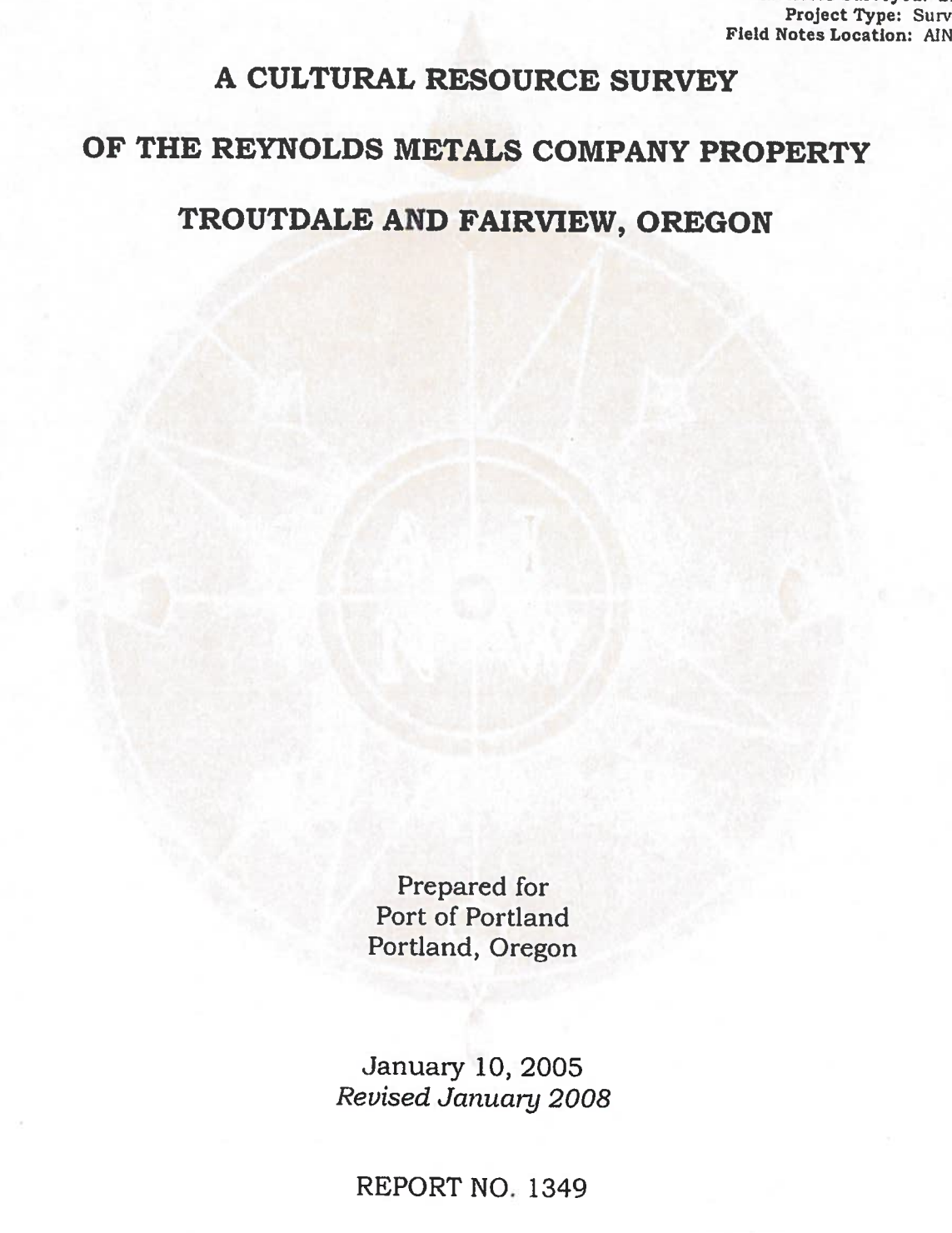


Findings: (-)
County: Multnomah
Township, Range, Section: 1N, 3E, 14, 22, 23, 24
USGS Quadrangle: *Camas, WA-OR, 7.5', 1993*
Total Project Acres: 700
Total Acres Surveyed: 290
Project Type: Survey
Field Notes Location: AINW

**A CULTURAL RESOURCE SURVEY
OF THE REYNOLDS METALS COMPANY PROPERTY
TROUTDALE AND FAIRVIEW, OREGON**



Prepared for
Port of Portland
Portland, Oregon

January 10, 2005
Revised January 2008

REPORT NO. 1349

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**A CULTURAL RESOURCE SURVEY
OF THE REYNOLDS METALS COMPANY PROPERTY,
TROUTDALE AND FAIRVIEW, OREGON**

PROJECT SITE: Reynolds Metals Company Property

TYPE: Cultural Resource Survey

LOCATION: Sections 14, 22, 23, and 24, Township 1 North, Range 3 East,
Willamette Meridian

USGS QUAD.: *Camas, WA-OR, 7.5', 1993*

CITY: Troutdale and Fairview

FINDINGS: One high probability area for containing buried archaeological resources was identified, and portions of historic-period National Register-eligible resources associated with Bonneville Power Administration transmission lines and with historic-period drainage features are present within the project area.

INTRODUCTION

To assist the Port of Portland (Port) in its acquisition of approximately 700 acres of land located in Troutdale and Fairview, Oregon (Figure 1), Archaeological Investigations Northwest, Inc. (AINW), conducted a cultural resource survey of the project area in 2004. This location was the site of the Reynolds Metals Company (RMC) aluminum-production facility that was in the process of being removed at the time of the 2004 survey. The aluminum facility was originally constructed in 1941 and ceased operations in 2002. The facility was owned by Alcoa, a manufacturer of aluminum and aluminum products.

