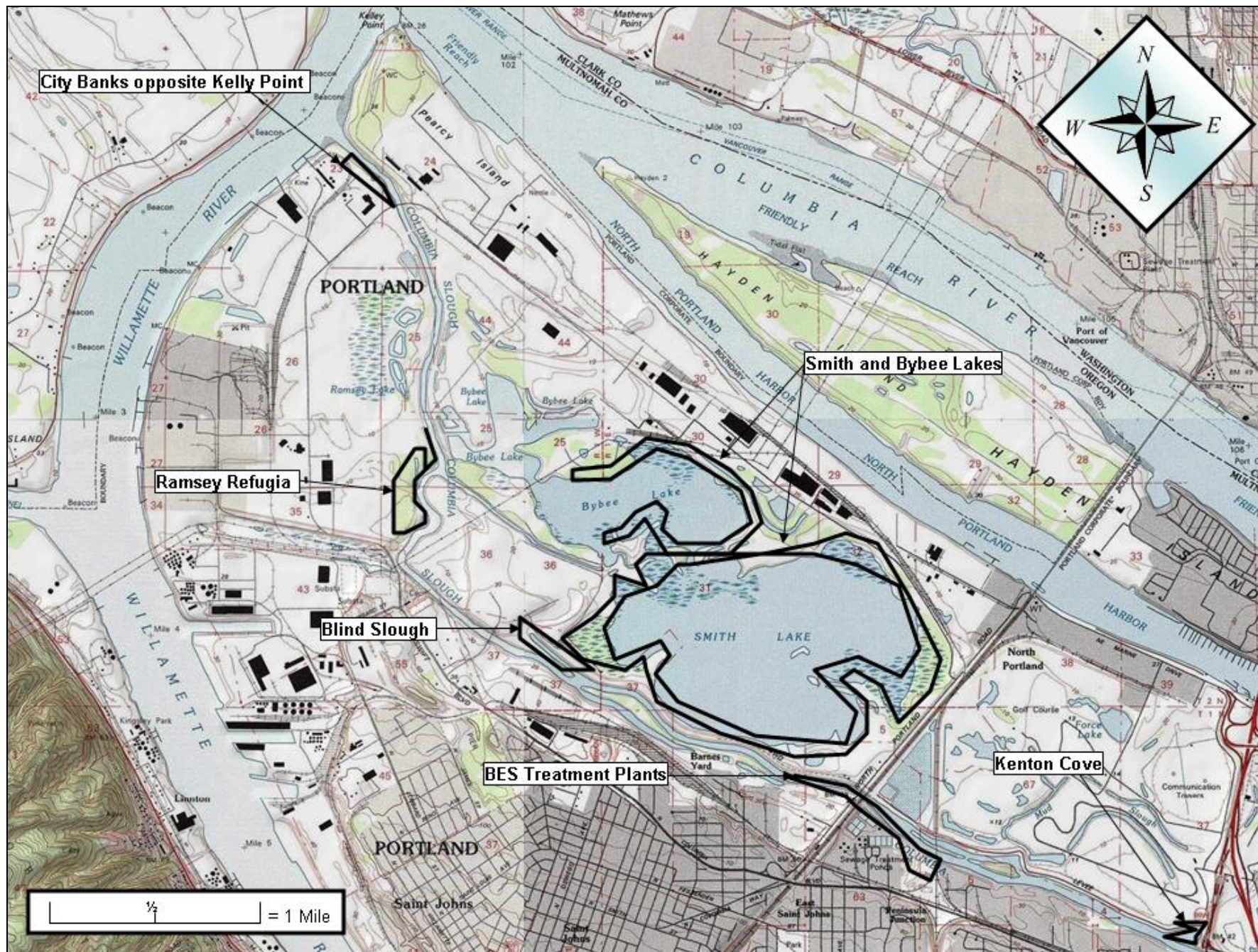


Figure 3. Columbia Slough. Kenton Cove to Willamette River (RM 0.5).

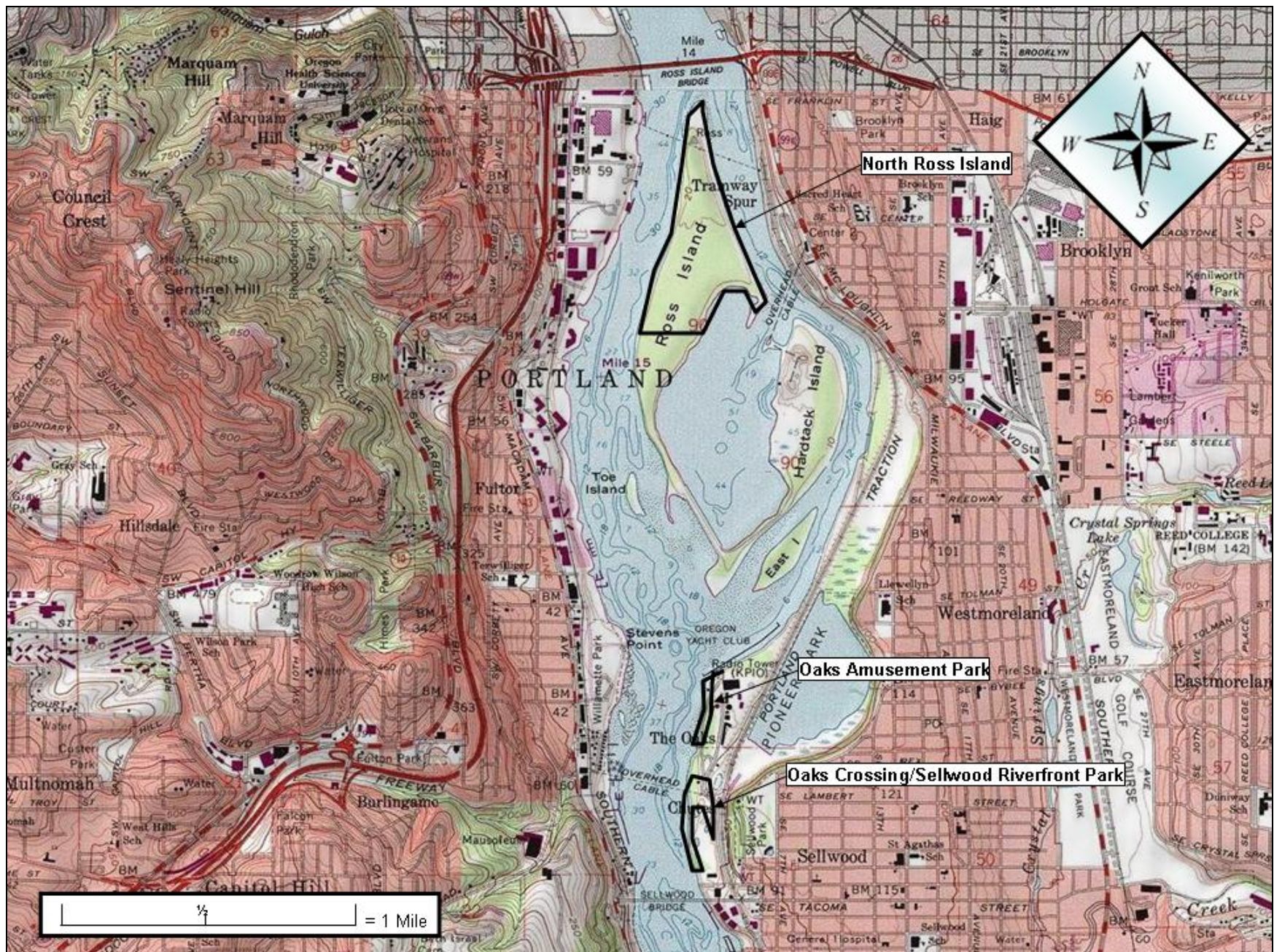


Figure 4. South Mainstem of the Willamette River. This reach stretches from River Mile (RM) 17.0 to 14.0 (Sellwood Bridge to Ross Island Bridge).

