CULTURAL RESOURCES REPORT COVER SHEET

DAHP Project Number: (Please contact the lead agency for the project number. If associated to SEPA, please contact <u>SEPA@dahp.wa.gov</u> to obtain the project number before creating a new project.)				
Author: Donald D. Pattee and Bill R.Roulette				
Title of Report: <u>Results of a Cultural Resources Study of the Proposed Rock Creek</u>				
Cove Resort Property, Stevenson, Washington				
Date of Report: <u>February 4, 2020</u>				
County(ies): <u>Skamania</u> Section: <u>1</u> Township: <u>2N</u> Range: <u>7E</u>				
Quad: Bonneville Dam, OR-WA; Carson, WA-OR 2017 Acres: 6.4				
PDF of report submitted (REQUIRED) Yes				
Historic Property Inventory Forms to be Approved Online? Yes No				
Archaeological Site(s)/Isolate(s) Found or Amended? Yes No				
TCP(s) found? Yes No				
Replace a draft? Yes No				
Satisfy a DAHP Archaeological Excavation Permit requirement? Yes # No				
Were Human Remains Found? Yes DAHP Case # No				

DAHP Archaeological Site #:

- Submission of PDFs is required.
- Please be sure that any PDF submitted to DAHP has its cover sheet, figures, graphics, appendices, attachments, correspondence, etc., compiled into one single PDF file.
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Revised 9-26-2018

RESULTS OF A CULTURAL RESOURCES STUDY OF THE PROPOSED ROCK CREEK COVE RESORT PROPERTY, STEVENSON, WASHINGTON



By Donald D. Pattee, M.A., RPA 32246885, and Bill R. Roulette, M.A., RPA 11132,

Report submitted to

FDM Development, Inc. Kennewick, Washington

February 4, 2020

APPLIED ARCHAEOLOGICAL RESEARCH, INC., REPORT NO. 2292



APPLIED ARCHAEOLOGICAL RESEARCH, INC. Cultural Resource Management and Historic Preservation

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ABSTRACT

FDM Development, Inc. (FDM) proposes to develop the Rock Creek Cove resort on an industrial property, formerly occupied by the Hegewald Veneer Mill (HVM), located in the western part of the town of Stevenson in Skamania County, Washington. Developments will include the construction of 14 vacation rental homes, a property management building, and paved parking areas around each structure.

The development site is within an urban exempt area of the Columbia River Gorge National Scenic Area. Therefore, the proposed project is not required to follow the guidelines for cultural resource surveys described in the Columbia River Gorge National Scenic Area Management Plan. However, the project is required to comply with the State Environmental Policy Act as implemented by Skamania County Code (16.04). The State Environmental Policy Act requires all developers to consider the impacts a project may have on the environment and to cultural resources before making permitting decisions. FDM contracted with Applied Archaeological Research, Inc. (AAR) to assist it in determining the effects of its proposed project on cultural resources.

AAR's study was designed to locate cultural resources that may be affected by the development and included background research and a field study. The latter included an intensive pedestrian survey and the excavation of four shovel test pits.

As a result, AAR determined that the entire project area had been impacted by the construction and operation of the HVM. Two concrete pads are all that remain of the mill operations. They mark the locations of the main sawmill building and another mill building. In AAR's opinion, the pads are not archaeological and they were not recorded as an archaeological resource.

In terms of Line 13 of the State Environmental Policy Act checklist, it is AAR finding that the project area does not contain any buildings, structures, or sites, that are listed in or eligible for listing in national, state, or local preservation registers. AAR recommends no further archaeological work is warranted in the current project area.

Although considered unlikely, there is always a possibility that an archaeological resource may be discovered during future development activity on the property. For that reason, the applicant and any contractors that may work on the property need to be aware that under the Revised Code of Washington at 27.53.060, it is unlawful to knowingly damage, deface, or destroy an archaeological site on public or private land in Washington. The Revised Code of Washington at 27.44.040 makes it a class C felony to knowingly remove, mutilate, deface, injure, or destroy any cairn or grave of any native Indian. Thus, in the event that archaeological materials, Indian cairns, or human remains are encountered during the development of the property, all construction activities must stop in the vicinity of the finds and the Department of Archaeology and Historic Preservation should immediately be notified and work halted in the vicinity of the finds until they can be inspected and assessed. Procedures outlined under Washington Administrative Code 25-48 will be followed and work will not resume until mitigation measures have been agreed upon.

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INTRODUCTION

Project Description and Staffing

FDM Development, Inc. (FDM) proposes to develop the former site of the Hegewald Veneer Mill (HVM) located at Rock Creek Cove resort into a resort that would include 14 vacation rental homes, a property management building, associated infrastructure, and paved parking areas. The development site is within an urban exempt area of the Columbia River Gorge National Scenic Area (CRGNSA). Therefore, the proposed project is not required to follow the guidelines for cultural resource surveys described in the CRGNSA Management Plan. However, the project is required to comply with the State Environmental Policy Act (SEPA) as implemented by Skamania County Code (16.04). SEPA requires all developers to consider the impacts a project may have on the environment and to cultural resources before making permitting decisions. To assist FDM in its compliance with SEPA requirements, Applied Archaeological Research, Inc. (AAR) conducted a cultural resource survey of the proposed development site.

Archaeological fieldwork for the project was supervised by Donald D. Pattee, M.A., RPA 32246885 who was assisted by Michelle R. Lynch, M.A., RPA 429967347. The project was under the technical supervision of Bill R. Roulette, M.A., RPA 11132, AAR's Principle Investigator. Mr. Pattee, Ms. Lynch, and Mr. Roulette meet the Secretary of the Interior's professional qualification standards.

Conventions

In this report, measurements for common distances, elevations, and areas are in United States customary units (e.g., feet, miles, and acres). Measurements related to archaeological techniques and artifact analyses are in metric units (e.g., meters, centimeters, and millimeters). Numbers in the thousands used to express ages and distances feature commas to denote thousands. Calendar dates and dates used to express years before present (B.P.) do not use commas to denote the thousands place but do use commas to denote the ten thousands place.