In anticipation of the purchase of the RMC property, in 2004 the Port contracted with AINW through a subcontract to perform a cultural resource survey as part of a due diligence study. The cultural resource survey was conducted to determine if archaeological or historic-period resources were present or considered likely to be present on the property.

The AINW survey of the RMC property consisted of two elements: an updating of records and a review of the literature of the property location; and a systematic pedestrian archaeological survey of those portions of the RMC property that were accessible and that were not previously surveyed. Excluded from the survey was the portion occupied by the aluminum plant and the immediately surrounding area, which totaled about 140 acres; this area had been substantially disturbed by the aluminum plant operations and was considered to have a very low potential for archaeological resources. This report presents the results of both a previous 2002 survey (as it pertains to the present project property) and the survey conducted in 2004.

Subsequent to AINW's 2004 survey, the RMC property boundaries underwent minor revisions. As a result, there are a few, small portions of the property that have not been surveyed for cultural resources. These are indicated in Figure 2.

The project area was surveyed for archaeological resources and a literature search was conducted for historic ethnographic, and traditional cultural uses to meet the requirements of Section 106 of the National Historic Preservation Act of 1966 as amended, and its implementation regulations, 36CFR800. The work was conducted and supervised by AINW staff meeting the professional qualification standards of the Secretary of the Interior.

No archaeological resources were identified during the archaeological survey, however, a high probability area (HPA) for such resources was identified and portions of the National Register of Historic Places (NRHP) -eligible Multnomah County Drainage District No. 1 facilities and Bonneville Power Administration (BPA) transmission lines are present within the study area. If ground disturbing activities are planned for the HPA, then subsurface testing should be done to determine if archaeological resources are present. Care should be taken to avoid impacts to the NRHP-eligible drainage features and power lines within the project area.

ENVIRONMENTAL SETTING AND EUROAMERICAN LAND-USE HISTORY

The project area is on the southern Columbia River floodplain immediately downstream of the confluence of the Sandy and Columbia rivers at about Columbia River mile 120. The property that the Port may acquire is located immediately north and northwest of the Portland-Troutdale Airport and includes lands within of the city limits of Troutdale and Fairview. The eastern portion of the proposed study area is occupied primarily by the former RMC aluminum plant, which was being demolished during the time that the survey was done. The portion of the study area west of Sundial Road was acquired by RMC in 1964 and has been used for grazing beef cattle. This western area is known as "Fairview Farms."

The eastern part of the project area is in Troutdale and the western portion is in Fairview. The area is situated in Sections 14, 22, 23, and 24, of Township 1 North, Range 3 East, Willamette Meridian (see Figure 1).

Much of the study area was listed in 1994 as a National Priorities List (Superfund) site due to the presence of contamination resulting from the aluminum plant operations. Hazardous substances previously identified in the study area included polynuclear aromatic hydrocarbons, aluminum, cyanide, fluoride, and polychlorinated biphenyls. Alcoa was demolishing the plant in 2004 and was addressing chemical contamination under oversight by the EPA.

The study area lies entirely on the floodplain of the Columbia River. The terrain is flat to gently rolling, with elevations of 6.1 to 9.1 meters (m) (20 to 30 feet [ft]) above mean sea level. The Columbia River levee that crosses the northern and eastern project areas is at an elevation of 13.7 m (45 ft). The area was historically subject to regular flooding by the Columbia and Sandy rivers in the winter and late spring. Floods were rare after diking and drainage projects were completed in the early 1900s.

There were several drainages that extend across portions of the project area. Salmon Creek is a natural stream that has been substantially modified through most of the project area, retaining its original course only across the Fairview Farms area. A short distance to the southwest of the Fairview Farms parcel is Arata Creek. Arata Creek is now a tributary of Salmon Creek; it is unclear if Arata Creek was historically a tributary of Salmon Creek or simply debouched onto the floodplain. There is a ditch on the Fairview Farms parcel that extends east-west about 120 m (400 ft) north of Salmon Creek. The ditch empties into a series of artificial ponds west of the present project area. The Salmon Creek channel generally forms the southern boundary of the westernmost portion of the survey area. The remaining

drainages in the project area are either constructed ditches or channelized natural drainages. All of these drainages—with the exception of Arata Creek—have been incorporated into the Sandy Drainage Improvement District (now managed by the Multnomah County Drainage District #1).

The major water feature within the project area is Company Lake, which is situated just north of the levee north of the aluminum plant. Company Lake is a natural lake but it has been substantially modified during the twentieth century. Stormwater and treated wastewater from the aluminum plant were discharged to the lake in the past. A channel connects Company Lake to the Columbia River to the north. A small lake to the east of Company Lake is sometimes referred to as "East Lake." A small channel connects East Lake to the Sandy River to the east.

The first Euroamerican description of the study area was by Lt. William Broughton, who made a brief exploration up the Columbia River in October 1792. The mouth of the Sandy River was the most upriver point reached by Broughton, and he described the land around the mouth as "low and woody," with a "low sandy flat" extending into the river's mouth (Vancouver 1984:759 [1798]). Broughton would have been referring to the historical mouth of the Sandy River, which was about 2.5 river miles up the Columbia from the modern mouth of the Sandy.

