

**A Literature Review of the 1,600–2,000 Acre Area in the
Northwest Portion of Pasco for the Boardmoor Area
Non-Project Environmental Impact Statement**

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June 25, 2018



Executive Summary

Northwest Anthropology LLC (NWA) was awarded a contract on 14 June 2018 by TerraGraphics Environmental Engineering, Inc., to conduct a literature review for the Broadmoor Area Non-Project Environmental Impact Statement, similar to what was produced by the Confederated Tribes of the Umatilla Indian Reservation Cultural Resources Protection Program in the Appendices for the 2003 City of Kennewick Proposed Planned Housing Community Project in the Southridge area of Kennewick, WA (Miller 2003; Hermann 2018).

NWA staff consulted WISAARD, local historical repositories, and historical maps to construct a precontact and historic overview of the Project Area. The research indicated that the National Register-eligible Tri-Cities Archaeological District is located on the shores of the Columbia River and contains many archaeological sites near the project boundaries. According to ethnographic sources, the area was heavily used as a permanent fishing village for local tribes and contained Native trails along the Columbia River bank. Historically, the Pacific Northwest Railroad Company established the City of Pasco when they established a station there in 1884 (Oberst 1978). Timmerman began operating a ferry across the Columbia River from Benton County to Franklin County in 1894. The location of his house and the ferry dock is currently the location of Harris farm, and is within the project boundaries. The 1934 Metsker map shows a road, the Pasco Columbia River Highway (as well as several other roads), built in the location of the Native trail. Plats of land have been subjected to further parceling and multiple owners. A 1955 map shows agricultural development occurring. Further housing development is shown in the Metsker 1963 maps. In recent years, housing development in West Pasco has accelerated.

Included within this literature review is a project description, a cultural and historical overview, and a recommendation for the project with respect to cultural resources.

It is the opinion of NWA to recommend further cultural assessment of the Project Area, including subsurface testing. Furthermore, NWA recommends the City of Pasco prepare an Unanticipated Discovery Plan, with additional consideration for the disturbance of Native and European burials, and to begin notification of and consultation with local Native Tribes and the Washington Department of Archaeology and Historic Preservation (DAHP).

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Introduction

The City of Pasco is preparing a land-use master plan for the Broadmoor area that encompasses 1,600 to 2,000 acres to become mixed-use, residential, commercial, and housing area to meet the needs of the expanding city (Figure 1). The legal description of the Project Area is: T09 R29E S7, and the northeast of T09 R28E S12, the northwest and northeast portions of T09 R29E and S18, and the southern part of T09 R29E S8. TerraGraphics Environmental Engineering, Inc. (TerraGraphics), was contracted by the City of Pasco to complete the previously-started Broadmoor Area Non-Project Environmental Impact Statement (Contract No. C18-200). The City of Pasco is conducting this Non-Project EIS to provide regulatory certainty and to streamline SEPA reviews for subsequent projects, as described below.

“A Planned Action or Non-Project EIS is a tool that the City of Pasco may use to provide regulatory certainty and encourage economic development. This tool is permitted by state law (RCW 43.21C.031 and WAC 197-11-164) and uses up-front SEPA review for a subarea plan or a distinct geographic area as a way to streamline SEPA review for subsequent projects that are consistent with the plan. It can also help attract growth and development to designated areas of the City. Reviewing the properties’ impacts all together, as a planned action, provides a coordinated development strategy.” (Broadmoor DEIS 2018)

Northwest Anthropology LLC (NWA) was subcontracted by TerraGraphics on 14 June 2018 (Subcontract No. S18-1054) to complete a cultural and historical overview for the NonProject EIS. TerraGraphics requested a literature review similar to what was produced by the Confederated Tribes of the Umatilla Indian Reservation Cultural Resources Protection Program in the Appendices for the 2003 City of Kennewick Proposed Planned Housing Community Project in the Southridge area of Kennewick, WA (Miller 2003, Hermann 2018).

Figure 1: Oblique Google Earth image of the Project Area; shaded, looking north.