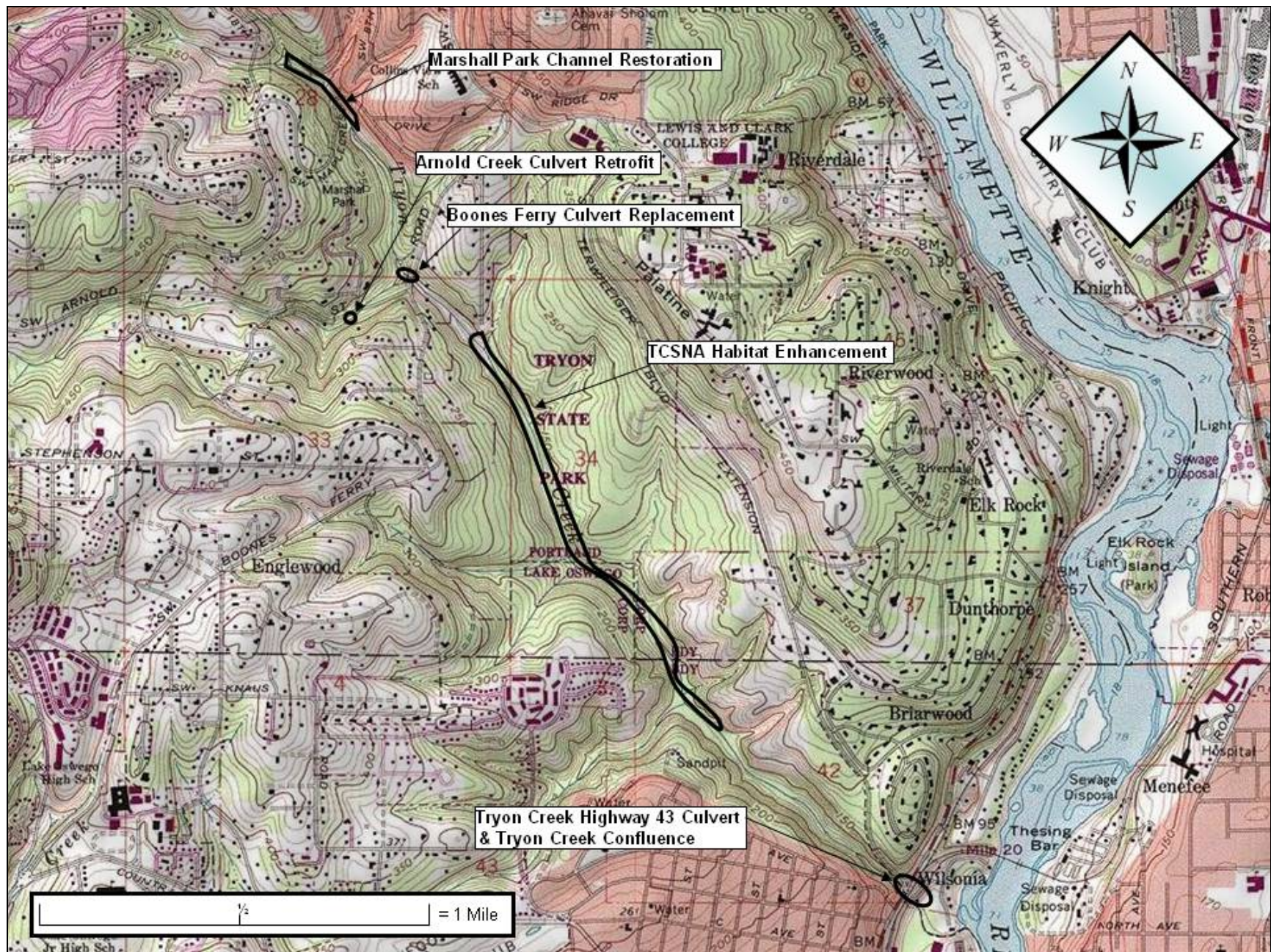


Figure 5. Tryon Creek. Marshall Park to Willamette River (RM 20.5). This reach consists of Tryon Creek near its confluence with the Willamette River to the upstream extent of Marshall Park.

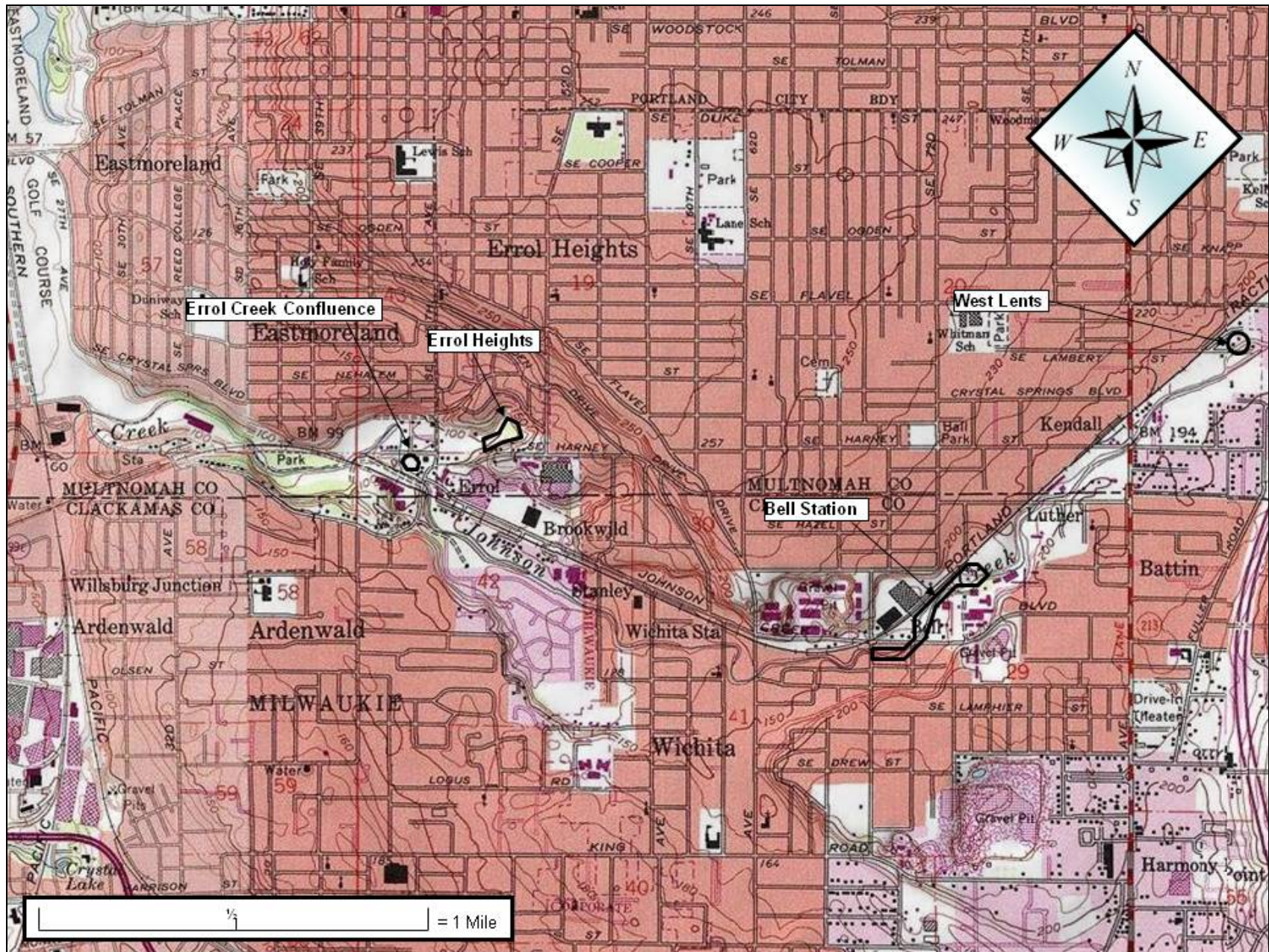


Figure 6. Johnson Creek. Bell Station to Willamette River (RM 18.5). need to remove errol heights and errol confluence

2.2 GEOLOGY AND STRATIGRAPHY

The project area lies within the Willamette Valley Province as described by Franklin and Dyrness (1988). The province stretches from the Columbia River to approximately Cottage Grove, Oregon where the Cascade and Coastal Mountain ranges converge. The project areas are all found near the northern terminus of this province, near its confluence with the Columbia River. This portion of the Willamette Valley is characterized by broad alluvial flats separated by groups of low basalt hills such as the Portland and Chehalem Hills. The valley floor found within the study area displays the greatest elevation change within the entire Willamette valley.