A more detailed account of the area is provided in the journals of Lewis and Clark in 1805-1806, who were the next Euroamericans along the river after Broughton:

below quick Sand [Sandy] River the Countrey is low rich and thickly timbered on each Side of the river, the Islands open & Some ponds river wide and emence numbers of fowls flying in every direction Such as Swan, geese, Brants, Cranes, Stalks [storks], white guls, comerants & plevers &c. [Moulton 1990:13].

Fir and White Cedar is the common growth of the up lands, as is the Cotton wood, ash, large leafed Ash and Sweet Willow that of the bottom lands The Country on either Side [of the Columbia River below the Sandy River] is fertile, the bottom on the South Side is wide and inter sperced with Small ponds in which the nativs gather their Wappato [Moulton 1991:77].

This description was still generally accurate through much of the nineteenth century. Late nineteenth- and early twentieth-century maps of the area show the present project area as a mix of riparian woodlands and wet prairie. There were numerous small lakes and ponds through the northern area. Two of the larger lakes were Company Lake, a predecessor of the present Company Lake north of the aluminum plant, and Sundial Lake, which occupied much of the present Fairview Farms area. Most of these lakes and ponds were fed by groundwater and floodwaters and lacked either inlets or outlets. Company Lake did not historically have an outlet or inlet, but Sundial Lake had an outlet to Salmon Creek. Salmon Creek historically headed at the northern edge of the community of Troutdale, then meandered northwesterly across the floodplain. Historic maps (U.S. Coast and Geodetic Survey 1904; U.S. Geological Survey 1918) show the creek emptying into the Columbia River near modern Chinook Landing. By 1942 (U.S. Geological Survey 1942), the creek was shown with a channel to the east end of Blue Lake.

Currently, all of the SDIC drainage is pumped over the dike by SDIC on the west end of the former Reynolds site, immediately east of the entrance to Chinook Landing. The pumped water then discharges into a watercourse that flows west past a Metro wetland mitigation site for Chinook Landing, then past the Chinook Landing facility before entering the Columbia

River about 1.3 kilometers (km) (0.8 miles [mi]) to the west of the discharge from the Sandy Drainage District.

With the exception of some of the higher ground, all of the project area was subject to regular flooding until the early 1900s. LaFayette Cartee, who surveyed Township 1 North, Range 3 East for the General Land Office in the spring of 1854, described the area as follows:

The bottom land is subject to over flow from the high waters of the Columbia which occurs annually [sic] beginning as soon as the snow has time to run from the mountains in the spring of the year which is generally in the first of May and continuing until the middle of July during which time the farmers may sail over their farms in boats [Cartee 1854:156-157].

Euroamerican settlement of the area began in the late 1840s. The mouth of the Sandy River was an occasional debarkation point for some early settlers who had rafted down the Columbia River from The Dalles. From this landing, they traveled overland to Oregon City. Several Donation Land Claims (DLCs) were settled on the Columbia River floodplain downstream of the Sandy River. The present project area includes portions of three DLCs: Lewis Marr, James Stott, and Calvin Reed. All three claims were settled in the 1850s, with Reed and Marr apparently selling their land soon after their claims were established. Stott appears to have stayed longer than the others. His house is shown on the 1855 General Land Office map of the township, along upper Salmon Creek and south of the modern Portland-Troutdale Airport (Genealogical Forum of Portland, Oregon 1957-1975:I:62, 94, II:22; General Land Office 1855, 1862).

A small community known as "Sandy" was established on the Sandy River near the present location of Troutdale in the early 1850s. The community appears to have remained small and its post office closed in 1868. A new post office was opened at or near the old Sandy community in 1880 by Captain John Harlow. He named the new post office "Troutdale" for the trout ponds (also used for raising carp) he had built on his farm. The construction of the Oregon Railway & Navigation Company railroad (later part of the Union Pacific empire) through Troutdale in 1882 spurred a move by Harlow's widow to plat the town. In 1891, the American Dressed Meat Company (later the Union Meat Company) built a large slaughterhouse in Troutdale. Employing about 100 men, the plant generated an economic boom in the community. The boom continued until 1907-1910, when a major fire in the business district and the relocation of the Union Meat Company to north Portland led to an economic decline. This decline was partially offset by construction of the Columbia River Highway through Troutdale in 1913-1916 (*Gresham Outlook* 1998:29, 52, 92; McArthur 1992:848; Nesbit 1996:3-6).

Until construction of levees in the early 1900s, annual flooding of the project area limited Euroamerican settlement on the Columbia River floodplain. The river bottoms were generally used for grazing cattle or for growing hay and other forage crops. Captain James Menzies had acquired much of the bottomlands in the present study area to create the Sandy Ranch in 1863. The ranch was sold in 1889 and became a part of the holdings of the Union Meat Company, which were in turn sold to the Pacific Bridge Company in 1908. The Pacific Bridge Company was one of many business interests of prominent Portlander Charles Swigert. Swigert transformed the former Sandy Ranch into Sun Dial Ranch. Occupying 1,800 acres, Sun Dial Ranch was reportedly the largest ranch in Multnomah County at the time. The ranch was primarily a dairy operation but also sold feed and livestock. Swigert and his partners began construction of a levee around the ranch in 1916 to protect the land from flooding and to facilitate subdividing the ranch into smaller farm tracts. The levee was completed in 1918, the same year in which Swigert organized the Sandy Drainage Improvement Company. This

allowed the ranch to begin growing vegetables as well (*The Gresham Outlook* 1916:1, 1998:69; MacColl 1979:194-195; Newman and McNassar 1979:6-7).