Natural Setting

The combined effects of lava flows and glacial floods have primarily shaped the Columbia Plateau region. During the Miocene epoch, numerous intermittent lava flows blanketed the region (Orr and Orr 1996). During the Pleistocene epoch, continental glaciers advanced and retreated from British Columbia into northern Washington State. The advances and retreats of these glaciers created ice dams and glacial lakes that caused extensive flooding. Locally, the most noted was the flooding caused by the release of glacial meltwater from Lake Missoula (RHO 1985). It is believed the last major Pleistocene floods occurred about 12,000 years ago. During the late Miocene through the Pleistocene, the Central Pasco Basin accumulated over 300 meters of sediment associated with lakes, rivers, and cataclysmic flooding. Following the Pleistocene, only minor sediment deposition has occurred in the basin.

A thin layer of Holocene sediments from various ongoing geologic processes covers the surface of the basin. Surface sediments include eolian sands that form thin sheets and dune colonies across much of the basin. Soils in the Project Area consisted primarily of Burbank loamy fine sand, Burbank gravelly loamy fine sand, Finley gravelly sandy loam, Neppel very fine sandy loam, Quincy loamy fine sand, Quincy-Dune land complex, Quincy-Timmerman complex, Royal fine sandy loam, Timmerman fine sandy loam, and Winchester loamy coarse sand.

According to the 1963 Metsker map (Figure 8), sand dunes are labeled along the Columbia River bank, although determining how far north, east, or south they extended was not. Currently, in the northeast corner of the Project Area (at the intersections of Burns Road and Broadmoor Boulevard Road and extending southwest) are stabilized sand dunes. Along the bank of the Columbia River is a riparian zone. The area is currently disturbed by agriculture, housing development, and a mining operation.

Cultural Setting

The Project Area lies within the Southern Plateau Culture Area, as defined by Ames et al. (1998). The pattern of permanent winter villages complemented by seasonal camps, typically referred to as the "Plateau pattern," appears archaeologically recognizable in an incipient mode by about 4,000 years ago. This model for Plateau subsistence is commonly distinguished archaeologically by the presence of several features, such as riverine settlement patterns, reliance on riverine and root resources, complex fishing technologies, the extension of trading links and apparent political integration, and shared aspects of material culture such as pithouse architecture. The general Tri-Cities region as a whole is within territory inhabited traditionally by Native people represented today by the Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, the Wanapum Band, and others. Large permanent villages were located in prominent locations, such as at the confluence of the Columbia River (*Nch'i-Wana*) and the Yakima River (*Koots Koots A Min Ma*). Regional interaction and crossutilization of resource areas were common results of the mobility and interaction of many Plateau peoples (Ray 1939; Thoms et al. 1983; Wright 1997). Large seasonal fisheries and harvests, trading fairs, and complex extensions of kin relations were an outgrowth of seasonal travel by autonomous families and villages, particularly following the spread of horses to the Northwest.

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Figure 2: Lower Snake River chronology (Leonhardy and Rice 1970).

Archaeological sites in the Tri-Cities area are numerous as the area was widely and extensively used for fishing and gathering place of immense numbers of Native peoples and are the result of the people who occupied and used the lower Snake River area. The sites demonstrate systems of land use, including habitation, subsistence, and spirituality practiced by the region's Native peoples since time immemorial. Nearby, prehistoric archaeological assemblages were used by Leonhardy and Rice (1970) to construct the Snake River chronological sequence for southwest Washington (Figure 2). This chronology and its associated assemblages have played a prominent role in Plateau archaeological research (Schalk and Cleveland 1983; Ames et al. 1998; Prentiss et al. 2005).

Euroamericans began arriving into the region ca. 1800, but settlement in this area was sparse throughout the nineteenth century. As the Euroamerican population increased in the early 1900s, farmers moved into Pasco and began irrigating the land, leading to increased farming use of the land. Furthermore, located within the city of Pasco was a train station, operated by the Pacific Northwest Railroad Company, leading to increased job opportunities and growth for Pasco. The city of Pasco

was founded by the Pacific Northwest Railroad, and named by one of its construction engineers, Virgil G. Bogue (Oberst 1978). It was established as a station in 1884.