Description of the Project Area

The proposed resort development site is in the western part of the town of Stevenson in Skamania County, Washington, in Section 1, Township 2 North, Range 7 East, Willamette Meridian (Figure 1). It is privately owned and encompasses 6.4 acres. It is composed of three contiguous tax parcels numbered 02070100130300, 02070100130400, and 02070100130200, that together form an irregularly-shaped tract that is maximally 1,022 feet (ft) measured north-to-south and 580 ft measured east-to-west. The property is located on a peninsula that projects into Rock Creek Cove on the northern bank of the Columbia River. The cove was created in 1937 as a result of flooding that occurred along the banks of the river east of Cascade Locks soon after the Bonneville Dam began operation. Its west side is bordered by Rock Creek Drive. Its other sides are defined by the boundaries of the proposed development footprint and the cove (Figure 2).

The project area is at an elevation of about 102 ft above mean sea level (amsl). Its surface has been artificially flattened and built up. The modifications are most likely related to the development of the property by the HVM in the early 1950s (see below). Its central part contains two concrete pads that mark the former locations of mill buildings. The largest pad is 337 ft long and 86 ft wide. It marks the former location of the main sawmill (Figure 3). The other pad is 59 ft long and 45 ft wide and most likely marks the location of a second mill building, possibly a machine shop.

Prior to AAR's fieldwork parts of the property had been disturbed by heavy equipment that was used to clear brush and remove trees. Cleared vegetation and soil were pushed into low piles that



Figure 1. Location of the project area.



Figure 2. Aerial photomap of the project area.



Figure 3. Photographic overview looking east at the concrete foundation of the main sawmill building of the HVM.

remain in place (Figure 4). At least two trenches had been excavated in the eastern part of the property and partly backfilled (Figure 5). The ground surface in the parts of the property that were not disturbed or otherwise obscured by gravel or building foundations were covered in grasses, blackberry brambles, and a scattering of Douglas-fir, alder, and maple trees (Figure 6).

Project Background

In 2016, Skamania County initiated an inventory of all brownfield sites (i.e. abandoned properties where there may be environmental contamination) located in the county to better understand their impacts on surrounding communities and to study their potential for commercial development. As part of the inventory, the county conducted a Phase II environmental site assessment (ESA) of the project area to evaluate the potential environmental impacts associated with the historical operation of the HVM. No cultural resource investigations were conducted on the property in advance of or as part of the assessment. The ESA included the use of ground penetrating radar across the site to check for buried infrastructure (e.g. tanks, tank pits, pipes, or septic systems). In addition, ten test pits were excavated in select areas to extract soil samples to be analyzed for metals, petroleum, and dioxins. The GPR results showed that there were no buried infrastructure and no petroleum was detected in the soil. Some metals and dioxins were detected, but did not exceed contamination levels considered by the Model Toxics Control Act to be harmful to humans. The ESA recommended that no further environmental remediation of the site was warranted.



Figure 4. Photographic overview looking north of an area cleared of brush. The vegetation and displaced soil have been pushed into low piles.



Figure 5. Photographic overview looking northeast of an area that had been trenched prior to fieldwork.



Figure 6. Photographic overview looking west showing typical vegetation throughout the project area at the time of fieldwork.

ENVIRONMENTAL, CULTURAL, AND HISTORICAL CONTEXTS

Environmental Setting

The project area is located in the southernmost part of the Southern Washington Cascade physiographic province where the mountains have been incised by the Columbia River Gorge. The province is characterized by deeply dissected and weathered mountains set on a generally western sloping terrace. It contains rugged mountainous areas, river floodplains, and low terraces.

The modern topography of the Gorge reflects the down cutting of the Columbia River through basalt bedrock. The basalt was laid down during the Miocene in a number of individual flows that collectively are known as the Columbia River Basalts. The lava from these flows originated in central and eastern Washington and Oregon and streamed westward down the Columbia River valley to the sea (Allen et al. 1986). Exposures of these flows can be seen in the steep walls framing the Gorge.

Following the deposition of the basalts, the Cascades were up-arched. As the mountains were rising, the Columbia River was cutting down through the range, creating its deep canyon. Later, toward the end of the Pliocene and into the Pleistocene, volcanic activity resumed in the Cascades, producing lava flows which filled the tributaries of the Columbia and which displaced the river to the north, near its present position. The strato volcano peaks of Mt. Hood, Mt. St. Helens, and Mt. Adams began to rise some 700,000 years ago, a process which continues into the present. The up-arching of the Cascades created a barrier to easterly flowing moist marine air and resulted in the climatic division of the region into the moist western and dry eastern portions (Allen et al. 1986). In the Columbia River Gorge, this climatic change occurs around White Salmon and Hood River, a short distance upriver, or east, of the project area.

Although the basalt flows of the Miocene laid the foundation for the physiography of the Gorge, the geological events of the Pleistocene shaped it into its present configuration. The most important of these events were the Missoula Floods (known variously as the Bretz or Spokane floods) that occurred between about 17,000 and 12,700 years ago (Clague et al. 2003; Waitt 1994). The floodwaters originated in Glacial Lake Missoula, a body of water formed when the Purcell Trench Lobe of the Cordilleran ice sheet blocked the Clark Fork River in Montana. When the waters of Lake Missoula breached the ice dam, a wall of water estimated to have been ca. 2,000 ft high was released. In a single flood, somewhere near 500 cubic miles of water rushed across the Columbia Plateau and entered the Columbia River system (Alt and Hyndman 1993:172). The tremendous force and volume of the floods scoured away the soils of the Gorge and altered the river valley from its previous V shape to its present U-shaped cross-sectional profile (Allen et al. 1986:159).

The floods led to the oversteepening of the Gorge walls, particularly in areas where the Columbia River basalts are underlain by the easily erodible Eagle Creek Formation. These conditions have made a nearly 50-square-mile area toward the west end of the Gorge prone to landslides. The project area is situated near the leading edge of a debris deposit from the quaternary-aged Red Bluff landslide, which is part of the greater Cascade Landslide Complex. The deposits extend further southward and are submerged in Rock Creek Cove (Pierson et al. 2016; Randall 2012).