The area remained agricultural through much of the early 1900s. The 1918 U.S. Geological Survey map shows a few roads across the area, including one to Stotts Landing on the Columbia River, a short distance downstream from the modern mouth of the Sandy River. Sun Dial (or Sundial) Ranch consisted at that time of two buildings near the present northeastern edge of the Portland-Troutdale Airport. By 1935, the Sun Dial Ranch had developed into a large complex of houses, barns, and other outbuildings (1935 aerial photograph, on file, U.S. Army Corps of Engineers [USACOE], Portland, Oregon). The location of the ranch complex is outside the current project boundaries. The ranch appears to have raised cattle and grown hay and forage crops. The ranch may have also grown truck and garden crops such as celery, cauliflower, and gladiolus bulbs that Troutdale was noted for in the 1920s and 1930s (*Gresham Outlook* 1930; Nesbit 1996:7).

By 1935 all of the current project area within the levee was occupied by farmland. Sundial Lake had been drained but Salmon Creek still followed in much of its original course. A network of ditches drained the fields. A system of roads through this area was constructed in the 1930s, including the predecessor of today's Sundial Road. The non-agricultural element introduced into this setting was the Troutdale Airport, which was constructed as a landing strip in 1924 southeast of the Sun Dial Ranch. It was initially used only for emergency landings, with routine use developing during World War II. The Port of Portland acquired the airport in 1942 (Newman and McNassar 1979:7; 1935 and 1939 photographs, on file, USACOE, Portland, Oregon).

The major historical development in the project area was construction of the aluminum plant in 1941. The plant was constructed by the U.S. Government to meet needs for the war effort. Although the United States had not yet entered World War II, it was a major supplier of armaments and other goods to the Allies in Europe. Construction of the aluminum plant was also the stimulus for the development of the community of Wood Village. A housing complex of 182 homes was built in 1942 for workers at the aluminum plant and named "Wood Village." The federal government operated the aluminum plant—first known as the Troutdale Aluminum Plant—until 1946, when it was leased to RMC. (RMC purchased the plant from the government in 1949). The plant operated at various capacity levels through November 1991, when RMC temporarily curtailed operations. Plant operations were restarted in 1998 but were curtailed once again in late summer 2000 following Alcoa's acquisition of the RMC. The plant was permanently shut down in July 2002 (Agency for Toxic Substances and Disease Registry [ATSDR] 2002; Troutdale Area Chamber of Commerce 1991).

By the end of World War II, the eastern project area had been largely developed for the aluminum plant and the Portland-Troutdale Airport. A small area was left undeveloped between the aluminum plant and the airport. The Sun Dial Ranch buildings had been demolished during World War II (1948 aerial photograph, on file, USACOE, Portland, Oregon). From 1941 to 2002, the project area east of Sundial Road and within the levee had been used primarily for industrial purposes: operation of the aluminum plant and associated activities and disposal of waste materials from plant operations. The former channel of Salmon Creek east of Sundial Road was filled or ditched, and an extensive wetland developed south of the aluminum plant where wastewater from the plant was discharged.

The western project area ("Fairview Farms") remained in agricultural use, first for grazing dairy cattle and—later—beef cattle. The project area between the levee and the Columbia and Sandy rivers has been used primarily for recreational use (e.g., fishing, hiking, dog-walking, etc.) for most of the twentieth century and to the present.

NATIVE PEOPLES

The project area lies within the traditional homeland of the Chinookans of the lower Columbia River valley. The Chinookans depended primarily upon the resources of the Columbia River and the adjacent floodplain. The abundant resources of the lower Columbia River valley supported a large population, with villages clustered on the banks of the river and its major tributaries. The nearest known Chinookan villages to the present project area were Nechacolee, a village visited by members of the Lewis and Clark Expedition in 1806 and situated along the south side of the Columbia River at or near Blue Lake; and Catlipoks, which was described in 1814 as being a short distance up the Washougal River. Each Chinookan village had its own chief and was politically autonomous but was linked with other villages through trade and intermarriage (Gough 1992:644; Moulton 1991:64-66; Silverstein 1990:541, Figure 1).

Chinookan villages varied considerably in size. Lewis and Clark (Moulton 1990:477-478, 484) reported that villages in the Portland area ranged in size from 1 to 20 houses and from 100 to 1,200 inhabitants. Chinookan houses were rectangular and constructed of cedar planks with the floor usually at ground level. These were typically multifamily dwellings and some houses—usually those of chiefs—were very large. Some villages in the Portland area may have been occupied year-round but some households may have shifted to seasonal camps during the warmer months, where mat or brush shelters were used (Hajda 1994; Silverstein 1990:537-538).

The most important resources for Native populations of the lower Columbia were salmon, sturgeon, and eulachon from the river; deer and elk found on the river bottom and adjacent uplands; and wapato tubers gathered in floodplain wetlands and camas bulbs obtained from upland prairies (Boyd and Hajda 1987:Table 2). The distribution of these resources focused subsistence activities on and along the Columbia River and major tributaries and on the adjacent floodplain. Forays into the adjacent uplands may not have been common for most Chinookans given the ready availability of most resources at lower elevations. Upland use may have been limited to gathering resources found only in the uplands (e.g., certain types of plants) for example that were scarce on the floodplain.

Traditional Chinookan life was severely disrupted by the European colonization of North America. Direct contacts were established in the 1780s as British and American traders began to appear regularly on the Pacific coast. Indirect contacts had been made earlier, however. Horses may have been introduced into the Willamette Valley by the late 1700s. A more destructive introduction was Euroamerican disease. A smallpox epidemic in the 1770s may have killed a third of the Native population of the lower Columbia region. There were subsequent outbreaks of smallpox and other diseases, culminating in a malaria epidemic in the early 1830s, when about 90% of the Native population died in a few years (Boyd 1990).