Cultural Properties in and near the Project Area

To determine the pre-contact and historical nature of the Project Area NWA staff consulted the WISAARD database, the Franklin County Historical Museum, historical maps, ethnographic sources, and local literature sources.

A review of the WISAARD database shows 13 archaeological sites fall within a mile of the project boundary (Table 1); some sites fall in Benton County, others fall in Franklin County. Eight of these sites fall within the National Register of Historic Places (NRHP)-eligible “Tri-Cities Archaeological District,” which runs along the Columbia River bank and does not extend inland, starting at about Van Giesen Street on the Benton County side, and just slightly north of Burns Road in Franklin County in the north, all the way to the Pioneer Memorial Bridge (locally referred to as the Blue Bridge) to the south (Solimano 2012). Also present within the Project Area is the “Hanford South Archaeological District,” which covers about 19 miles on both banks of the Columbia River, beginning at River Mile 350.5 (north of Wooded Island) and ending at River Mile 339 (near north Richland) (Hanford South Archeological District 45DT39A form 1983). One site within a mile of the Project Area falls within the Hanford South District. The Hanford South District has never been determined as eligible for the National Register and has not been recently updated in WISAARD, so its NRHP eligibility is unknown to NWA at this time.

All but one of the 13 sites within a mile of the Project Area are precontact (one is historic)—eight of the 13 are eligible to be listed on the National Register. There are no sites located directly within the Project Area. The 13 sites within the one-mile radius contain an array of lithics, shell, burials, irrigation pipes, and one was designated as a field camp. The singular historic site found within a mile of the Project Area indicates historic farming was also occurring nearby, which indicates there will have already been a great deal of ground-disturbing activity. The number of sites and their proximity to the river is unsurprising due to the nature of Native cultures in the Project Area subsisting largely on fish resources since time immemorial.

Table 1: Archaeological Sites within a Mile of the Project Boundary as Documented in WISAARD.

Site Number	District	Type of Site	Site Description	NRHP Status
FR00016	TC	Precontact	Lithic and shell scatter	Not evaluated/ not eligible
FR00017	TC	Precontact	Field camp	Eligible
FR00018	n/a	Precontact	Inundated; lithics	Not eligible
FR00019	HS	Precontact	Shell, lithics	Eligible
BN00023	TC	Precontact	Lithics, burial	Eligible
BN00024	TC	Precontact	Lithics	Eligible
BN00025	TC	Precontact	Shell, lithics	Eligible
BN01929	n/a	Precontact	Lithics, shell	Not eligible
BN00583	TC	Precontact	Lithics	Not eligible
BN00329	TC	Precontact	Lithics	Eligible
BN01725	n/a	Precontact	Shell, burials, lithics, faunal	Eligible

BN01481	n/a	Historic	Irrigation pipes	Potentially eligible
BN00046	TC	Precontact	Inundated; hearth	Eligible

TC = Tri-Cities Archaeological District; HS = Hanford South Archaeological District

According to an 1859 War Department Map (Parker 1988), a native trail was also present in the area, connecting the Old Fort Walla Walla (present-day Wallula), to White Bluffs, and up into Colville Territory (Figure 3). This trail was likely also used by the Hudson's Bay Company as a trading route, as happened frequently with native trails.

Also present in the Project Area was *Tanáxalu*, or “throw rocks at fish” (Ray 1936; Relander 1956; Hunn et al. 2015), a large permanent village that was known especially as a fishing site on the Columbia River opposite Richland, WA. The Wanapum, Yakama, Umatilla, Nez Perce and other various Native Americans would have resided within and around *Tanáxalu*. One of the 13 sites listed in Table 1, FR00018, was initially recorded as a habitation with three house-pits in 1947; since then, the site has become inundated, is no longer within the archaeological district boundaries, and is no longer considered eligible for listing on the National Register. This site is relatively close to the known location of *Tanáxalu*, though it cannot be said with certainty that the archaeological site is part of the village.