2.3 CLIMATE

Portland experiences oceanic or marine west coast temperate climate, with mild, damp winters and relatively dry, warm summers. Summers in Portland are warm, sunny and relatively dry, with July reaching an average high of 81 °F and a low of 58 °F late in the month. Due to Portland's inland location and when there is an absence of a sea breeze, heat waves occur (in particular during the months of July and August) with air temperatures rising to over 100 °F. Winters can be mild to cold, and very moist, with January averaging a high of 46 °F and a low of 37 °F, cold snaps are short-lived. Spring can bring rather unpredictable weather, resulting from warm spells, to thunderstorms rolling off the Cascade Range. The rainfall averages 37.5 inches per year in downtown Portland. Portland averages 155 days with measurable precipitation per year. Snowfall occurs no more than a few times per year, although the city has been known to see major snow and ice storms thanks to cold air outflow from the Columbia River Gorge. The city's winter snowfall totals have ranged from just a trace on many occasions, to 60.9 inches in 1892-93. The lowest temperature ever recorded in Portland was -3 °F, set on February 2, 1950. The highest temperature ever recorded was 107 °F, set on July 30, 1965 as well as August 8, 1981, and August 10, 1981. Temperatures of 100 °F have been recorded in each of the months from May through September.

2.4 FLORA

Portland is home to a number of native and exotic floras that contribute to its urban setting. All of the restoration sites are located near water resources and are home to native, exotic and invasive species. Specific flora varieties observed at each of the restoration sites are summarized in Section 2.6.

2.5 FAUNA

Fauna found within the restoration sites is typical of a forested urban setting. Small mammals and birds occupy the majority of the fauna population with occasional deer and raptor species.

2.6 PRESENT LAND USE AND LAND DISTURBANCE

The existing conditions of each restoration project site vary in its present use and disturbances. Due to these fluctuations in land use each restoration project area will be described individually below.

Kelley Point Park: This site is a public park located at the confluence of the Willamette and Columbia Rivers that has a documented use as a dump area for Columbia River dredging operations (Houck 2000). The dominant vegetation includes large grassy areas, with an Oregon ash and cottonwood riparian zone. The shoreline along Kelley Point is good quality sand beaches with a moderate amount of wood. Blackberry is dominant in multiple locations. The public park itself has created disturbances through open field maintenance, path and trail construction and a parking lot. The specific project elements proposed for this site fall within portions of the park that are used by the public for walking trails and beach access.

Miller Creek Confluence: This site lies adjacent to a marina on the Multnomah Channel near its confluence with the Willamette River. Vegetation near the water is extremely dense with blackberry and nettle growth. Extensive dredge spoil deposition has occurred in the interior portion of this site, but does not directly affect Miller Creek itself. Aerial photography also shows that the NE quarter of this area has been cleared sometime between 1995 and 2000.

Doane Creek/Railroad Corridor: Most of this site lies between a railroad track and a commercial facility, both of which have significantly altered the landscape. The western culvert portion of the project area is covered by Highway 30 and a commercial building complex. The northern beach portion of the project area is a maintained park environment used by the nearby industrial complex. A strip of forest lies downslope from the railroad tracks and is covered with deciduous forest. Several homeless camps were observed in these woods. The remainder of the site skirts the bottom of the railroad grade and has been severely impacted by railroad construction.

Saltzman Creek: This site is characterized by a highly incised streambed surrounded by high mounds of what appear to be dredge spoils. The surrounding area is highly industrialized. The riparian zone is dominated by non-native locust, with some Oregon ash and red alder. The understory is predominantly Himalayan blackberry with some Pacific willow. The northern half of this project area is heavily vegetated and the surface could not be observed. The remaining portion of the project area lies along an open beach where no signs of cultural materials or features were identified.

Willamette Cove: The site is covered with invasive weeds and small concentrations of Douglas fir. Numerous hard packed roads are found at the site which appear to be used for pedestrian trails. This site is extremely disturbed based on ground level undulations likely caused by the presence of the former McCormick and Baxter treatment plant located directly east of the Willamette Cove site. Railroad tracks border the site to the east and north, homeless camps were observed on the site.

Ramsey Refugia: This site is covered with young deciduous tree growth and typical understory vegetation. A dirt road has been constructed through the site and starts at N. Lombard St. and travels north through the site, household trash was observed in various locations. Additional dirt roads were identified across the site and wetlands appear to have been constructed or enhanced for wildlife.

Blind Slough: Black cottonwood, cedar and fir dominate the overstory and the understory is comprised of Himalayan blackberry, snowberry, trailing blackberry and reed canary grass. The site is bordered to the north and west by a City of Portland garbage dump.

Smith and Bybee Lakes: This site surrounds Smith Lake and a large portion of Bybee Lake. Proposed project activities are limited to the wetland environments immediately surrounding these two lakes. A mix of grasses, shrubs, and small trees is found around the edges of the lakes in most places, but much of the vegetation consists of invasive species such as reed canary grass. The two lakes were once part of a landfill and are now being restored by the City of Portland.

BES Treatment Plant: This site consists of a bike trail and park and the left bank of Columbia Slough. The dominant vegetation includes black cottonwood, ninebark, Himalayan blackberry, English ivy, and reed canary grass. The shoreline appears to be naturally vertical and about 8 feet high. The site appears to have been recontoured at some point, perhaps to accommodate spoils from construction of the adjacent treatment plant.

Kenton Cove: This site consists of a large, shallow backwater area bordered by a levee on one side. The terrestrial portion is covered with young black cottonwood, Himalayan blackberry, and reed canary grass. No significant disturbances were observed outside of the levee area.

Ross Island: The entire north portion of the island is covered with invasive species and deciduous tree growth. The south portion of the island has undergone significant alteration from gravel mining. Because this location is accessible only by boat, it gets relatively few visitors. Access to the upland portion is restricted due to the presence of a great blue heron rockery.

Oaks Amusement Park: This site is located along the Willamette River and is frequented by public park users. Pier pilings are found along the beach. Heavy blackberry growth exists along the entire site and deciduous trees provide a tree canopy.

Oaks Crossing/ Sellwood Riverfront Park: This site is frequented by public park users. Pier pilings are found in place along the beach. Heavy blackberry growth exists along the river portion of the site. Deciduous and coniferous trees provide a tree canopy. Trails travel throughout the forest portion of the site. No significant impacts were observed and the maintained portion of the park is outside of the proposed project work within the site.

Errol Creek Confluence: The site is covered by invasive species and young deciduous trees. The culvert portion of the project to the north is found in a residential yard that has been maintained as an open space. This site has had stone work in Johnson Creek installed as a Works Progress Administration project in the 1930's and two road culverts. Also, the creek was channelized to accommodate local roads and residential development. No other significant disturbances were observed.

Errol Heights Headwaters: This site is used as a park which includes walking paths throughout. The vegetation is dominated by Pacific willow, Oregon ash, big leaf maple, Himalayan blackberry, English hawthorn, reed canary grass, and ivy. The headwaters area includes several springs that feed into a large wetland complex. Some excavation of channels and ponds has occurred. No other significant disturbances were observed.

Bell Station: Johnson Creek is highly channelized through this reach with a narrow strip of riparian zone dominated by young red alder, Oregon ash, and a few sparse cottonwoods. The understory is predominantly Himalayan blackberry and reed canary grass with some willows, red elderberry and hazelnut. No significant disturbances were observed within the site but the surrounding area has undergone significant alterations by the construction of residential neighborhoods and the previously mentioned commercial complex.

West Lents: This site is a mixed coniferous/deciduous forest which includes a maintained open grass area near its northern border. Invasive species have taken over the interior making access difficult. The creek is fairly channelized in a narrow corridor with banks dominated by blackberry. A portion of the floodplain has had blackberries removed and some plantings have occurred. There is a narrow strip of trees along the creek including Oregon ash, Pacific willow, big leaf maple, and Douglas firs, with Himalayan blackberry and swordfern understory. The site is surrounded by residential and commercial construction. Walking paths give limited access to the interior of the site.

Marshall Park Channel Restoration: The majority of the park is vegetated with second growth (mostly 12-18 inch dbh) alder and some Douglas fir and Western red cedar. The shrub layer is primarily native including salmonberry, Indian plum, sword fern, and trailing blackberry, but English ivy is also present.

Arnold Creek Culvert Retrofit: This site is surrounded by deciduous forest and has a paved road running through. The riparian zone is dominated by Himalayan blackberry and ivy, with a few red alder, Western red cedar and willows present. The site has been significantly impacted by the installation of the existing culvert which is scheduled to be replaced by the Lower Willamette.

Boones Ferry Culvert Retrofit: This site is surrounded by deciduous forest and has a paved road running through. The site has been significantly impacted by the installation of the existing culvert which is scheduled to be replaced by the Lower Willamette Restoration project.