The project area is in the *Tsuga heterophylla* zone, a classification of plant associations that is found throughout western Washington and Oregon in wet maritime climates between sea level and about 2,300 ft amsl (Franklin and Dyrness 1988). Throughout the zone, Douglas-fir, western hemlock, and western redcedar with few hardwoods dominate typical overstory vegetation in forested areas. Common forest understory plants throughout the zone include vine maple, hawthorn, wild rose, blackberry, thimbleberry, and snowberry.

The primary soil mapped within the project area is Arents, 0 to 5 percent slopes (Haggen 1990). It is an anthropogenic soil that developed as the result of disturbance and redeposition through various human activities such as mining, dredging of water bodies, road building, and construction (Sencindiver and Ammons 2000). It does not represent a native soil body, but rather formed in spoils that have been removed from their original context and redeposited. No single profile of Arents is typical. One commonly observed includes a 24-inch-thick "A horizon" of dark brown, gravelly sandy loam. The underlying material extends to a depth of 5 ft below surface and consists of stratified gravelly to very gravelly loamy sand (Haagen 1990).

Ethnographic Overview

The project area is located at the eastern periphery of the traditional territory of the Cascade people that spoke an Upper Chinook dialect and were closely aligned with other Upper Chinook peoples that occupied both sides of the Columbia River between from roughly the mouth of the Washougal River to a point above Dallesport including the Hood River, White Salmon, Wasco, and Wishram (French and French 1998:360-363). The territory of the Cascades Chinook included lands on each side of the Columbia River in the vicinity of the Cascades of the Columbia, a section of river narrowed and obstructed with landslide debris where the river dropped about 40 ft in elevation through a series of rapids over a distance of several miles. The Cascades controlled the portages around the rapids and the important salmon fishery centered there.

The Cascade people and other Upper Chinookan groups lived in autonomous villages without overarching political organization or centralized government (French and French 1998:369). Villages were presided over by chiefs who held office based primarily on a system of hereditary leadership rights (Silverstein 1990:541). Chiefs were usually persons of the highest rank within the hierarchically organized Chinook society, and chiefly status was conferred on members of wealthy and politically

influential families. Status, class, and rank were used as organizational principles in Chinook society. Chiefs, along with shamans, warriors, and traders, formed a small upper class with slaves forming the bottom of the social hierarchy. Commoners ranged between these hierarchical poles and were probably ranked along numerous socially recognized gradations. High rank and high class was strongly linked to wealth.

Winters were spent in permanent settlements consisting of one or more rectangular, gabledroofed, upright-cedar-plank houses (Hajda 1994; Silverstein 1990) that featured raised sleeping and storage platforms that lined the house walls. In 1805, Lewis and Clark encountered the Chinook village of Wishram on the north side of the Columbia River (near what is now Columbia Hills State Park) and described some 20 homes constructed of wood, the first wooden houses the expedition had seen since leaving Illinois (Wilke et al. 1983:75-76). Chinook subsistence was oriented toward fishing and root-andberry gathering. Most subsistence activities were organized around small groups that dispersed to smaller camps focused on task-specific subsistence activities.

Native peoples that lived along the Columbia River came into contact with European and American sea-borne fur traders in the late-eighteenth century. Diseases introduced by the traders, especially small pox, influenza, and malaria, spread rapidly upriver and throughout the region with catastrophic results. The first historical reports of a malarial epidemic are from 1830. Within four years 75 to 90 percent of the regional native population was dead (Boyd 1985). Displaced groups and individuals formed *ad hoc* communities or joined those still existing, and either attempted to follow traditional patterns or adopted the life ways of the Euroamericans (Hajda and Boyd 1988:45-46).

Historical Overview

The first Euroamericans to pass through the Columbia River Gorge were explorers and fur traders in the early decades of the nineteenth century. Among the explorers were Lewis and Clark who led their Corps of Discovery expedition down the Columbia River in 1805, and David Thompson, who traversed the length of the Columbia River in 1811. After the establishment of a land-based fur trade around 1811, a greater number of Euroamericans traveled throughout the region in search of furs. Travel logs left by early traders in the region document the spread of disease among the native populations of the Columbia River as early as the 1830s, resulting in a catastrophic population loss (Minor et al. 1986:54-55). By 1834, missionaries began trickling into the region, followed several years later by the initial waves of pioneers heading to the Willamette Valley along the Oregon Trail. Between 1841 and 1851 all travelers and settlers heading west had to pass through the Columbia River Gorge, where, just east of the city of Stevenson, they were forced to portage along the north bank of the river around the rapids known as the Upper, Middle, and Lower Cascades.

The passing of the Oregon Donation Land Act of 1850 resulted in a steady influx of Euroamerican settlers that initially used the area for grazing livestock and logging (Mack and McClure 1999). As more settlers arrived to the region, small communities were established along the banks of the Columbia River, which provided needed services for travelers passing through the gorge. These included lodging, supplies, and improved portage routes. One such community was Stevenson, which shared the name of its founder, George Stevenson. The town was founded in 1893 and quickly became an important way-stop for travelers passing through the gorge. River transportation improved with the construction of the Cascade Locks in 1896 allowing boats to by-pass the cascades. Incoming travelers to the region could now navigate the Columbia River from Portland as far as The Dalles. Easier river travel spurred economic development in Stevenson and by 1900 the town featured two hotels, two saloons, two restaurants, as well as a general store, drug store, post-office, jail, print shop, and court house (Skamania County Chamber of Commerce 2020; Wilma 2006). The town was officially incorporated in 1908. That same year, the Spokane, Portland, and Seattle rail line arrived and connected the town to the major cities of the Pacific Northwest (Wilma 2006). The rail line and the more navigable river resulted in logging and milling becoming one of the more important economic pursuits in the region as timber products could be transported with relative ease to Portland or Seattle and then shipped overseas where demand was high. In the following decades, the logging industry became vital to the economy of Stevenson. Trees logged in the hills backing the town were transported by flumes down to sawmills that lined the shoreline including the HVM.