BN00023 is part of Columbia Point South and is determined Eligible for listing in the NRHP, despite having been heavily looted. The site contains extensive amounts of lithics, shell, and burials and/or burial goods. The southern part of the Project Area is located directly opposite Columbia Point South; thus, the surrounding area is culturally sensitive. Sand dunes, which the Project Area contains, are also culturally sensitive. As can be seen in a 1963 map, sand dunes were located along the Franklin bank of the Columbia River. Due to the proximity of the river, the fishing settlements, and the location of the sand dunes, it can be inferred that this area is culturally sensitive to the local Native Tribes (Yakama Indian Nation, Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, and Wanapum).

The WISAARD predictive model indicates that the entirety of the Project Area ranges from High Risk to Very High Risk in terms of how highly archaeological survey is advised. This predictive model indicates that artifacts are very likely to be found during survey of the Project Area.

Previously Conducted Cultural Resource Surveys

There are two cultural resource surveys previously conducted within the Project Area. The first report was conducted in 2003 by Rain Shadow Research Inc., for the Proposed Broadmoor Apartment Complex for the City of Pasco (Root 2003). They conducted a 100% surface survey over 8.33 ha (20.0 acres) of land, just south of Interstate Highway 182 and west of Broadmoor Boulevard. Both the Yakama Indian Nation and Confederated Tribes of the Umatilla Indian Reservation were notified of the proposed project, and the Yakama Indian Nation requested an archaeological monitor be present during any ground disturbing activity. Rain Shadow Research found no cultural resources within the Project Area.

The second cultural resource survey was conducted in 2012 by Cultural Resource Consultants, Inc, for the Harris Road Irrigation Booster Pump Station and Piping Project, which aimed to construct a new irrigation supply pipeline and booster pump station for the City of Pasco (Kelly 2012). Fieldwork conducted consisted of an intensive pedestrian survey over the entire 14-acre APE, an examination of soil exposures, and focused subsurface testing (five shovel test pits). The Colville Confederated Tribes, Nez Perce Tribes, Confederated Tribes of the Umatilla Indian Reservation, Wanapum Band, and Yakima Nation were all notified. No cultural resources were found within the Project Area.

Historic Maps

NWA also consulted various historical maps to flesh out the historical use of the Project Area. Ethnographic sources locate a permanent fishing village and Native trail through the Project Area (Figure 3).

Figure 3: Map of the local Tri-Cities area with ethnographic information such as various native settlements. The Project Area is located within the highlighted square (Ray 1936; Relander 1956; Hunn et al. 2015).

Figure 4: Late 1800s to early 1900s GLO combined maps with project overlay. Trails are indicated by a line with cross hatching. Please also note the presence of land parcels within the background of the figure.

Late 1800s to early 1900s GLO maps indicate that the Native trail along the Columbia River bank was still in use, this time with added early fur traders and Euro-American settler use (Figure 4). The GLO maps also indicate the presence of a second trail occurring through the middle of the Project Area. Plats of land have been delineated for homesteading and pioneers to settle on. Furthermore, in 1894, August Timmerman established and ran a cable ferry from Richland to Franklin County (Oberst 1978). Timmerman also managed a herd of cattle. The ferry landing is located where the Harris farm is located today (within the Project Area, just north of the I-182 bridge). On the Franklin County side of the Columbia River, the cable tower was anchored to the railroad rail. Timmerman built a house on the next to the ferry ramp in September of 1894 (Figure 5). The Timmerman Ferry ceased operation in 1922 due to a nearby bridge (Oberst 1978).

Figure 5: Photograph of sheep crossing the frozen Columbia River. Timmerman's house and the ferry cable tower shown in background of photo (Oberst 1978:89).

Figure 6: Metsker 1934 Benton County Map showing a portion of Franklin County. The Project Area is highlighted.

