

Real Estate Inventory and Assessment for Tribal Housing pursuant to The Flood Control Act of 1950

Summary

The Flood Control Act of 1950 authorized the construction of The Dalles Dam on the Columbia River substantially in accordance with plans contained in House Document 531. This authorization recognized that the construction of The Dalles Dam would inundate two tribal villages and provided for the construction of a replacement village. Army General Counsel determined this authority has not yet been used to construct a new Indian “village.” Following this determination, Headquarters (HQ), USACE based on discussions with the Assistant Secretary of the Army for Civil Works (ASA(CW)), directed NWP to develop an inventory and assessment of real estate along the Columbia River that may be suitable for the development of a tribal village pursuant to this authority.

The area considered along the Columbia River began at Bonneville Dam extended upriver through The Dalles, John Day, and McNary pools stopping at the confluence with the Snake River. Federal, state, and tribal lands were considered as well as a search of the Regional Multiple Listing Service for private lands currently for sale meeting the established screening criteria for all four pools.

Basic screening criteria were formed based on the reconstruction of Celilo Village. This criteria assumed single-family homes and included minimum parcel size (10 acres), proximity to the river (1 mile), and topography. The screening was followed by site evaluations using criteria that included site constructability, access to utilities, cultural sensitivity, and environmental considerations.

Coordination with the Bureau of Indian Affairs (BIA) and the tribes was initiated via tribal coordination letters and calls/meetings by the Commander followed by a two-tiered approach: 1) the first tier was technical (staff level discussed screening and evaluation criteria of the inventory); 2) the second tier was policy level (technical findings were reviewed and policy issues such as inter-tribal housing and pool preferences were clarified). Formal government-to-government consultation was not initiated (given that no action was being taken at that time) but would take place if directed to proceed with a village development plan. The Tribes’ comments and input was incorporated throughout the screening and evaluations that included their decision to not supply tribally owned lands for consideration and the request to use travel time analysis to services.

The completed real estate inventory and assessment results in a total of 22 public (16 US Army Corps of Engineers (USACE), two US Forest Service (USFS) and four state) and 14 private sites were identified as potentially suitable. The following table contains the sites and basic information on all 36 sites.

	River Mile	County	Acreage	Land Ownership
BONNEVILLE DAM POOL				
BN-1-WA, Home Valley Park	155	Skamania	12	USACE
BN-5-OR-ST	174	Wasco	29	Oregon
BN-6-OR-ST, Memaloose State Park	178	Wasco	12	Oregon
BN-9-OR-USFS, NSA	153	Hood River	29	USFS
BN-10-WA-USFS, NSA	180	Klickitat	19	USFS
BN-12-WA-ST, DNR - Murdock/Zoo	185	Klickitat	14	Washington
BN-13-OR-P, Hood River	161	Hood River	34	Private
BN-14-WA-P, Stevenson	151	Skamania	49	Private
BN-15-OR-P, Lonepine Development	191	Wasco	28	Private
BN-16-OR-P	178	Wasco	26	Private
BN-17-WA-P, Wishram I	155	Skamania	40	Private
THE DALLES DAM POOL/LAKE CELILO				
TD-3B-WA, Spearfish - upper	193	Klickitat	30	USACE
TD-4-WA, Horsethief Lake	194	Klickitat	25	USACE
TD-8-WA, Maryhill	208	Klickitat	20	USACE
TD-14-WA-P, Wishram	200	Klickitat	11	Private
TD-15-WA-P	200	Klickitat	60	Private
TD-16-WA-P	200	Klickitat	20	Private
JOHN DAY DAM POOL				
JD-10-OR, Threemile Canyon	255	Morrow	54	USACE
JD-14-OR, East of Boardman Rest stop Area, North of I84	266	Morrow	36	USACE
JD-19B-OR, West of Irrigon Park	282	Morrow	21	USACE
JD-19C-OR, East of Irrigation Pumps	281	Morrow	43	USACE
JD-21A-WA, Western Plymouth including Park	290	Benton	30	USACE
JD-21B-WA, Western Plymouth - by Natural Gas Line	290	Benton	71	USACE
JD-22-OR, West of Umatilla River	288	Umatilla	43	USACE
JD-23-OR, Umatilla Old Town Site	289	Umatilla	55	USACE
JD-25-WA, Plymouth City, North of Engineer's Road	290	Benton	68	USACE
JD-26-OR, Umatilla Marina Park	290	Umatilla	12	USACE
JD-31-OR-P, Arlington	242	Gilliam	11	Private
JD-32-OR-P, Boardman 1	269	Morrow	20	Private
JD-33-OR-P, Boardman 2	268	Morrow	48	Private
JD-34-OR-P, Irrigon 1	281	Umatilla	22	Private
JD-35-OR-P, Irrigon 2	285	Umatilla	11	Private
JD-36-OR-P, Umatilla	290	Umatilla	85	Private
McNary Pool				
MN-5-OR, Warehouse Beach	299	Umatilla	22	USACE
MN-23-OR, Hat Rock State Park	299	Umatilla	160	Oregon
MN-24-WA, Hover Park, South of Toothacre	317	Benton	50	USACE