The HVM operated between 1952 and 1973. It was primarily used for the production of wood veneer, which was peeled from tree logs and then pressed into 8-foot-long sheets (Hunt 1964). The sheets were used to line doors, table tops, and cabinetry panels. At the height of its operation, the mill produced 60,000,000 square feet of veneer annually (Hunt 1964). Waste produced from the process (e.g. wood chips or parts of the log not suitable for milling) was burned in two conical structures referred to at the time as "wigwam burners" (Hunt 1964). Tree logs were stored in Rock Creek Cove, which was enclosed by wooden booms that prevented the logs from floating downriver. In 1973, the mill was sold to Louisiana Pacific, which operated it until its closure in 1975. Around that same time, other sawmills in the Stevenson area closed resulting in the loss of hundreds of jobs and severely impacting the economy of the town. It did not fully recover until the early 1990s (Wilma 2006).

Historical Maps Research

As part of the background research, historical maps were reviewed to determine the likelihood that the project area contains undocumented historic-era features and to trace land ownership. Maps reviewed include those produced by the General Land Office (GLO) as part of the cadastral survey and those prepared by the United States Geologic Survey (USGS). Historic aerial photographs were also reviewed.

The earliest maps that depict the project area are cadastral survey maps produced by the General Land Office (GLO) in 1860, 1876, 1903, and 1906. The project area is shown as devoid of developments on the maps (GLO 1860, 1876, 1903, 1906). An 1864 GLO map shows lands taken out of federal ownership through land claims. The project area is shown as within a 319.91-acre land claim filed by D. Baughman (GLO 1864).

A 30-minute (1:125,000) map published by the United States Geological Survey (USGS) in 1929 shows the project area before inundation of the Bonneville Pool (also known as Bonneville Lake) the reservoir behind Bonneville Dam (USGS 1929). No buildings or other developments are depicted in it (Figure 7). A 15-minute map published by the USGS in 1957 shows the project area after completion of the Bonneville Dam and formation of the reservoir behind it (USGS 1957). A large rectangular structure is shown on the map to be in the project area representing the main HVM sawmill building (Figure 8).

An aerial photograph taken of the mill sometime between 1952 and 1973 on display in the Columbia Gorge Interpretive Center Museum, shows that HVM in full development (Figure 9). The mill complex can be seen to cover the entire project area with much of it covered by buildings, what appear to be graveled surfaces, stockpiled wood products, and general debris. The photograph shows the main sawmill and the second mill building in locations corresponding to where concrete pads remain. It also shows two wigwam burners that were located in the southern part of the property (Western Ways, Inc., n.d.).

Previous Archaeology in the Project Area and Vicinity

A review of records on file at the Washington State Department of Archaeology and Historic Preservation (DAHP) accessed online using its Washington Information System for Architectural and Archaeological Records Data (WISAARD) database showed that the project area has not previously been surveyed for cultural resources. Thirty-three cultural resource investigations have been conducted within



Figure 7. Location of the project area as depicted on the Hood River, Wash.-Oreg., 30-minute topographic quadrangle published in 1929.



Figure 8. Location of the project area and the HVM as depicted on the Bonneville Dam, Oreg.-Wash., 15-minute topographic quadrangle published in 1957.



Figure 9. Aerial photomap taken of the HVM sometime between 1952 and 1973. Photomap is currently on display in the Columbia Gorge Interpretive Center Museum.

two miles of it (Table 1). The studies have generally consisted of reconnaissance and formal surveys that have resulted in the identification of multiple component sites 45SA20 and45SA541, pre-contact sites 45SA210, 45SA600, 45SA633, 45SA650, pre-contact isolate 45SA585, and historic-era sites 45SA8, 45SA121, 45SA501, and 45SA502.

Of the previously recorded sites, 45SA20, the Ice House Lake site, has been the most intensively studied. The site was recorded during a cultural resources survey conducted by the University of Washington in advance of the construction of a powerhouse at Bonneville Dam (Mesrobian and Sunstrom 1976). It is located about 1.4 miles to the southwest of the project area on terraces overlooking the northern shore of the Columbia River. Evaluative test excavations were conducted at the site in 1988. They included a surface inspection as well as the excavation of six 1-x-1 meter (m) test units (TUs) and six auger test probes. The investigation resulted in the recovery of a variety of pre-contact and historic-era artifacts as well as floral and faunal remains.

Pre-contact artifacts recovered from the site included 11,243 pieces of cryptocrystalline silicate (CCS), obsidian, basalt, and petrified wood debitage and 99 stone tools. Tools included projectile points, preforms, knife fragments, bifaces, flake knives, perforators, used flakes, hammerstones, pounders, anvils, choppers, cobble flake knifes, spall tools, abraders, and cores (Minor 1988). Most of the projectile points identified were small, narrow necked forms consistent with Types 7, 8, 10, and 12 described in Pettigrew's (1981) projectile point chronology of the Portland Basin. Broad-necked projectile points of the Type 2 variety were also observed (Pettigrew 1981).

The 439 historic-era artifacts recovered during the investigations included fragments of earthenware, porcelain, stoneware, and Chinese ware, clay pipes, vessel glass, machine cut nails, spikes, brace plates, iron bolts, staples, wire, bullets, metal scraps, and gunflint. A few pieces of charred nut shell and 148 animal bones were also recovered. Most of the bones were small fragments. Most were from sturgeon but they also included horse, elk, deer, cow, salmonids, and cyprinid bones (Minor 1988).

Minor (1988) determined that the site represented the village *Wahlala* (Curtis 1911) or *Walala* (Spier and Sapir 1930) occupied by the Cascade Chinook. It is described in the journal of Lewis and Clark as consisting of eight plank slab houses that were inhabited part of the year during the fishing season. Based on the results of the investigation, the site was interpreted to have been continually used by Chinook as a seasonal fishing village during the pre-contact period and into historic times. Initial occupation of the site was thought to have occurred 830 years ago. The site was likely abandoned around 1850 when the United States established a strong military presence throughout the Columbia River Gorge (see below). The site was recommended as eligible for listing on the National Register of Historic Places (NRHP).

The other multicomponent site within two miles of the project area is 45SA541. The site was recorded based on the inadvertent discovery of human remains in the side wall of a utility trench during the installation of buried telecommunications equipment. The discovery triggered emergency archaeological excavations and the screening of a sample of the spoils created during the trenching. Recovered were 86 human or potentially human bones and mixed historical; and prehistoric artifacts all of which were contained in a thick layer of imported fill (Paraso and Ellis 2010).