Euroamerican settlement of the Pacific Northwest accelerated in the 1840s, creating additional pressures on the Chinookans who had survived the epidemics. To facilitate settlement, the U.S. Government negotiated treaties with Willamette Valley and Chinookan groups in 1851. These treaties would have created reservations for some of the groups but were not ratified by Congress. A second round of negotiations in 1854 resulted in treaties that were ratified in 1855. The Grand Ronde and Siletz reservations were subsequently created by Executive Order, and most of the Chinookans were removed to these reservations in the late 1850s (Beckham 1990). Some individuals and families from the Portland area moved to the Yakama and Warm Springs reservations.

PREVIOUS CULTURAL RESOURCE STUDIES

A review of the records on file at the Oregon State Historic Preservation Office (SHPO) and documents in the AINW library indicate that eight cultural resource studies have been previously conducted within about 2 km (1.6 mi) of the present project area. The two earliest studies were conducted in May 1979 for the Port of Portland. One survey was for the proposed relocation of NE Graham Road at the Portland-Troutdale Airport. No archaeological resources were noted in the survey but two archaeological resources (one Native American, one Euroamerican) were noted near the airport (Woodward 1979). The second survey was conducted for the proposed expansion of the Portland-Troutdale Airport. This survey noted the presence of an oak tree associated with the early history of the Troutdale area. This study also recorded a prehistoric archaeological site (35MU43), consisting of a midden deposit with a large number of associated artifacts. The site had been damaged prior to 1979 by road construction and livestock grazing (Newman and McNassar 1979). Neither of these cultural resources is located within the present project boundaries (35MU43 is about 0.7 km [0.4 mi] southeast of the southern boundary of the Fairview Farms parcel).

The only study known to have been conducted in the 1980s was a survey of the southern shoreline of the Columbia River from Bonneville Dam to the Glenn Jackson Bridge (Interstate 205). This survey included the Columbia River shoreline north of the present project area and a small portion of the Sandy River shoreline at its confluence with the Columbia. No cultural resources were identified in the vicinity of the current study area (Reese et al. 1990).

Four studies were conducted in the 1990s. In 1991 and 1992, a parcel south of the eastern end of the RMC plant, the easternmost portion of a parcel between the plant and the Portland-Troutdale Airport, and the southwestern corner of a parcel east of the plant were surveyed for expansion of an existing natural-gas pipeline that extended through this area. No cultural resources were identified in this area (Burnett and Reese 1992; Fagan et al. 1991:29-30). In 1994, a cultural resource survey was conducted of a 26-acre parcel west of the Portland-Troutdale Airport and southeast of the Fairview Farms parcel. The 1994 project area included the location of the previously recorded site 35MU43. This study consisted of a systematic surface survey and excavation of 22 auger probes. The survey indicated that archaeological deposits associated with 35MU43 occupied a larger area than previously recorded in 1979, but no new resources were identified (Musil 1994).

Two surveys in 1999 addressed areas southwest of the Fairview Farms parcel. One study examined about 10 acres of land to the west of the intersection of NE Marine Drive and NE Sundial Road. No cultural resources were observed in this survey (Keeler 1999). In late 1999, a stone mortar was discovered during construction in an area between NE Marine Drive, NE Sundial Road, and the Union Pacific spur line to the aluminum plant. Subsequent archaeological examination of the area and excavation of 10 probes recovered flaking debris and cobble tools in addition to the mortar found during construction. Analysis of these materials and associated deposits indicated that the finds were associated with a prehistoric archaeological site that had been largely destroyed by construction (Kent and Fagan 2000). The SHPO designated this site as 35MU118. It was located about 0.3 km (0.2 mi) southeast of the southern boundary of the Fairview Farms parcel.

The most recent study was a survey conducted in 2002 by AINW (Ellis 2002) on a portion of the current project parcel for a proposed science and technology park. Approximately 260 acres of property owned by Alcoa and the Port of Portland were surveyed. This included the eastern portions of Fairview Farms and the property south of the plant and north of the Portland-Troutdale Airport. About 50 acres of the area surveyed in 2002 was

outside of the present project boundaries. The only cultural resource identified during the survey was the remnants of an irrigation system dating to the late 1940s or early 1950s (Ellis 2002).

In 1987, the BPA conducted an assessment of its master grid to determine what components might be eligible for listing in the National Register of Historic Places. That assessment identified 14 BPA substations and 10 transmission lines considered eligible for listing in the National Register. One of the eligible substations is the Troutdale Substation adjacent to the RMC plant but outside the present project boundaries. None of the BPA transmission lines that cross the present project area were considered National Register-eligible in the 1987 study (Curran 1998:Tables 1 and 2; Glenn L. Jacobson, Memorandum: Coordination of Alterations to Historic Buildings, 16 January 1992, U.S. Department of Energy, Bonneville Power Administration, copy on file, AINW). However, in her more recent treatment of the BPA system, Curran (1998:178-179) recommended that "every transmission line in the BPA system that was built between 1939 and 1945 is eligible for the National Register." This recommendation referred to the transmission-line alignments as the significant elements of the system whether or not any of the original physical components of the transmission lines were present.