1. Introduction

1.1. Authority and Purpose

The Flood Control Act of 1950 authorized the construction of The Dalles Dam on the Columbia River substantially in accordance with plans contained in House Document 531. Recognizing that the construction of The Dalles Dam would inundate two tribal villages - Spearfish and Celilo - the plans for The Dalles Dam provided for the construction of a replacement village. Army General Counsel determined “A new Indian village can be constructed pursuant to the Flood Control Act of 1950 because this authority has not yet been used to construct a new Indian village.”

Following this determination, Headquarters (HQ), USACE based on discussions with the Assistant Secretary of the Army for Civil Works (ASA(CW)), directed NWP to develop an inventory and assessment of real estate along the Columbia River that may be suitable for the development of a tribal village pursuant to this authority.

1.2. Recent History

From 1988 through 2013, the Columbia River Treaty Fishing Access Sites (TFAS) project created or improved 31 fishing access sites along the Columbia River and included the reconstruction of the existing Celilo Village near The Dalles Dam. As the TFAS project was nearing completion, in response to resolutions from the four Columbia River treaty tribes (treaty tribes) (comprised of the Confederated Tribes and Bands of the Yakama Nation (Yakama), the Confederated Tribes of Warm Springs (CTWS), the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), and the Nez Perce), NWP conducted a “Tribal Housing” fact finding assessment that documented tribal perspectives on housing lost due to the construction of the lower Columbia River mainstem dams. The fact finding reviewed existing relocation records, Indian Claims Commission documents and publications, and conducted tribal interviews but did not undertake an extensive search for documents. Effects from inundation by the John Day Dam were not addressed in this assessment. Readily available documentation identified potential outstanding relocations, however, no recommendations were made for further action.

From January 2014 through spring 2016, the treaty tribes, the Columbia River Inter-Tribal Fish Commission (CRITFC), and members of the Oregon and Washington Congressional delegations made several inquiries and requests to the Administration to take action on tribal housing. During this period, the Army General Counsel provided its legal opinion on the remaining authority.

Subsequently, HQUSACE directed Northwestern Division (NWD) to conduct an inventory and assessment of real estate in the vicinity of the four lower Columbia River dams that might be suitable for developing a tribal village, and provide the results to HQUSACE and the ASA(CW) within three months. NWP conducted the work, coordinating with the treaty tribes and the

Bureau of Indian Affairs (BIA). HQUSACE also directed NWD to develop options for village development and implementation strategies that would allow construction to commence as expeditiously as possible, subject to direction by the Administration and the availability of funding.

This inventory and assessment did not address conditions at the TFAS or “in-lieu” sites (which have limited infrastructure, were not constructed for long-term occupancy, and are not considered suitable for village development), nor identify the number of dwellings impacted by construction of the four lower Columbia River dams. This assessment was intended to aid the Administration in determining next steps.