Of the previously recorded pre-contact resources, three of them (45SA210, 45SA585, and 45SA650) consist of low density, lithic scatters that have not been documented past the initial survey phase. Site 45SA210 was identified 1.5 miles to the southwest of the project area on the north shore of Ashes Lake. As documented, the site contains one desert side-notched projectile point, a piece of human bone, and pieces of lithic debitage (Cole and Southard 1971). Only lithic debitage was identified at the other resources with site 45SA585 containing 10 pieces of CCS and basalt debitage and isolated find 45SA650 containing a single piece of CCS debitage (Becker and Roulette 2017; Olander et al. 2011).

Table 1. Cultural Resource	Surveys Conducted wit			
Author(s) of Report/Year	Type of Investigation	Size of Study Area	Findings	
Cole and Southard 1971	Formal survey	Not listed	45SA210 identified and documented	
Dunnell and Lewarch 1974	Formal survey	Not listed	45SA8 identified and documented	
Mesrobian and Sundstrom 1976	Formal survey	Not listed	45SA20 identified and recorded	
Minor 1988	Evaluative testing	Not listed	Additional study at 45SA20 that refined its boundaries and expanded its artifact assemblage.	
Minor and Beckham 1988	Evaluative testing	Not listed	45SA121 identified and documented	
Freed 1989	Damage Assessment	Not listed	Additional study at 45SA20 that expanded its artifact assemblage.	
Boynton 1995	Formal survey	82 acres	Archaeological resources identified and documented at distances greater than 2 miles from the project area	
Musil 1999	Formal survey	120 acres	No archaeological resources identified	
Easton and Roulette 2002	Formal survey	Not listed	No archaeological resources identified	
Stilson 2002	Formal survey	4.4 acres	Archaeological resources identified and documented at distances greater than 2 mile from the project area	
Scott 2003	Cultural resource monitoring	47 mile linear cooridor	Archaeological resources identified and documented at distances greater than 2 miles from the project area	
White and Ozbun 2003	Reconnaissance survey	Not listed	No archaeological resources identified	
Boynton and Fagan 2006	Formal survey	4.2 acres	45SA501 and 45SA502 identified and documented	
Gall 2006	Formal survey	25.4 acres	No archaeological resources identified	
Dryden 2007	Reconnaissance survey	0.90 acre	No archaeological resources identified	
Dryden 2009	Reconnaissance survey	0.01 acre	No archaeological resources identified	
Lloyd-Jones and Ozbun 2009	Formal survey	5 acres	No archaeological resources identified	
Dryden 2010a	Reconnaissance survey/cultural resource monitoring	2 acres	No archaeological resources identified	
Dryden 2010b	Reconnaissance survey	0.15 acre	No archaeological resources identified	
Paraso and Ellis 2010	Emergency archaeological excavations	Not listed	45SA541 identified and documented	
Olander et al. 2011	Formal survey	Not listed	45SA585 identified and documented	
Kiers 2012	Formal survey	<0.1 acre	No archaeological resources identified	
Knutson et al. 2012	Formal survey	8.6 acres	45SA600 identified and documented. Numerous other resources identified at distances greater than 2 miles from the project area.	
Harris et al. 2013	Formal survey	3.5 acres	No archaeological resources identified	
O'Donnchadha 2013	Formal survey	1 acre	No archaeological resources identified	
Bard et al. 2014	Formal survey	123.5 acres	Archaeological resources identified and documented at distances greater than 2 miles from the project area	

Table 1. Cultural Resource Surveys Conducted within 2 Miles of the Project Area

Author(s) of Report/Year	Type of Investigation	Size of Study Area	Findings	
Jenkins and Reese 2014	Formal survey	2.6 acres	No archaeological resources identified	
Pattee and Roulette 2014	Formal survey	8.26 acres	No archaeological resources identified	
Smith and Gall 2014	Formal survey	30 acres	Additional study at 45SA600 that refined its boundaries. 45SA633 identified and documented.	
Holschuh 2015	Formal survey	1 acre	No archaeological resources identified	
Becker and Roulette 2017	Formal survey	1 acre	45SA650 identified and documented	
Homan and O'Donnchadha 2017	Formal survey	52.51 acres	No archaeological resources identified	
Gall and Smith 2019	Formal survey	41.5 acres	Additional study at 45SA8 that refined its boundaries and expanded its artifact assemblage. Archaeological resources identified and documented at distances greater than 2 miles of the project area.	

Table 1. Cultural Resource Surveys Conducted within 2 Miles of the Project Area, continued

Pre-contact sites 45SA600 and 45SA633 were observed to contain shallow pit features that had been excavated into a talus slope. The sites are located about two miles to the southwest of the project area. The date, origin, and function of the pits could not be determined. They are similar to those identified on the summit of Wind Mountain located approximately seven miles to the northeast of the project area, which are considered sacred to past and contemporary Native American groups. Because of this, the features were recorded as archaeological sites (Knutson et al. 2012; Smith and Gall 2014).

Historic-era site 45SA121 is located about 1.2 miles to the southwest and consists of the remnants of the U.S. Army's Fort Lugenbeel and the civilian town site of Upper Cascades. The town was established in 1851 and became one of the first frontier communities in the Columbia River Gorge. It contained hotels, homes, storage buildings, a portage tramway, and a sawmill. By 1855 the U.S. Army had established Fort Cascades at the Lower Cascades and Fort Rains at the Middle Cascades to the west to ensure the safe passage of troops and supplies from Fort Vancouver. Both forts were attacked and destroyed by Native Americans in 1856. Following the attack, the U.S. Army regained control of the area and constructed Fort Lugenbeel on a ridge above the community at Upper Cascades to deter future attacks (Minor and Beckham 1988). Evaluative testing at the site in 1988 resulted in the identification of multiple building foundations associated with the fort and town site as well as the recovery of 4,630 artifacts. These included ceramic and glass fragments, nails, spikes, bricks, various items related to firearms, clay pipe fragments, buttons, and faunal remains (Minor and Beckham 1988). The fort and town site were used between 1850 and 1880. The site has been listed on the NRHP under Criterion D.