Middle TCSNA Habitat Enhancement: This site lies at the bottom of a steep draw in which Tryon Creek runs. The majority of the site is vegetated with a second growth Douglas fir and Western red cedar forest. The riparian zone is dominated by red alder, salmonberry, sword fern, young cedar, and red elderberry. The site is surrounded by a mature deciduous forest. No significant impacts were observed.

Tryon Highway 43 Culvert: The site is dominated by Highway 43 and includes areas of heavy blackberry and young red alder growth.

Tryon Creek Confluence: The south bank of the creek has an above-ground sewer pipeline that runs along its length to the wastewater treatment plant on a high terrace above the creek. The south side has recently undergone noxious weed removal and replanting, while the north side of the creek once included a residence which was bought out and demolished by the City of Portland. The dominant vegetative species are cottonwood, red alder, and Pacific willow, with an understory of Himalayan blackberry, ivy, bamboo, Japanese knotweed, reed canary grass, and buttercup.

University of Portland Triangle Park: The site is mostly open and is driven over frequently created a hard packed surface (west half), steep river bank (east half) constitute the remainder of the site.

SECTION 3.0 CULTURAL SETTING

3.1 PREHISTORIC CULTURAL CHRONOLOGY

The Paleo-Indian stage is recognized throughout North America and represents the earliest known human settlement in North America. Paleo-Indian populations are thought have been composed of small, very mobile groups who focused on the hunting of large, now-extinct mammals such as mastodon, mammoth, giant ground sloth, giant bison, camel, and horse. Although artifacts associated with the Paleo-Indian Stage have been found in the Willamette Valley, no evidence of Paleo-Indian presence in the Portland Basin has been found to date (Aikens 1993, Ames 1994).

In North America, the Paleo-Indian stage was followed by the Archaic Stage, which extended from about 10,500 years ago to about 6,400 years ago. The Archaic is generally characterized by small, mobile, hunting/gathering groups that relied on a variety of plant and animal resources (the megafauna that characterized the Paleo-Indian stage were largely extinct by the beginning of the Archaic stage). Expressions of the Archaic stage varied in different regions, and over time regional and local groups became increasingly focused on locally abundant resources. This regional specialization in the later Archaic is reflected in the development of relatively large settlements and extensive trade networks in some regions of North America (Ames 1994).

Archaic settlement in the Portland Basin is highly probable but to date there has been little conclusive archaeological evidence for such occupations. Two sites in the general Portland area are considered likely candidates as Archaic sites. One of these is located in the Clackamas River drainage near the town of Sandy. The second of these sites is 35CL96 in Lake Oswego, located near the southern portion of the research area. The archaeological deposits have not been firmly dated but the artifact assemblage at 35CL96 is very similar to assemblages at other sites dating to between about 9,000 and 7,000 years ago (Ames 1994, Minor 1994).

In the past, the Archaic stage was often considered to continue until the appearance of agriculture, which was considered a prerequisite for the development of sedentary settlements and more complex societies. These latter features generally defined the Formative stage. In the Pacific Northwest, this model is not applicable since complex societies developed based on fishing, hunting, and gathering rather than farming. This exception was recognized by Willey and Phillips (1958), the authors of the concept of the Archaic and Formative stages, but was largely ignored or forgotten. Minor et al. (1994) have pursued the Archaic-Formative exception in the Portland Basin and argue that the Formative stage developed in western Oregon about 2,000 years ago, as evidenced by the appearance of sedentary villages. Although there is archaeological evidence of settlements with circular house pits in the Portland area before 2,000 years, Minor et al. argue that it is the construction of rectangular houses that is an index of truly permanent settlements. The earliest, archaeologically known rectangular houses in the Portland Basin date to about 2,000 years ago.

Ames (1994) builds on this formative idea and suggests that the Archaic was followed by the “Pacific period” on the Northwest Coast (including the lower Columbia River). The “Pacific period” designation was developed by Ames and Maschner to recognize the evolution of the Native peoples into complex hunter-gatherers, including the appearance and refinement of many of the distinctive cultural features of the Northwest Coast region. These features include occupation of permanent villages, the presence of social hierarchies and status differences, the importance of ritual, and participation of communities in interaction spheres that created extensive networks of kinship and exchange. Not all of these features are in evidence at archaeological sites in the Portland Basin, nor are they all apparent in the ethnohistoric literature. But it appears that the prehistoric and historic-period Native peoples of the Portland Basin were influenced by these regional developments. The Pacific period “model” is therefore applicable to the Portland Basin in helping to define how Native peoples in the lower Columbia River area shared in regional cultural patterns, had developed variations on those regional patterns, and had cultural attributes specific to the lower Columbia area. The Pacific period extends from about 4400 BC to AD 1775 (Ames 1994).

All of the known archaeological sites in the Portland Basin that have been dated with some accuracy are from Pacific period and most of these are from the Formative stage as defined by Minor et al (1994). The three oldest radiocarbon-dated Portland Basin sites are all located on the Columbia River floodplain not far from the mouth of the Willamette River: 45CL31 near Vancouver Lake (radiocarbon dates of 3510 ± 100 BP [“before

present”, defined arbitrarily as AD 1950] and 3360±70 BP); 35MU117 on Bybee Lake (2970±80 BP, 2850±30 BP, and 2800±110 BP); and 35MU9 on Sauvie Island (2880±155 BP and 2850±95 BP) (Ellis 2000; Wessen 1983). In addition to these sites, limited excavations have been conducted at four sites along lower Columbia Slough that are from 1.1 to 1.8 km (3,500 to 6,000 ft) east of the Willamette River. Two of these sites (35MU105 and 35MU112) appear to have been seasonal camps; 35MU112 was occupied between about AD 700 and 1250; 35MU105, directly across the slough from 35MU112, was occupied between AD 1450 and 1800 (Ellis 1996, 1998). A third site (35MU47) may also have been a seasonal camp, dating to about AD 1335-1435. The fourth of these sites is 35MU46, at which excavations in 1990 indicated that the site was a possible winter village occupied between about AD 1425 and 1800 (Woodward 1990). Excavations at 35MU46 in 2002-2003 have provided substantially more evidence that it is a village site.

Summary data on radiocarbon-dated archaeological sites in the Portland Basin (Ames 1994; Minor et al. 1994) demonstrate that known archaeological sites provide an extensive record of the past 2,000 years in the Portland Basin. The past 1,500 years are especially well represented. Although some gaps in the sequence have been suggested, these gaps have tended to disappear as further archaeological studies have been conducted. This archaeological record demonstrates the presence of villages located on the banks of the Columbia and Clackamas rivers and along some of the larger drainages across the Columbia River floodplain (e.g., Columbia Slough).

Seasonal camps (some of which may have included houses) were more widely distributed across the floodplain, along sloughs and adjacent to ponds, lakes, and marshes. There are also some limited data indicating the presence of seasonal use locations (either camps or resource harvesting and processing areas) along streams in more upland settings (e.g., Johnson Creek). There are also a few archaeological sites that do not appear to be associated with any drainages or wetlands.

In a settlement model developed for the Columbia South Shore area (i.e., the Columbia River floodplain between NE 82nd Avenue and NE 185th Avenue), Minor et al. (1994) proposed that (1) low-lying sloughs and ponds were the locations for task-specific activities and short-term, dry-season camps; (2) marsh and wet meadow settings are found at slightly higher elevations than the slough/pond zone and were the locations of task-specific activities and more long-term seasonal occupations; and (3) the higher-elevation grasslands and woodlands were where seasonal camps and permanent villages were located, especially where they offered ready access to resource-rich wetlands.

3.2 RECORDED ETHNOGRAPHIC HISTORY

Prior to the arrival of Euro-Americans to the region Chinookan people occupied the region in which the project is located. These people collectively spoke various dialects of the Upper Chinookan language branch which is a part of the Penutian phylum (Silverstein 1990, French and French 1998). The Chinookan people in general relied heavily on

water resources but also included hunting and gathering in their subsistence economy (Silverstein 1990).

The Chinook group as a whole first encountered Euro-American explorers in 1792 when Robert Gray and John Boit of the *Columbia* were exploring the Willamette River. Following brief encounters by other explorers the Chinook people engaged in trade with fur traders and by the early 19th century missionaries were reporting on the Chinook populations. During the 19th century disease spread throughout all of the Pacific NW populations and in particular the Clackamas are said to have suffered extensively (Silverstein 1990).