A Benton County 1934 Metsker map (Figure 6) shows that further housing development has occurred with the Project Area. The trail has now become a road named Pasco Columbia River Highway. Parcels of land are owned by: Northwest Pacific Railroad Co., B. Sullivan, Fannie Jolly, W.J. Burt, A. F. Petty, W. M. Sturgeon, H. B. Jensen, County, Dora Buchanan Est., Regalia, and Metallium Deposita Corp. A 1955 aerial photograph of the City of Richland has been cropped to show the Project Area (Figure 7) shows agriculture in the area.

Figure 7: An aerial view of the City of Richland, cropped to show the Project area in Franklin County. 1955 CHIP-4P-59.

Figure 8: 1963 Metsker Benton County map with Project Area highlighted (left). 1963 Franklin County Metsker map with Project Area highlighted (right).

According to 1963 Metsker maps (Figure 8) the Pasco Columbia River Highway has been renamed to Upper River road. Parcels within the Project Area are owned by the following people: Gayle Hunt, Richard H. Ferguson, G. C. Walkley, Chas. Schmitz Est., F. W. Harris and U.S., E. F. Allen, B. Cooter and R. Rettig, and Otto Roeder. When the Timmerman bridge ceased operation in the 1920s, residents used to cross the Columbia River via a bridge located south. The I-1812 bridges were built in 1984. A 1996 Google Earth image shows extensive agriculture in the area (Figure 9). Google Earth does not show more housing developing in the northeast corner of the Project Area till around 2006.

Figure 9: 1996 Google Earth image with the Project Area shaded.

Summary

There are 12 precontact archaeological sites and one historical site within a one-mile radius of the Project Area. Nine are located on the opposite (west) side of the Columbia River in Richland, WA. 45FR00018 is most likely remnants of the ancient Native permanent village *Tanáxalu*, “throw rocks at fish” where Native peoples would fish. Located opposite of the Project Area, across the Columbia River, is Columbia Point South, considered a highly sensitive area for Native Tribes of the area.

Eight sites are part of the Tri-Cities Archaeological District, which is eligible for the National Register of Historic Places. One site falls within the Hanford South District. It should be noted that all along the Columbia River bank are extensive archaeological sites, and the Tri-Cities Archaeological District and Hanford South Archaeological Districts are not the only archaeological districts within the boundaries of the Tri-Cities.

Many of the nearby sites, both archaeologically and ethnographically, reference burials along the river. This is of importance for the Broadmoor EIS because the Project Area currently contains sand dunes, is near a permanent precontact Native village, and is along the Columbia River bank. Therefore, there is immense potential of disturbing Native burials.

Ethnographic sources place a Native village along the Columbia River named *Tanáxalu*, “throw rocks at fish” and places a Native trail running along the Columbia River bank extending far to the north, along present day White Bluffs to south, past present day Wallula. In 1894 Timmerman has his ferry built and began operating that same year, ferrying people from Benton to Franklin County. The boat landing of the ferry was located roughly where the Harris farm currently resides. In the GLO maps ca. 1800s two trails are noted, one along the Columbia River bank and another through the Project Area. Furthermore, around this same time frame, homesteading had occurred. The 1934 Metsker map shows a road, the Pasco Columbia River Highway (as well as several other roads), is built in the location of the Native trail. Plats of land have been subjected to further parceling and multiple owners. A 1955 map shows agriculture occurring. Further housing development is shown in the Metsker 1963 maps. In recent years, housing development in West Pasco has accelerated.

In conclusion, the likelihood of disturbing precontact and historical cultural material within the Project Area is very high.

Recommendation

Based upon the data thus summarized above, it is the opinion of NWA to recommend further cultural assessment of the Project Area, including subsurface testing. Furthermore, NWA recommends the City of Pasco prepare an Unanticipated Discovery Plan, with additional consideration for the disturbance of Native and European burials, and to begin notification of and consultation with local Native Tribes and DAHP.

References Cited

Ames, K. M., D. E. Dumond, J. Galm, and R. Minor
1998 Prehistory of the Southern Plateau. In *Handbook of North American Indians*, Vol. 12, *Plateau*, edited by Deward E. Walker, pp. 103–119, general editor William C. Sturtevant. Smithsonian Institution, Washington, D.C.