Because the transmission lines have been in continuous use since they were constructed, replacement of towers, cable and other equipment has been necessary to maintain quality of service and to accommodate new technology. Although it is always preferable to find original components, the existence of original towers, cable, and electrical equipment is not essential to integrity. In fact, a transmission line's ability to convey integrity depends more on the corridor within which it travels than its historic fabric [Curran 1998:179].

There are three BPA transmission lines that cross the RMC property that follow alignments defined between 1939 and 1942. These alignments are shown in Figure 3.

AINW recently completed an assessment of the drainage districts managed by the Multnomah County Drainage District #1, which includes the Sandy Drainage Improvement Company (SDIC) facilities. The AINW study recommended that the SDIC levee and some of the drainage networks in the SDIC were eligible for listing in the National Register (Elizabeth O'Brien, Section 106 Documentation Form for Columbia Slough Drainage Districts Historic District, 2005, on file, AINW). The SDIC facilities recommended as significant are shown in Figure 3. In March 2006, the SHPO concurred with the recommendation of eligibility for the drainage features.

AINW FIELD STUDIES

Field Methods

On June 29 and 30, 2004, AINW archaeologists R. Todd Baker, M.A., Jason Allen, M.A., Sara Davis, B.A., and Eric Ball, B.A., conducted a pedestrian archaeological survey of approximately 370 acres of the RMC property; David V. Ellis, M.P.A., served as project manager. The project area was surveyed by walking north-south and east-west oriented transects spaced 10 m (33 ft) apart and by examining exposed banks of the Columbia and Sandy rivers to check for artifacts that might have eroded out of the river banks. No cultural material was found during the survey. Safety training and an orientation to the parcels was provided to the AINW crew by Steve Shaw of RMC on the morning of June 29 before the survey began. Personal protective equipment (PPE) required for entrance onto the project survey area

was Level D, consisting of a hard hat, orange safety vest, gloves, steel-toed work boots, and safety glasses.

The northern survey area, north of the plant and the levee, was heavily wooded (Photo 1) and contained Company Lake and the north landfill. The western portion of the landfill was covered with gravel, and the eastern portion was an open depression that was to be reseeded with native grasses. This part of the project area also contained a gravel access road that crossed the levee and provided access to the parcel. The vegetation and trees were too dense to allow for complete survey coverage of the parcel, but a portion of this wooded area was surveyed by walking along animal trails and inspecting any open areas that could be easily accessed.

From the wooded parcel north of the plant facility, the survey area extended down the north side of the levee (Photo 2) and from the levee to the bank of the Sandy River, and southward to the Portland-Troutdale Airport. This area was characterized by tall grass, blackberries, and some scattered trees along the levee corridor and thick woods adjacent to the banks of the Sandy River. The location of a demolished house was noted near the southeast end of the survey area on the north side of the levee. The former house location was inspected and contained the remnants of a driveway, two coniferous trees, and a large poured concrete pad that was completely covered in blackberries. Pieces of building material and broken pottery dating to the late 1950s were noted. The area had recently been used for camping, and a fire-ring and modern debris was observed. The house is not depicted up on the 1954 *Camas, Wash.-Oreg.* U.S. Geological Survey map, indicating that it was built in the late 1950s or 1960s. This location was considered to be modern, and thus was not recorded as an archaeological site.

The RMC plant facility grounds were excluded from the survey area, but the area between the plant fence and the levee (on the south side of the levee) from the Portland-Troutdale airport to Sundial Road was surveyed. Like the north side of the levee, conditions in the survey area were characterized by tall grass and blackberries along the levee corridor, with thick patches of blackberry bushes and dense woods in some locations (Photo 3).

The Fairview Farms area west of the RMC plant was surveyed. The survey area contained head-high reed-canary grass and an irrigation ditch that extended east-west through the parcel (Photo 4). Thick patches of blackberries were interspersed with grassy fields. The survey area extended across NE Marine Drive.

Most of the project area was covered with thick grass, brush, and thickets of deciduous trees. Ground surface visibility was approximately 0 to 10%. Mineral soil visibility occurred where vegetation was sparse and in the few backdirt piles from burrowing animals.

Results

No evidence of any archaeological sites was identified in the portions of the project area that were accessible and could be systematically surveyed. Previous surveys of other portions of the RMC property had also not recorded any evidence of archaeological or historic-period resources. It is important to note, however, that most of the surveyed area was characterized by very poor ground surface visibility. In addition, about 25% (about 40 acres) of the study area between the levee and the Columbia and Sandy rivers was not accessible due to dense vegetation of blackberries and thick underbrush. Another area of about 10 acres between the aluminum plant and the levee was also not surveyed due to dense understory vegetation (Figure 2).

One location was designated as an HPA for archaeological resources. This HPA occupies about 25 to 30 acres and lies within the northern, heavily wooded portion of the survey area that borders both the Columbia and Sandy rivers. A 1904 U.S. Coast and Geodetic Survey map of the shoreline in this area indicated that the shoreline at the HPA has not changed significantly. The area was considered an HPA due to its topographic location on a high, flat landform adjacent to both rivers just south of Sundial Beach between the Company Lake outfall pipe and the mouth of the Sandy River (Figure 4). This type of setting is consistent with the location of other archaeological sites recorded along the Sandy and Columbia rivers. Much of this HPA could not be accessed due to very dense blackberry growth. The portions of the HPA that could be surveyed were characterized by very poor ground surface visibility.