In the middle part of the 19th century, the Willamette Valley's fertile soils, pleasant climate and abundant water attracted thousands of settlers from the eastern United States, mainly the Upland South borderlands of Missouri, Iowa, and the Ohio Valley.[39] Many of these emigrants followed the Oregon Trail, a 2,170-mile (3,490 km) trek across western North America that began at Independence, Missouri and finally ended at various locations near the mouth of the Willamette River. Although people had been traveling to Oregon since 1836, large-scale migration did not begin until 1843, when nearly one thousand pioneers headed westwards. Over the next 25 years, some 500,000 settlers traveled the Oregon Trail, braving the rapids of the Snake and Columbia Rivers in order to reach the Willamette Valley (Oregon Trail 2010).

Starting in the 1820's Oregon City grew up around Willamette Falls. Incorporated in 1844, it was the first city west of the Rocky Mountains to have that distinction (Oregon – California Trails Association 2010). John McLoughlin, a Hudson's Bay Company official, was one of the major contributors to the founding of the town in 1829 (Lewis 2008). McLoughlin attempted to persuade the British government (which still held sway over the area) to allow American settlers to live on the land, and provided significant help to American colonization of the area, all against the HBC's orders. Oregon City prospered because of the paper mills that were run by the water power of the Willamette Falls, which, unfortunately to the economic development of the area, formed an impassable barrier to river navigation. Linn City (originally Robins Nest) was established across the Willamette from Oregon City (Lewis 2008).

By the mid-19th century, settlers were increasingly encroaching on Native American lands in the Willamette Valley. Skirmishes between natives and settlers in the Umpqua and Rogue valleys to the southwest of the Willamette River resulted in the Oregon state government removing the natives by military force (Jette 2010). They were first led off their traditional lands to the Willamette Valley, but soon were marched to the Siletz Reservation on the coast west of the valley. Joel Palmer, a pioneer and legislator of the Oregon government, who had been involved with driving out the Umpqua and Rogue peoples, later forced tribes of the Willamette Valley to sign a treaty that transferred 7,500,000 acres (30,400 km²) of their land to the United States government for \$200,000 (Palmer 2002). The natives of the Willamette Valley were similarly moved into the Siletz Reservation, which since has shrunk to a fraction of its former size (Columbia River History 2006). Palmer, later criticized for bringing unnecessary risk to white

settlers (by angering the Native Americans) and often unlawful treatment of the natives, was removed from the legislature in 1856 (Palmer 2002). However, by that year, further conflicts with Native Americans saw the last of the tribes being removed from the valley (Beckham 1990).

After Portland was incorporated in 1851, quickly growing into Oregon's largest city, Oregon City began to slowly lose its importance as the economic and politic center of the Willamette Valley. Beginning in the 1850s, steamboats began to ply the Willamette, but Willamette Falls formed an almost impassable boundary (Lewis 2008). As a result, navigation on the Willamette River was divided into two stretches: the 27-mile (43 km) lower stretch from Portland to Oregon City, which allowed connection with the rest of the Columbia River system, and the upper reach, which encompassed most of the Willamette's length. In 1873, the construction of the Willamette Falls Locks bypassed the falls and allowed easy navigation between the upper and lower river. Each lock chamber measured 210 feet (64 m) long and 40 feet (12 m) wide, and the canal was originally manually operated (today it is electrically powered). Today, however, the lock system is little used (Lewis 2008).

The low areas and sloughs on the east side of the river were filled as the city grew, especially after the consolidation of East Portland and Albina into Portland in 1891. Portions of Mocks Bottom and Swan Island were filled to facilitate industrialization of these areas. The east bank of the Willamette moved westward, and the river channel narrowed through downtown (Portland 2010).

Swan Island was once a real island and separated two channels of the Willamette River. Prior to 1920, the eastern, deeper Swan Channel was the river's main channel. The current channel on the west side of the island was wide and shallow. A massive dredging project shifted the river channel and filled the causeway that now connects Swan Island to North Portland (Portland 2010).

SECTION 4.0 METHODS

4.1 CULTURAL RESOURCES RECORDS CHECK

The Oregon Parks and Recreation Department, State Historic Preservation Office; Geographic Information System (GIS) database of cultural resources sites and surveys was reviewed. Such a check was done to determine whether the subject parcel and/or its immediate environs had been previously surveyed for cultural resources and whether any archaeological sites have been identified and mapped.

4.2 TRIBAL NOTIFICATIONS

The Army Corp. of Engineers will be heading the Tribal Notification responsibilities for this project. This report does not contain any information regarding tribal notifications or associated documentation.

4.3 FIELD SURVEY

An archaeologist from Tetra Tech DIV, Bothell completed cultural resources investigations at all of the propose habitat restoration sites during the week of 9/28-10/2 2009 and on 3/25 2010. The Principal Investigator for the project was Mr. Frank Stipe, (Tetra Tech, Bothell, WA). Mr. Stipe meets and exceeds The Secretary of the Interior's Standards and Guidelines, and is, therefore, qualified to conduct and supervise archaeological investigations on federal, state, and private lands.

Field investigations were conducted at each site. Sites where conditions indicated a potential likelihood for subsurface archaeological materials were tested at 20 meter intervals on a grid set to cardinal directions. Sites where conditions indicated that archaeological materials were not likely underwent a less intense testing regiment to identify site conditions, identify disturbances and to identify any indications that archaeological materials may be present on the site.

SECTION 5.0 RESULTS

5.1 CULTURAL RESOURCES RECORDS CHECK

The Oregon Parks and Recreation Department, State Historic Preservation Office; GIS database of cultural resources sites and surveys was used to identify any known archaeological resources at the individual restoration sites as well as the level of archaeological survey completed at each restoration site.

The database identified numerous cultural resources located on several of the restoration sites as well as completed archaeological surveys which encompassed several of the restoration sites. The results of that research are outlined below.

Kelly Point Park: The northern tip of the project area has been covered with river dredging, stated under an unidentified report polygon within the GIS database (OR SHPO GIS database). These dredgings would have presumably been placed towards the center of the “point” away from either the Columbia or Willamette rivers. The project related disturbances will occur near the shore where the banks will be sloped back and erosion control features installed. Along the southern border of the site, along the Columbia slough, four archaeological sites are known to exist. These sites are:

35MU47: Two 5-10 cm. bands of charcoal and thermally altered rock interspersed with a 10-15 cm. thick layer of silt in the bank of the Columbia Slough.

35MU48: Seasonal Campsite

35MU49: Seasonal Campsite

35MU50: Seasonal Campsite

All four of these sites were identified in 1979, in a subsequent cultural survey completed in 1983 (Survey#5246) 35MU48 and 35MU49 could not be found while the size of sites 35MU50 and 35MU47 appear to grow considerably. All four of these sites are located along a 1000 foot stretch of the Columbia slough’s north bank.

Miller Creek confluence: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. An archaeological survey passes through the restoration site but does not completely cover the proposed restoration area. The survey is described by report #17115 (Cultural Resources Reconnaissance Survey and Inventory of the Portland Segment of Level 3's Proposed Fiber Optic Line from Portland).

Doane Creek/Railroad Corridor: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. An archaeological survey passes through the restoration site but does not completely cover the proposed restoration area. The survey is described by report #17115 (Cultural Resources Reconnaissance Survey and Inventory of the Portland Segment of Level 3's Proposed Fiber Optic Line from Portland).

Saltzman Creek: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site.

Willamette Cove: One archaeological site has been identified within the project boundaries. This site (35MU114) is mainly a brick scatter related to the Western Cooperage Mill built in 1915. The site was discovered while a survey of the McCormick & Baxter Superfund (CERCLA) Property (#18347) was completed. One other archaeological survey has been completed in the restoration area. This survey (#1303) was completed for the St Johns Riverfront Development and had no physical survey completed.

Ramsey Refugia: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. One survey has been completed which includes a part of the proposed restoration site. This survey (#8262) “The Ramsay Lake Project Area”

identified numerous archaeological resources along its eastern project border but none along its western border where the proposed restoration site is located.

Blind Slough: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site.

Smith and Bybee Lakes: Numerous archaeological surveys have been completed in and around the proposed restoration area and numerous archaeological sites are known to exist within the project area as well. All surveys completed in and around the Smith and Bybee Lakes project are described below.

Survey # 623: Identifies a lithic scatter in a letter report. Located between Smith and Bybee Lakes.

Survey # 8262: Identified fire hearths, FCR and lithic scatters NE of the proposed project area.

Survey # 15861: Did not identify any cultural resources.