Historic-era site 45SA8 was initially identified in 1974 as an historical homestead based on anecdotal information (Dunnell and Lewarch 1974). At the time of its recording, the location of the site was not field verified. In 2019, the site was the subject of a formal cultural resources survey that resulted in the discovery of a sparse, subsurface historic-era debris scatter. Observed artifacts included amber, aqua, amethyst, and colorless vessel glass, cut nails, several bottle bases, fragments of whiteware ceramics, and metal fragments (Gall and Smith 2019). Based on the identification of temporally sensitive artifacts during the investigation, the site deposit was determined to have formed between 1880 and 1920 (Gall and Smith 2019).

Historic-era sites 45SA501 and 45SA502 are located approximately 1 mile to the northeast of the project area. They were identified during a cultural resources survey conducted in advance of the construction of a residential subdivision. Site 45SA501 consists of a small dump of household debris, which includes oval Postum tins, a Hazel-Atlas bottle base, zinc caps, rusted cans, canning jars, and

fragments of machine molded glass. The dump has been interpreted to have formed in the early 20th century (Boynton and Fagan 2006). Site 45SA502 consists of the ruins of an historic-period residential structure that was constructed in 1895 (Boynton and Fagan 2006).

Two historic-era cemeteries, which were recorded as cultural resources, are located within two miles of the project area. They are sites 45SA555, the Iman Cemetery, and 45SA651, the Gropper Cemetery. The first is located on land that was owned by Feliz Grundy Iman and was established in 1889 (Anonymous n.d.a). The second is located on the northern end of Stevenson and was established in 1905 (Anonymous n.d.b).

METHODS AND RESULTS

Fieldwork Methods

Fieldwork was conducted on January 8 and 15, 2020. The approach to the fieldwork was informed by the results of the background research that showed that the entire development site had been significantly impacted by past development that appears to have included grading and leveling the ground surface. Subsequent to that soil and gravel were dumped across the landform and compacted. With that history of land use in mind, the potential for buried archaeological deposits to be present was assessed as very low. Consequently, the fieldwork consisted of an intensive surface survey and the excavation of four shovel-test-pits (STPs) to verify the suspected level of disturbance and to examine the character of subsurface conditions (Figure 10).

The STPs were 30 centimeters (cm) in diameter and were excavated in 20-cm or thinner levels to depths that ranged between 20 and 50 cm below surface (cmbs). All sediments removed from the probes were screened through one-eighth-inch-mesh hardware cloth. Afterward, the STPs were completely backfilled and their locations were recorded using a handheld Trimble Geo7X global positioning system (GPS) device. GPS data were then corrected and exported to a graphics program for final editing and formatting.

Results of the Field Investigations

The ground surface was inspected by walking transects spaced no more than 10 m apart. Ground surface visibility was variable. In the parts of the property that were obscured by building foundations, gravel, or trampled blackberry brambles, surface visibility was zero percent. Areas that had been trenched and then backfilled prior to fieldwork had 100 percent visibility. Other areas of the property were covered in a thin layer of grass and duff. Surface visibility in these areas was about 25 percent. No artifacts were found on the ground surface. The two concrete pads, mentioned above, were observed. They appear to be all that remains of the HVM. All other mill facilities have been completely removed. The slabs are overgrown and covered with a thin layer of moss and grass.

No artifacts were found in the STPs. Soil profiles encountered during the excavations consisted entirely of fill material, which matched the description of Arents, 0 to 5 percent slopes mapped on the property. Profiles generally included a 5- to 20-cm-thick organic layer of very dark brown (7.5YR 2/2) sandy loam, which capped a 10- to 45-cm-thick layer of brown (10YR 4/3), sandy loam (Figure 11). At least three quarters of the soil matrix in the latter layer contained angular gravel intermixed with small to medium angular cobbles (Figure 12). STP 3 and 4 terminated at 20 cmbs due to an impenetrable layer of angular cobbles (Table 2).



Figure 10. Aerial photomap of the project area showing the locations of the concrete slabs representing mill structures, STPs, and pedestrian transects walked.



Figure 11. Representative view of the gravelly fill encountered in the STPs.



Figure 12. Representative view showing the amount of rock found in the STPs.

STP #	Depth (cmbs)	Sediments (Moist)	Results		
0-5		Organic layer of very dark brown (10YR2/2) sandy loam	No artifacts		
1	45-50	Brown (10YR4/3) sandy loam. Numerous angular gravels and cobbles.	IND AILITACTS		
2	0-20	Organic layer of very dark brown (10YR2/2,) sandy loam No artifacts			
2	20-50	Brown (10YR4/3) sandy loam. Numerous angular gravels and cobbles.	No annacts		
	0-5	Organic layer of very dark brown (10YR2/2) sandy loam			
3	5-20	Brown (10YR4/3) sandy loam. Numerous angular gravels and cobbles. Terminated at	No artifacts		
	5-20	impenetrable layer of angular cobbles.			
	0-5	Organic layer of very dark brown (10YR2/2) sandy loam			
4	5-20	Brown (10YR4/3) sandy loam. Numerous angular gravels and cobbles. Terminated at	No artifacts		
	5-20	impenetrable layer of angular cobbles.			

Table 2. Summary Results of STPs Excavated

SUMMARY AND RECOMMENDATIONS

Summary

This report has described the results of a cultural resources study conducted by AAR of a 6.4acre property that FDM proposes to develop into the Rock Creek Cove resort. The study included background research and field investigations. The results of the background research indicate that the property has been significantly altered such that it has low potential to contain archaeological resources. AAR's fieldwork included an intensive surface survey and excavation of four STPs. No artifacts were found. Profiles exposed in the probes showed that a thick layer of imported gravelly fill covers the entire development site.

The only trace of the HVM consists of two concrete pads that mark the location of two of the mill buildings. In AAR's view, the pads are not archaeological and they were not were not recorded as an archaeological resource.

Recommendations

AAR's study was done to assist FDM in complying with SEPA as implemented by Skamania County Code (16.04). In terms of Line 13 of the SEPA checklist, it is AAR finding that the project area does not contain any buildings, structures, or sites, that are listed in or eligible for listing in national, state, or local preservation registers. AAR recommends no further archaeological work is warranted in the current project area.