CONCLUSIONS AND RECOMMENDATIONS

AINW completed an archaeological survey of most of the accessible portions of the previously unsurveyed portions of the RMC Troutdale property in 2004. The previously surveyed portions of the RMC property total about 210 acres. The area around the aluminum plant that had been excluded from both the previous and the present surveys totals about 140 acres. The area targeted for survey in the present study totaled about 350 acres. About 50 acres could not be surveyed due to dense vegetation. Several very small parcels of land, about 10 acres, were added to the project after the AINW fieldwork was done in 2004 and were therefore not surveyed. The 2004 archaeological survey therefore examined about 290 acres.

The records search and archival research indicated that there are little data on human use of this area for either the prehistoric or historic-contact periods. The two previously recorded archaeological sites in the area (35MU43 and 35MU118) are both associated with higher ground along Arata Creek, southwest of and outside of the present project area. Most of the area was historically occupied by woodlands and small grasslands, with numerous small lakes, ponds, and other wetlands. Situated at the confluence of the Sandy and Columbia rivers, it was usually flooded every year in late spring and may also have been occasionally flooded in the winter. The lakes and other wetlands would have drawn Native peoples to this area, especially with the proximity to the Sandy and Columbia rivers. Although year-round occupation would have been difficult across much of the floodplain, seasonal camps could have been established on the higher ground and the higher elevations close to the rivers could have supported more long-term settlements.

The annual flooding of the area limited most Euroamerican development on the floodplain to livestock grazing and the production of hay and other forage crops. The construction of a levee for Sun Dial Ranch in 1916 to 1918 allowed for the introduction of row crops on the floodplain and eventually led to more permanent development such as the Troutdale Airport and the RMC aluminum operation. There is no known archaeological evidence of the Euroamerican settlement in the project area prior to the early 1900s. Most of the flood control and drainage features constructed by the Sandy Drainage Improvement District are maintained and continue to be used. These features include the levee along the Columbia and lower Sandy rivers, Salmon Creek (the channel of which has been modified), and a series of drainage ditches to the southwest of the aluminum plant and across Fairview Farms. These features have been recommended as National Register-eligible as a part of the drainage districts and are shown in Figure 3.

Based on the results of the current study and findings, AINW recommends that should ground-disturbing activity be planned at any of the locations that were not accessible at the time of the 2004 fieldwork, that those locations be surveyed after the dense vegetation has been cleared and prior to any construction or development. If modifications are likely to occur

within the HPA, then AINW recommends that the HPA be shovel tested to determine if buried archaeological deposits are present.

The National Register-eligible BPA transmission lines and the drainage features present within the project area are eligible for their current alignments, their basic designs, and their engineering features. Any proposed changes to the alignments and function of these historically significant features would most likely constitute adverse effects. Thus, AINW recommends that these resources be protected in-place.

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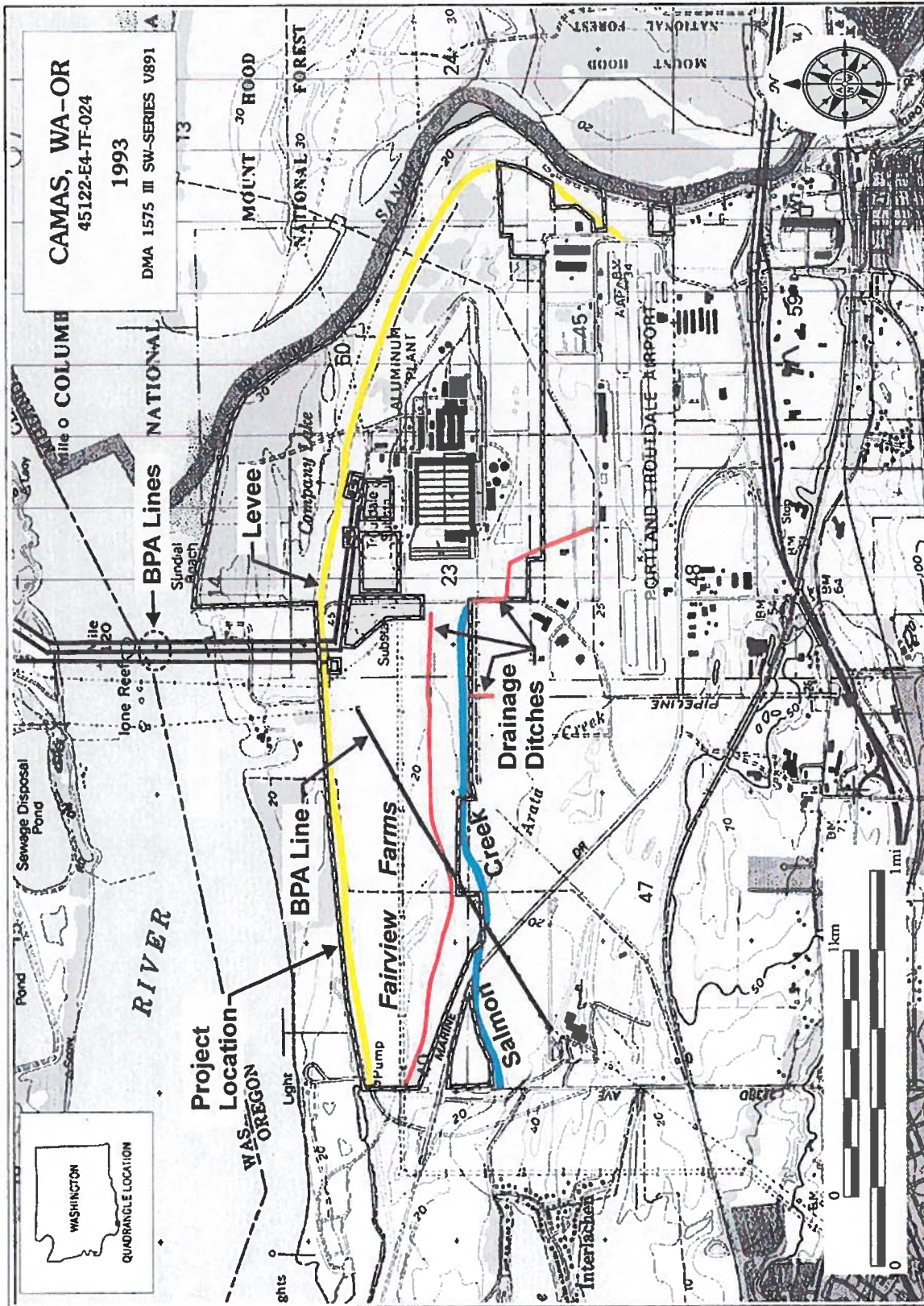