Survey # 16729: Identified 3 hearth features that did not include any other artifacts forms.

Two of these sites are located away from the restoration area while one of the sites falls along the north shore of Smith Lake within the restoration area.

Survey # 19765: Did not identify any cultural resources.

Survey # 21059: Did not identify any cultural resources.

Twelve archaeological sites were identified within the proposed restoration area during the records review. These sites are described below.

35MU15: Area of fire cracked rock located below the average water level.

35MU20: Area of fire cracked rock extending from 10 feet contour into lake

35MU21: Area of fire cracked rock at 10 ft. contour

35MU22: Area of fire cracked rock extending into the lake at normal lake level

35MU44: Possible Village Site

35MU46: Possible Village Site

35MU51: Seasonal campsite

35MU52: Area of fire cracked rock

35MU60: FCR and lithic artifacts

35MU110: Prehistoric short term campsite

35MU111: remains of a hearth

35MU117: Warm season base camp

BES Treatment Plant: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. An archaeological survey passes through the restoration site but does not completely cover the proposed restoration area. The survey is described by report #17215 (Fiber Optic Line between Portland & Seattle Cultural Resource Assessment Clark, Cowlitz, Lewis, Thurston, Pierce & King Counties).

Kenton Cove: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. An archaeological survey passes through the restoration site but does not completely cover the proposed restoration area. The survey is described by report #14770 (Preliminary Cultural Resource Assessment of Inverness Force Main Route Alternatives).

Ross Island: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. An archaeological survey has been completed which covers the entire restoration area. The survey is described by report #622 (Report on Archaeological Reconnaissance of Ross Island).

Oaks Amusement Park: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. An archaeological survey has been completed which covers the entire restoration area. The survey is described by report #312 (An assessment of the Cultural resources to be Affected by the Proposed Southeast Relieving Interceptor Project). There was no physical survey of the proposed restoration area.

Oaks Crossing/ Sellwood Riverfront Park: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site.

Errol Creek Confluence: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site.

Errol Heights Headwaters: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site.

Bell Station: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site.

West Lents: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site.

Marshall Park Channel Restoration: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site.

Arnold Creek Culvert Retrofit: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. An archaeological survey passes through the restoration site but does not completely cover the proposed restoration area. The survey is described by report #15865 (HRA Letter Report 96-45: Cultural Resource Survey of Four Portland Area Watersheds).

Boones Ferry Culvert Retrofit: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. An archaeological survey passes through the restoration site but does not completely cover the proposed restoration area. The survey is described by report #15865 (HRA Letter Report 96-45: Cultural Resource Survey of Four Portland Area Watersheds).

Middle TCSNA Habitat Enhancement: Four archaeological sites have previously been identified within the proposed restoration area. These sites have not been given Smithsonian trinomials. The sites are described below and are separated by bullets:

- Concrete foundations remains with associated bricks
- Earthen Depression
- Glass, ceramic, metal cable
- Bottles and cans

One archaeological survey has been completed within the proposed restoration area. This survey (#21479) did not identify any cultural materials or features other than those listed above.

Tryon Highway 43 Culvert: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site.

Tryon Creek Confluence: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site.

University of Portland Triangle Park: No artifacts, sites or cultural features have been identified in or around the proposed restoration area, site 35MU114 is located north of this site in the Willamette Cove site, the former McCormick & Baxter wood treatment plant is located between these two sites.

5.2 FIELD SURVEY

Each of the 26 restoration project sites was visited by a Tetra Tech archaeologist to inspect the area for cultural resources and to determine whether the area has the potential to hold intact subsurface cultural materials that would add to the archaeological record of the region. The site visit consisted of the archaeologist performing a pedestrian survey over all areas to be impacted by project activities, including potential lay down areas, and looking for evidence of those archaeological sites identified under section 5.1. Additionally; Sites where conditions indicated a potential likelihood for subsurface archaeological materials were tested at 20 meter intervals on a grid set to cardinal directions. Sites where conditions indicated that archaeological materials were not likely underwent a less intense testing regiment to identify site conditions, identify disturbances and to identify any indications that archaeological materials may be present on the site.

SECTION 6.0 DISCUSSION

"Historic properties," as defined by the ACHP, the body charged with implementing the National NHPA of 1966 [as amended], include any "...prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior" (36 CFR 800). The NPS has developed four criteria for determining eligibility for inclusion in the NRHP (36 CFR 60.4):

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity, design, setting, materials, workmanship, feeling, and association and

- A. That are associated with events that have made a significant contributions to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embodies the distinctive of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That has yielded, or may be likely to yield, information important in prehistory or history.

6.1 *Expectations*

As discussed by Minor (1994) and summarized in Section 3.1 of this report; prehistoric cultural remains that are likely to be found in the project areas littoral environments are likely to be represented by procurement and specific task related archaeological sites. Evidence of these site types are not likely to be found on the surface, and given the known vegetation and subsurface disturbances experienced by all of these project areas from 20th century residential, commercial and industrial development these smaller site types are not expected to be identified within the selected project areas.

Euro-American occupation of the Lower Willamette and its tributaries, as summarized in Section 3.1, shows ongoing development and alteration of the landscape to suit individual occupation requirements. These developments and alterations have left a record of constant landscape alterations and renewal that is a patchwork across the landscape. Remains of various Euro-American occupations are expected and due to the project areas littoral context are expected to be related to commercial shipping and riverside industrial activities.

6.2 *Archaeological Assessment of the Restoration Sites*

Assessments are made based on known archaeological sites in the area and the level of perceptible disturbance that the project area has received which would have disrupted

intact cultural materials and features that might be present. When possible the methodology of previous archaeological surveys will be used as a guide to determine the level of effort put forward towards identifying cultural resources at a particular restoration site. If a survey completed shovel testing across the entire project area with no results then the probability is low while if a windshield survey was completed then that survey will not be counted on as a marker for the level of possible archaeological materials present at the restoration site.

Kelly Point Park: The city of Portland acquired the Kelly Point Park site in 1984 from the Port of Portland, which had covered much of the peninsula with dredged material from the Columbia River to create places to build terminals like terminal 6 just SE of the park (Houck 2000).

The majority of project work will occur along the beach of the park where dredging would not have presumably been placed due to the proximity of either river. Inland from the beach the project will create a channel through the park and place woody debris and boulders for pond turtle habitat. These inland activities have the potential to dig through the dredging layer and into intact soil horizons that may hold cultural materials similar to those found in the surrounding area as described in section 5.1. In particular are sites 35MU50 and 35MU47 which as last visit had grown considerably in size. Evidence of these two sites was not observed but vegetation has grown back over the site locations and likely hides any cultural materials from view, a great asset in a public park.

Six shovel test pits were completed along the proposed channel which will travel through the public park. A dark loamy A soil horizon was underlain by a dark sandy horizon (presumably river dredging material), this sandy soil extended to between 40 cm. and 80 cm. from the ground surface. Below this sandy horizon was a dark slightly clayey sand that is likely the transition from dredging material to former top soil, due to depth and water seepage the shovel test probes were not completed, i.e. 20 cm. past a sterile C horizon.

The Kelly Point Park project has a high probability to disturb archaeological materials and/or features due to the close proximity of known archaeological resources and the lack of cultural resource survey completed on the specific project activity areas.

Miller Creek Confluence: Vegetation in the project area prevented any visual observations of the ground surface. The majority of project activities will occur on a flat rise where the area will be vegetated with native upland species. This area of the project appears deflated and aerial photographs show the trees cleared out of a portion of the project area after 1995 and before 2000.

The remaining project area skirts the river and dock area and will create wetland areas along Miller Creek which will be redirected to place the mouth of the Creek near the NE corner of the project area.

No archaeological resources are known to exist on the project area although a significant village site is known to exist just 1.5 miles upstream on the opposite side of the Multnomah Channel. This site is significant due to the excellent artifact preservation that has occurred due to the village's position below the average water line.

Four shovel test probes were dug on the flat rise where tree saplings will be planted. Soils on this flat consisted of a shallow A horizon (less than 5 cm.) underlain by yellowish brown loamy clay. Tree removal likely contributed to top soil erosion. Those areas to be used for wetland development near the water line could not be excavated due to water seepage and loose soils.

The Miller Creek Confluence project has a moderate probability to disturb archaeological materials and/or features. Site 35MU0004 is found approximately 1.5 miles upstream of the restoration site along the Multnomah Channel. Site 35MU0004 is a submerged archaeological site that dates to a time period when water level was lower than they are at present and has produced delicate archaeological materials preserved in their submerged state. As the proposed restoration project intends to disturb soils near the water line and because of known archaeological sites found along the same water course the proposed restoration efforts may disturb similar archaeological materials as those found at 35MU0004.