Although considered unlikely, there is always a possibility that an archaeological resource may be discovered during future development activity on the property. For that reason, the applicant and any contractors that may work on the property need to be aware that under the Revised Code of Washington at 27.53.060, it is unlawful to knowingly damage, deface, or destroy an archaeological site on public or private land in Washington. Under the Revised Code of Washington at 27.44.040 it a class C felony to knowingly remove, mutilate, deface, injure, or destroy any cairn or grave of any native Indian. Thus, in the event that archaeological materials, Indian cairns, or human remains are encountered during the development of the property, all construction activities must stop in the vicinity of the finds and the DAHP should immediately be notified and work halted in the vicinity of the finds until they can be inspected and assessed. Procedures outlined under Washington Administrative Code at 25-48 will be followed and work will not resume until mitigation measures have been agreed upon.

REFERENCES CITED

Allen, John Elliot, Marjorie Burns, and Sam C. Sargent

1986 *Cataclysms on the Columbia*. Timber Press, Portland, Oregon.

Alt, D. D., and D. W. Hyndman

1993 Roadside Geology of Washington. Mountain Press Publishing Company, Missoula, Montana.

Anonymous

- n.d.a *Cemetery Report for the Iman Cemetery (45SA555).* On file, Washington Department of Archaeology and Historic Preservation, Olympia.
- n.d.b *Cemetery Report for the Gropper Cemetery (45SA651).* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Bard, James C., Celia Moret-Ferguson, Jennifer Flathman, and David W. Harvey

2014 A Cultural Resources Survey of the Ross-John Day Fiber Replacement Project, Skamania and Klickitat Counties, Washington. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Becker, Thomas E., and Bill R. Roulette

2017 *Results of a Cultural Resource Survey of the Paradise Rock Development Project, Skamania County, Washington.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Boyd, Robert T.

1985 *The Introduction of Infectious Diseases among the Indians of the Pacific Northwest, 1774-1874.* Ph.D. Dissertation, Department of Anthropology, University of Washington, Seattle.

Boynton, Michael

1995 *High Cascade Verneer/Lizotte/Exchange*. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Boynton, Michael J., and John L. Fagan

2006 An Archaeological Survey of the Proposed Snowberry Woods Subdivision, Stevenson. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Clague, J.J., R. Barendregt, R.J. Enkin, and F.F. Foit, Jr.

2003 Paleomagnetic and Tephra Evidence for Tens of Missoula Floods in Southern Washington: *Geology* 31:247-250.

Cole, D.L., and M.D. Southard

1971 *Archaeological Survey of the Bonneville Dam Reservoir*. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Curtis, Edward S.

1911 The North American Indian. Volume 8. Cambridge University Press, Cambridge, Massachusetts.

Dryden, Margaret L.

2007 *Heritage Resource Inventory Report of Clubb Demolition and New Construction Project.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Dryden, Margaret L., continued

- 2009 *Heritage Resource Inventory Report for Embarq New Construction Project, North End of Bridge of the Gods.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.
- 2010a *Heritage Resource Inventory Report for Burlington Northern-Santa Fe Powerpole Project*. On file, Washington Department of Archaeology and Historic Preservation, Olympia.
- 2010b *Heritage Resource Inventory Report for Kitlow New Construction Project*. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Dunnell, R.C., and D.E. Lewarch

1974 *Archaeological Remains in Home Valley Park.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Easton, Krey, and Bill R. Roulette

2002 Letter to Phil Smith Regarding Results of an archaeological survey for the Stevenson Substation Fiber Optic Connection Project. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Franklin, J. F., and C. T. Dyrness

1988 *Natural Vegetation of Oregon and Washington*. Second edition. Oregon State University Press, Corvallis, Oregon.

Freed, Robert A.

1989 Damage Assessment of Looting Incident at Ice House Lake Archaeological Site (45SA20) Skamania County, Bonneville Project. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

French, D., and K. French

1998 Wasco, Wishram, and Cascades. In *Plateau*, edited by Deward E. Walker, pp. 360-377. Handbook of North American Indians, vol. 12, W. G. Sturtevant, general editor. Smithsonian Institution, Washington, D. C.

Gall, Alexander

2006 A Cultural Resources Survey of the Chinidere Mountain Estates Subdivision Project Area, Stevenson. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Gall, Alexander, and Mike Smith

2019 *Cultural Resources Survey of the North Bonneville Substation and Powerline Upgrade Project Area, Skamania County, Washington.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

General Land Office (GLO)

- 1860 *Township 2 North Range 7 East, Willamette Meridian.* Electronic document, http://www.blm.gov/or/landrecords/survey/ySrvy1.php, accessed January 20, 2020.
- 1864 *Township 2 North Range 7 East, Willamette Meridian.* Electronic document, http://www.blm.gov/or/landrecords/survey/ySrvy1.php, accessed January 20, 2020.
- 1876 *Township 2 North Range 7 East, Willamette Meridian.* Electronic document, http://www.blm.gov/or/landrecords/survey/ySrvy1.php, accessed January 20, 2020.
- 1903 *Township 2 North Range 7 East, Willamette Meridian.* Electronic document, http://www.blm.gov/or/landrecords/survey/ySrvy1.php, accessed January 20, 2020.
- 1906 *Township 2 North Range 7 East, Willamette Meridian.* Electronic document, http://www.blm.gov/or/landrecords/survey/ySrvy1.php, accessed January 20, 2020.

Applied Archaeological Research, Inc., Report No. 2292

Haagen, Edward

1990 *Soil Survey of Skamania County Area, Washington.* U. S. Dept. of Agriculture, Soil Conservation Service, Washington, D. C.

Hajda, Yvonne P.

1994 Notes on Indian Houses of the Wappato Valley. *Northwest Anthropological Research Notes* 28(2):177-188.

Hajda, Yvonne P., and Robert T. Boyd

1988 Ethnohistory of the Wappato Valley. In *An Inventory of Cultural Resources and an Evaluation of the Effects of the Proposed North Coast Feeder Gas Pipeline, Located Between Deer Island and Sauvie Island, Lower Columbia River Valley, in Oregon*, by Charles Hibbs, Jr., and David V. Ellis, Section D. On file, Oregon State Historic Preservation Office, Salem.