Figure 3. Components of Sandy Drainage Improvement Company system and historic-period BPA transmission lines.

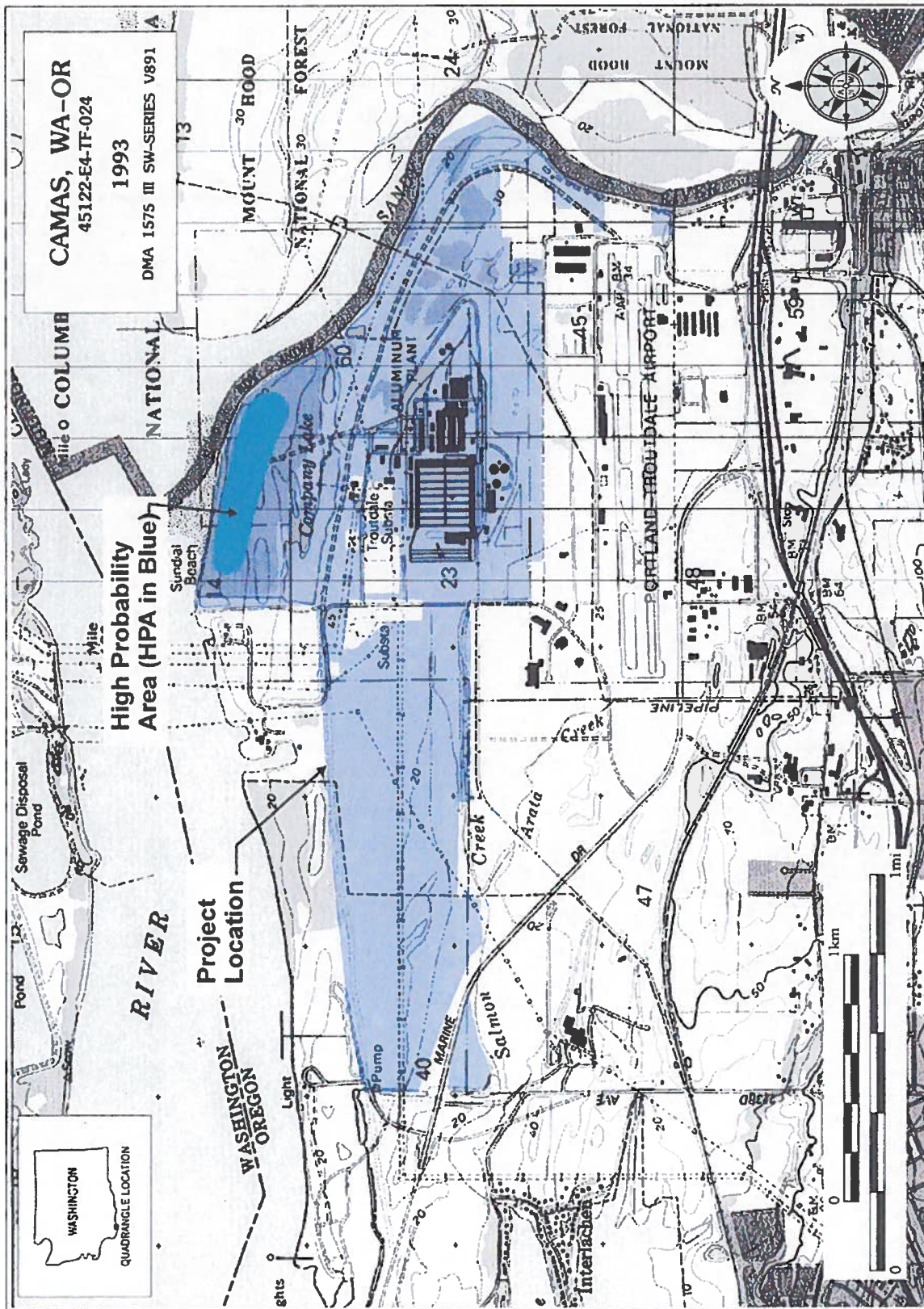


Figure 4. Project location showing high probability area in blue.



Photo 1. Survey conditions in the northern parcel bordering Columbia and Sandy rivers. Dense vegetation made survey difficult. The view is to the south.



Photo 2. Survey corridor on the north side of the levee, between the levee and the Sandy River. The view is to the west.



Photo 3. Survey area on the south side of the levee between the levee and the Reynolds Aluminum plant. The view is to the northeast.



Photo 4. Westernmost survey area on Fairview Farm containing tall reed-canary grass. The view is to the south.