Doane Creek/Railroad Corridor: All portions of the restoration area have been heavily disturbed by railroad and highway construction. Project activities will involve installation of a fish passable culvert, create marsh habitat, install erosion control features and to slope back the banks along the Willamette river.

The Doane Creek/ Railroad Corridor project has a low probability to disturb any archaeological resources due to surface and sub-surface disturbances completed over the project area by railroad, railroad bridge, and road construction. Trees currently cover extremely low portions of the site and at the time of survey standing water was found.

Due to previous disturbances no shovel test probes were completed at this site.

Saltzman Creek: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. An archaeological survey has been completed near the project area (report #17115) this survey did not identify any cultural materials or features near the restoration area. An industrial park is located directly west of the site. Ground visibility was good at the site, most of the site is located on the Willamette River beach.

The Saltzman Creek project has a low probability to disturb archaeological materials since the previous survey did not identify any archaeological materials and no known archaeological materials exist near the restoration site.

Willamette Cove: One archaeological site has been identified within the project boundaries. This site (35MU114) is mainly a brick scatter related to the Western Cooperage Mill built in 1915. The site was discovered while a survey of the McCormick

& Baxter Superfund (CERCLA) Property (#18347) was completed. One other archaeological survey has been completed in the restoration area. This survey (#1303) was completed for the St Johns Riverfront Development and had no physical survey completed.

The brick scatter is located near the Willamette River and the north side of the railroad bridge, glass was observed mixed with the bricks. No shovel test probes were completed within the known site boundaries of 35MU114. Ten shovel test probes were dug in relatively undisturbed portions of the site where archaeological materials would be most likely identified. Soils indicated that a shallow hard packed light brown A horizon is underlain by a brown gravelly Ab horizon. Due to rocks and hard packed soils the soil test probes could not be completed to depth.

No artifacts were identified but due to the presence of the cooperage mill, other Euro-American related archaeological deposits may be present; therefore this project has a high probability for disturbing archaeological materials.

City Banks opposite Kelly Point: The restoration activities at this site have the potential to disturb intact soil horizons that may hold cultural materials similar to those found in the surrounding area as described in section 5.1. In particular are sites 35MU50 and 35MU47 which as last visit had grown considerably in size. Evidence of these two sites was not observed but vegetation has grown back over the site locations and likely hides any cultural materials from view, a great asset in a public park.

Six shovel test pits were completed along the proposed channel which will travel through the public park. A dark loamy A soil horizon was underlain by a dark sandy horizon (presumably river dredging material), this sandy soil extended to between 40 cm. and 80 cm. from the ground surface. Below this sandy horizon was a dark slightly clayey sand that is likely the transition from dredging material to former top soil, due to depth and water seepage the shovel test probes were not completed, i.e. 20 cm. past a sterile C horizon.

The City Banks opposite Kelly Point project has a high probability to disturb intact subsurface archaeological resources such as those found in 35MU47 and 35MU50.

Ramsey Refugia: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. One survey has been completed which includes a part of the proposed restoration site. This survey (#8262) "The Ramsay Lake Project Area" identified numerous archaeological resources along its eastern project border but none along its western border where the proposed restoration site is located. The proposed project work includes creating a channel, re-vegetation, replace culverts, slope back banks and to enhance permanent wetland conditions.

The Ramsey Refugia project has a low probability to disturb archaeological resources due existing disturbances related to wetland creation and culvert installation. Shovel test probes were completed in those areas where re-vegetation and bank enhancement

activities would take place on the west border of the refuge (an industrial complex is located directly west of the site to mark its western border). These areas included heavy undergrowth of blackberry and relative understory varieties, the ground surface was not easily visible. Two shovel test probes were completed which showed a shallow dark brown loam A horizon underlain by a brown silty loam which transitioned to a dark brown slightly silty clay with grey mottles. Both shovel test probes were dug to 50 cm. and no artifacts were identified.

Blind Slough: No artifacts, sites or cultural features have been identified within the proposed restoration area. One archaeological survey has been completed within the proposed restoration area. This survey (OR SHPO # 16729) identified several hearth features that did not include any other artifacts forms. The nearest archaeological site identified by this survey to the restoration site is 35MU116 which is a site found to hold intact soil horizons of charcoal that may indicate a hearth. This site is located just under one half mile from the restoration site along the Columbia Slough.

Six shovel test probes were completed along this site which appears undisturbed and features mature alder growth with a blackberry understory. Shovel test probes showed an approximate 10-12 cm. silty loam dark brown A horizon transitioning to a brown silty clay with grey mottles. These shovel test probes were dug to 50 cm. below ground surface, no artifacts were identified.

The Blind Slough restoration project has a moderate possibility to disturb archaeological materials based on its setting, which is similar to other nearby locations that hold archaeological materials (35MU116) in the immediate vicinity, and the lack of perceptible disturbances which may have alter the landscape in such a way as to destroy and remove archaeological materials.

Smith and Bybee Lakes: Twelve archaeological sites have been identified in the immediate area of the planned restoration site. Disturbances from the former city garbage dump are expected but due to the marsh setting of the lakes and the known archaeological sites in the area the Smith and Bybee Lakes restoration project has a high potential to disturb intact cultural materials.

Due to the number of known archaeological sites within the Smith and Bybee Lakes site no shovel test probes were completed as potential areas for testing are known archaeological sites.

BES Treatment Plant: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. An archaeological survey passes through the restoration site but does not completely cover the proposed restoration area. The presence of the homeless camps makes the possibility of any significant archaeological surface materials low but due to the mature forest, lack of perceptible disturbances the restoration project has a moderate chance of disturbing intact cultural materials. Two shovel test probes were completed on this site, both approximately 100 feet southwest of the Columbia Slough in areas not disturbed by soil moving activities and homeless

camp. Both shovel test probes showed a brown silty clay A horizon underlain by a light brown B horizon starting at 14 cm. below the ground surface. The shovel test probes were dug down to 50 cm. and no artifacts were identified.

Kenton Cove: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. An archaeological survey passes through the restoration site but does not completely cover the proposed restoration area. No disturbances were noted during the survey and considering the low level of disturbances expected from restoration activities the probability is low that any archaeological materials will be disturbed by this project.

Ross Island: A cultural resource survey (#622) has been conducted which covers the entire island. This survey did not identify any archaeological materials and no research has suggested that any would be expected.

The Ross Island project has a low potential to disturb unknown archaeological resources.

Oaks Amusement Park: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. An archaeological survey report has been completed which covers the entire restoration area but no physical survey of the proposed restoration area was completed. Due to the existing pier pilings found in place along the beach the restoration site likely contains some archaeological materials but since the area is frequented by beach walkers from Sellwood Riverfront Park surface materials would not be expected.

The project has a moderate possibility to disturb archeological materials mostly likely during the excavation of the proposed channel due to the known Euro-American presence indicated by the pier pilings. Three shovel test probes were dug between the vegetated portion of the park and the piers located in the water on the park beach. The shovel test probes were dug in grassy areas where sand could be seen on the surface. The shovel test probes showed a loamy sand on the surface underlain by a brown sandy silt. No artifacts were identified in any of the probes.

Oaks crossing/ Sellwood Riverfront Park: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site. Due to the existing pier pilings found in place along the beach the restoration site likely contains some archaeological materials but since the area is frequented by beach walkers from Sellwood Riverfront Park surface materials would not be expected. Project activities within the forest area of the site may uncover archaeological materials related to the pier pilings.

The project has a moderate possibility to disturb archeological materials due to the known Euro-American presence indicated by the pier pilings. Four shovel test probes were dug in the park away from the piers located in the water on the park beach. The shovel test probes were dug in grassy areas where sand could be seen on the surface. The

shovel test probes showed a loamy sand on the surface underlain by a brown sandy silt. No artifacts were identified in any of the probes.

Errol Creek Confluence: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site. A stone work was identified in Johnson Creek within the restoration site that is attributed to a Works Progress Administration project dating to the 1930's. This stone work was presumably limited to Johnson Creek but the surrounding area may hold archaeological materials related to the construction of that project and data that would add to the archaeological record of depression era Portland. Due to the existing stone work the project has a high likelihood of disturbing archaeological materials.