Hanford South Archaeological District 45DT39 Form
1983 Hanford South Archaeological District 45DT39 form.

Hermann, Randy

2018 Broadmoor EIS Support Estimate. Email sent by Randy Miller to Darby Stapp. June 13, 2018.

Hunn, Eugene, E. Thomas Morning Owl, Phillip E. Cash Cash, and Jennifer Karson Engum
2015 *Cáw Pawá Láakni: They Are Not Forgotten*. Tamastslíkt Cultural Institute, Pendleton, OR.

Kelly, Katherine

2012 Cultural Resources Assessment for the Harris Road Irrigation Booster Pump Station and Piping Project, Pasco, Franklin County, WA. Cultural Resource Consultants, Inc., Bainbridge Island, WA.

Leonhardy, Frank C. and David G. Rice

1970 A Proposed Culture Typology for the Lower Snake River Region, Southwest Washington. *Northwest Anthropological Research Notes*, 4(1):1–28, Moscow, ID.

Miller, Carey

2003 A Literature Review for the Proposed Planned Housing Community Project, Benton County, Washington. Addendum in Southridge Area Master Plan Traffic Impact Analysis: A Supplement to the Programmatic Environmental Impact Statement. Confederated Tribes of the Umatilla Indian Reservation, Pendleton, OR.

Oberst, Walter

1978 *Railroads, Reclamation, and the River: A History of Pasco*. Addendum: A New Look at Pasco, written in 1997. Franklin County Historical Society, Pasco, WA.

Orr, Elizabeth L., and William N. Orr

1996 *Geology of the Pacific Northwest*. The McGraw-Hill Companies Inc., New York.

Parker, Martha

1988 Washington and Oregon: A Map History of the Oregon Country. Ye Galleon Press, Fairfield, WA. Prentiss, William C., James C. Chatters, Micheal Lenert, David S. Clarke, and Robert C. O'Boyle

2005 The Archaeology of the Plateau of Northwestern North America During the Late Prehistoric Period (3500–200 B.P.): Evolution of Hunting and Gathering Societies. *Journal of World Prehistory*, 19:47–118.

Ray, Verne

1936 Native Villages and Groupings of the Columbia Basin. *Pacific Northwest Quarterly*, 27(2):99–152.

1939 Cultural Relations in the Plateau of Northwestern America. AMS Press, New York.

Relander, Click

1956 *Drummers and Dreamers*. Caxton Printers, Caldwell, ID.

RHO

1985 Paleodrainage of the Columbia River on the Columbia Plateau of Washington State: A Summary. RHO-BW-SA-318P, Rockwell Hanford Operations, Richland, WA.

Root, Matthew

2003 Cultural Resources Survey of the Proposed Broadmoor Apartment Complex, City of Pasco, Franklin County, WA. Rain Shadow Research Inc. Pullman, WA.

Schalk, Randall F., and Greg Cleveland

1983 A Sequence of Adaptations in the Columbia-Fraser Plateau. In *Cultural Resource Investigations for the Lyons Fish Hatchery, Lyons Ferry, Washington*, edited by Randall F. Schalk, pp. 11–56. Laboratory of Archaeology and History, Project Report No. 8. Washington State University, Pullman.

Solimano, Paul

2012 Tri-Cities Archaeological District 45DT41 form. Willamette Cultural Resources Associates, Ltd., Portland, OR.

Thoms, A. V., S. J. Bobalik, K. Dohrun, T. R. Metzger, D. Olson, and S. R. Samuels

1983 Archaeological Investigations in Upper McNary Reservoir, 1981–1982. Laboratory of Archaeology and History, Project Report No. 15. Washington State University, Pullman.

Wright, M. K.

1997 The Prehistoric Period of the Hanford Site and Associated Portions of the Columbia River, Washington, Circa 10,000 B.P.–A.D. 1805. Pacific Northwest National Laboratory, Richland.