Harris, Lucille E., Bill R. Roulette, and Aimee A. Finley

2013 *Cultural Resource Study of the Stevenson Trail Extension, Phase 1, Project Area.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Holschuh, Dana L.

2015 *Cultural Resources Survey of the SR-14 Heritage Marker Project Area.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Homan, Amy, and Brian O Donnchadha

2017 Cultural Resources Survey for the North Bonneville-Midway No. 1 Transmission Line Impairments Project (Miles 1-80). On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Hunt, W.J.

1964 The Northwest and Its Resources. *The Northwest* 38:3-5.

Jenkins, Sarah L., and Jo Reese

2014 Archaeological Survey of the Cascade Avenue Improvements Project, Stevenson. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Kiers, Roger

2012 Section 106 Review, SR 14 Ice House Lake Culvert Replacement. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Knutson, Chris, Todd M. Ahlman, and Michael Falkner

2012 *Literature Review, Archaeological Survey, and Subsurface Testing for the Wautoma-Ostrander No. 1 Upgrade Project.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Lloyd-Jones, Jeff, and Terry Ozbun

2009 Archaeological Survey for the Skamania Pipe Replacement Project. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Mack, Cheryl A., and Richard H. McClure

1999 *Significance Evaluation, Wind River Administrative Site Historic District*. Heritage Program, USDA Forest Service Gifford Pinchot National Forest. Vancouver, Washington.

Mesrobian, A., and L.J. Sundstrom

1976 *University of Washington Archaeological Site Survey Form for 45SA20.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Minor, Rick

1988 Archaeological Testing at Ice House Lake, Skamania County, Washington. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Minor, Rick, and Stephen Dow Beckham

1988 Archaeological Testing at Fort Lugenbeel and the Upper Cascade Townsite, Skamania County, Washington. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Minor, Rick, Kathryn Anne Toepel, and Stephen Dow Beckham

1986 An Overview of Investigations at 45SA11: Archaeology in the Columbia River Gorge. Heritage Research Associates, Report No. 39. Prepared for the Portland District U.S. Army Corps of Engineers.

Musil, Robert R.

1999 *Letter to Craig Rundell RE: Cultural Resources Survey of the Blue Lake Rock Quarry.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

O'Donnchadha, Brian

- 2013 *Underwood Tap Emergency Restoration Program.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.
- Olander, Jennifer, Jennifer Gilpin, Fred Anderson, Jennifer Hushour, Barbara Montgomery
- 2011 Updated and Revised Historic Properties Treatment Plan for Route SC-2 of BTOP Round 1 of the Washington Rural Access Project (WRAP), Skamania County. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Paraso, Kanani, and David V. Ellis

2010 Emergency Archaeological Excavation at Site 45SA541, Bridge of the Gods Discovery Location, Skamania County, Washington. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Pattee, Donald D., and Bill R. Roulette

2014 Cultural Resource Study for the Monitoring of Land Movement Near Tower 128/1 on the Wautoma-Ostrander No. 1 Transmission Line. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Pettigrew, Richard M.

1981 *A Prehistoric Culture Sequence in the Portland Basin of the Lower Columbia Valley.* University of Oregon Anthropological Papers 22.

Pierson, Thomas C., Russell C. Evarts, and Joseph A. Bard

2016 *Landslides in the Western Columbia Gorge, Skamania County, Washington.* U.S. Geological Survey Scientific Investigations, Map 3358.

Randall, James Robert

2012 Characterization of the Red Bluff Landslide, Great Cascade Landslide Complex, Columbia River Gorge, Washington. Portland State University, Portland Oregon, M.S. Thesis.

Scott, Shane J.

2003 *Cultural Resource Monitoring on the Washington Shore of the Bonneville Pool.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Sencindiver, J.C., and J.T. Ammons

2000 Minesoil Genesis and Classification. *Reclamation of Drastically Disturbed Lands* 41:595-613.

Silverstein, Michael

- 1990 Chinookans of the Lower Columbia. In *Northwest Coast*, edited by Wayne Suttles, pp. 533-546. Handbook of North American Indians, vol. 7, W. G. Sturtevant, general editor. Smithsonian Institution, Washington, D. C.
- Skamania County Chamber of Commerce
- 2020 *Stevenson History*. Electronic document, <u>https://skamania.org/history/#1496983641788-67c6bfc3-e78f</u>, accessed January 17, 2020.
- Smith, Michael, and Alexander Gall
- 2014 *Cultural Resources Survey of the Blue Lake Rock Quarry Project Area.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Spier, Leslie, and Edward Sapir

1930 Wishram Ethnography. University of Washington Publications in Anthropology 3(3).

Stilson, M. Leland

2002 *Nootka Variable Thinning Timber Sale, Agreement #30-071263, Cultural Resource Survey.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

United States Geological Survey (USGS)

- 1929 Hood River, Wash.-Oreg. 30-minute topographic quadrangle (reported without correction 1950). Copy on file Applied Archaeological Research, Inc., Portland, Oregon.
- 1957 Bonneville Dam, Oreg.-Wash., 15-Minute Topographic Quadrangle. Electronic document accessed at http://nationalmap.gov/historical/, accessed January 20, 2020.

Waitt, Richard B. Jr.

1994 Numerous Colossal Missoula Floods Through Columbia Gorge and Portland-Vancouver Basin: *Geological Society of America* 28(5):120-121.

Western Ways, Inc.

n.d. Aerial photograph of the Hegewald Timber Co. Inc. Photograph on Display at the Columbia Gorge Interpretive Center Museum, Stevenson, Washington

White, Susan Lynn, and Terry Lee Ozbun

2003 *Cultural Resource Reconnaissance Survey for Blue Lake Stress Relief Project 26" Ignacio to Sumas Line.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Wilke, S., R. Dalan, J. Wild, K. Fames, R. Weaver, and D. Harvey

1983 *Cultural Resource Overview and Survey of Select Parcels in The Dalles Reservoir, Oregon and Washington.* On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Wilma, David

2006 *Skamania County-Thumbnail History*. Electronic document, https://historylink.org/File/7811, accessed January 17, 2020.