Errol Heights Headwaters: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site. The project has a low chance of disturbing archaeological materials due to its location within a developed portion of Portland

Bell Station: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site. The project has a low chance of disturbing archaeological materials due to the close proximity of residential housing and the commercial complex.

West Lents: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site. The project has a low chance of disturbing archaeological materials due to the close proximity of residential housing and the commercial complex.

Marshall Park Channel Restoration: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. The project is found in an area of steep slopes and second growth forest. The project has a low potential to disturb archaeological materials.

Arnold Creek Culvert Retrofit: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. An archaeological survey passes through the restoration site but does not completely cover the proposed restoration area. The project has a low potential to disturb archaeological materials since the main objective is to replace an existing culvert which would have already disturbed and uncovered any archaeological materials that could be present when it was installed.

Boones Ferry Culvert Retrofit: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. An archaeological survey passes through the restoration site but does not completely cover the proposed restoration area.

The project has a low potential to disturb archaeological materials since the main objective is to replace an existing culvert which would have already disturbed and uncovered any archaeological materials that could be present when it was installed.

Middle TCSNA Habitat Enhancement: Four archaeological sites have been identified near the proposed restoration area. These sites are composed of Euro-American refuse remains and a building foundation. The project has a low potential to disturb archaeological materials since project activities are limited to the lower creek area and not higher up outside of the creek draw where the previously mentioned sites were found. The specific project area has already been surveyed by an archaeologist who did not identify any cultural materials near the creek itself.

Tryon Creek Culvert: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site. The project has a low probability of disturbing archaeological materials since the original culvert installation disturbed and uncovered any archaeological materials which might have been present. No shovel test probes were completed due to the small project size and the total disturbance of the project area.

Tryon Creek Confluence: No artifacts, sites or cultural features have been identified in or around the proposed restoration area. No archaeological surveys have been completed which include any part of the restoration site. The project has a low probability of disturbing archaeological materials due to the adjacent disturbances caused by residential and commercial construction.

University of Portland Triangle Park: One archaeological site has been identified within the project boundaries. This site (35MU114) is mainly a brick scatter related to the Western Cooperage Mill built in 1915. The site was discovered while a survey of the McCormick & Baxter Superfund (CERCLA) Property (#18347) was completed. This survey did not identify any other cultural materials. Due to the presence of the cooperage mill, other Euro-American related archaeological deposits may be present; therefore this project has a high probability for disturbing archaeological materials.

7.0 CONCLUSIONS

The Oregon SHPO GIS database indicated that there are historic properties within the APE although none are eligible for inclusion in the NHRP. A pedestrian archaeological field survey and limited subsurface testing using shovel test probes failed to detect any historic properties. This is to say that no “significant” prehistoric or historic-era sites, features, buildings, or artifacts were recorded.

In summary, no properties eligible for or listed in the National Register of Historic Places were observed in the Lower Willamette APE. The proposed project actions are not expected to have an adverse effect on historic properties.

SECTION 8.0 RECOMMENDATIONS

Section 106 of the NHPA requires that federal agencies take into account the effects of their undertakings on historic properties and seek ways to avoid, minimize, or mitigate any adverse effects on such properties (36 CFR 800.1(a)). No historic properties were identified within any of the project areas. Insofar as no significant prehistoric or historic era artifacts, features, sites, or districts were identified, it follows that no federal historic properties have been identified. Given these observations and deductions, Tetra Tech, Inc., presents the following recommendations regarding the proposed undertaking:

- No historic properties (as defined by the ACHP with regard to the NHPA have been observed or recorded within any of the Lower Willamette Restoration sites APE. Thus, no historic properties will be affected by the proposed undertaking as currently proposed;
- If ground-disturbing activities (such as dozing, grading, or backhoe excavation) expose any prehistoric or historic-era artifacts (older than 50 years), features, or sites, all work in the immediate area is to be stopped. The appropriate cultural resources manager is to be notified of the find immediately;
- If human remains are discovered in the course of ground disturbance all work in that area should be halted or diverted until the appropriate County Coroner's Office is notified and that office offers an opinion/disposition. Notification of the appropriate County Coroner shall occur within 24 hours of discovery.

SECTION 9.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits regarding the Lower Willamette Cultural Resource Review Project present the data and information required for this archaeological report, and that the facts, statements and information presented are true and correct to the best of my knowledge and belief. I also certify that I am a qualified California archaeologist who meets and exceeds The Secretary of the Interior's Standards and Guidelines.

Signed: Date: November 5, 2010

Frank Stipe M.A.

Archaeologist

Tetra Tech, Inc

19803 North Creek Parkway

Bothell, Washington

Phone: (425) 482-7821

FAX (425) 482-7830

e-mail frank.stipe@tetrattech.com

SECTION 10.0 REFERENCES

Ames, Kenneth M.

- 1994 Archeological Context Statement: Portland Basin. Wapato Valley Archaeological Project Report No. 4, Department of Anthropology, Portland State University, Portland, Oregon. Submitted to the Oregon State Historic Preservation Office, Salem.

Aikens, C. Melvin

- 1993 Archaeology of Oregon, 3rd ed. U.S. Department of the Interior, Bureau of Land Management, Oregon State Office, Portland.

Beckham, Stephen Dow, ed.

- 2006 Oregon Indians: Voices from Two Centuries. Corvallis: Oregon State University Press

Beckham, Stephen Dow.

- 1990 History of Western Oregon Since 1846. In Handbook of North American Indians. vol. 7. Northwest Coast. Ed. Wayne Suttles. Washington D.C.: Smithsonian Institution.

Berg, Laura, ed.

- 2007 The First Oregonians. 2d ed. Portland: Oregon Council for the Humanities

Columbia River History

- 2006 Indian Removal. Center for Columbia River History. Website Accessed 11/1/2010. Website: <http://ccrh.org/comm/slough/chinook6.php>.

Ellis, David V.

- 2000 Cultural Resource Survey for the Proposed Wapato Corrections Facility and Data Recovery Excavations at 35MU117, Portland, Oregon. Archaeological Investigations Northwest, Inc. Report No. 205. Prepared for Adolfsen & Associates, Inc., Portland, Oregon and Multnomah County, Oregon.

Houck, Michael C. and M. J. Cody ,

- 2000 A Guide to Portland's Natural Areas, Oregon Historical Society, Portland, Oregon

Jette, Melinda

- 2010 Kalapuya Treaty of 1855. The Oregon Encyclopedia. Website Accessed: 11/1/2010. Website: http://www.oregonencyclopedia.org/entry/view/kalapuya_treaty/

Lewis, Alan

2008 Conquering the Falls: The Willamette Falls Locks. History of the Willamette Falls. Willamette Falls Heritage Foundation. Website Accessed 11/1/2010. Website: <http://www.willamettefalls.org/HisLocks>.

Minor, Rick, Robert R. Musil, and Kathryn Toepel

1994 An Inventory and Assessment of Archaeological Resources in the Columbia South Shore for the City of Portland, Oregon. Heritage Research Associates Report No. 165. Submitted to the Bureau of Planning, City of Portland, Oregon.

Oregon Trail

2010 The Oregon Trail. Idaho State University. Website Accessed 11/1/2010. Website: <http://www.isu.edu/~trinmich/Introduction.html>

Oregon – California Trails Association

2010 Where did the Oregon Trail Go? Reaching Oregon's Willamette Valley". People & Places. Oregon-California Trails Association. Website Accessed 11/1/2010. Website: http://www.octa-trails.org/learn/people_places/articles_ot_by_here.php.

Palmer, Joel

2002 Joel Palmer. The Oregon History Project. The Oregon Historical Society. Website Accessed 11/1/2010. Website: http://ohs.org/education/oregonhistory/historical_records/dspDocument.cfm?doc_ID=AC1EDCD5-1C23-B9D3-68CE692537F90A51

Spores, Ronald

1993 Too Small a Place: The Removal of the Willamette Valley Indians, 1850-1856. American Indian Quarterly. 17:2 (Spring 1993): 171-92

Wessen, Gary C.

1983 Archaeological Investigations at Vancouver Lake, Washington. Western Heritage, Inc., Olympia, Washington. Submitted to Cooper & Associates, Inc., Portland.

Wiley, Gordon R., and Philip Phillips

1958 Method and Theory in American Archaeology. University of Chicago Press, Chicago and London.

Woodward, John

1990 An Archaeological Assessment of the St. Johns Site on the Columbia Slough with Primary Emphasis on Site 35MU46. Woodward and Associates, Portland, Oregon. Submitted to the Port of Portland, Oregon.