2. Area of Consideration

For this evaluation, the area of consideration began at Bonneville Lock and Dam at river mile (RM) 145 on the Columbia River and extended upriver (east) through The Dalles Pool, John Day Pool, and 33 miles of the McNary Pool to the confluence of the Columbia and Snake rivers at RM 325. The Columbia River within the project area up to RM 309 (17 miles above McNary Dam and 16 miles below the confluence of the Snake River) serves as the state boundary between Oregon and Washington. Although, there are roughly 25 smaller towns and villages along the river, most of the area is sparsely populated. Highway access to all project areas excluding McNary are primarily by means of Interstate 84 (I-84), a four-lane, limited access freeway, that parallels the full length of the Oregon shore up to McNary Dam. On the Washington shore, State Route (SR) 14 roughly parallels all pools up to McNary Dam and is a two-lane highway with resultant lower traffic speeds and volumes.

Bonneville Pool

Bonneville Lock and Dam is located on the Columbia River, approximately 145 miles above its mouth and 42 highway miles east of Portland, Oregon, and Vancouver, Washington. The Bonneville Pool references the body of water impounded by the Bonneville Lock and Dam, a 47-mile long reservoir extending upstream to The Dalles Dam at RM 192.

While the Bonneville Pool occupies a relatively small portion of the Columbia River Basin, it occupies a significant portion of the Columbia River Gorge and the Columbia River Gorge National Scenic Area (NSA). The USFS and Columbia River Gorge Commission manage the NSA.



Portions of Skamania and Klickitat counties in Washington, and Multnomah, Wasco, and Hood River counties in Oregon are included in the Bonneville Pool. Additionally, the Nez Perce, Umatilla, Warm Springs, and Yakama tribes have treaty fishing rights throughout. The Project can be accessed by SR 14 in Washington and I-84 in Oregon and is connected by the Bridge of the Gods near Cascade Locks. It is bordered on much of its shoreline by railroad lines on both the north and south shores.

Lands closest to the dam are dominated by thick groundcover in the form of Himalayan blackberry, ivy, tall rye grasses, and mature trees including Douglas fir, various oak species, red osier dogwood, and cottonwood. Moving east of the Bonneville Dam, the vegetation zones change to typical sage steppe habitats, which are dominated by various species of *Artemisia* (sages), bunch grasses, cheat grass, and foxtail grass.

The Dalles Pool

The Dalles Dam is located on the Columbia River, approximately 192 miles above its mouth and 90 highway miles east of Portland, Oregon, and Vancouver, Washington. The Dalles Pool (Lake Celilo) references the body of water impounded by The Dalles extending upstream to the John Day Dam at RM 215.6. The nearest major municipality - the City of The Dalles, Oregon - is directly downstream from the dam. The Dalles project area lies within Wasco and Sherman Counties in Oregon and Klickitat County in Washington. Portions of The Dalles Pool (Lake Celilo) are within the NSA.

US Highway (US) 197 provides a north-south link between I-84 and SR 14, one-third of a mile downstream from the dam. Another crossing of the Columbia River occurs at Biggs, Oregon, approximately 17 miles upstream from the dam. US 97, a major north-south highway that connects the central interiors of Oregon and Washington, crosses Lake Celilo on the Samuel Hill Memorial Bridge. It is bordered on much of its shoreline by railroad lines on both the north and south shores.

The westernmost end of The Dalles Pool is in the Blue Mountain forest and oak woodlands vegetation zone. Moving east, these vegetation zones quickly give way to the sagebrush-bunchgrass steppe vegetation zone, which is the predominant habitat type east of The Dalles. The consistent presence of various sage brush species, bunch grasses, wheatgrass, fescue, rice grass, green rabbit brush, and other hardy varieties of shrub mark this arid zone. In areas of higher moisture, stands of ponderosa pines with a bitterbrush understory may be present (St. John 2007).

John Day Pool

The John Day Dam is located on the Columbia River, approximately 215.6 miles above the mouth and 112 highway miles east of Portland, Oregon, and Vancouver, Washington. The John Day Pool (Lake Umatilla) references the body of water impounded by the John Day Dam extending upstream to the McNary Dam at RM 292.

The majority of Lake Umatilla's shoreline is paralleled on each side by main-line railroads and paved highways. Excluding approximately two miles of its upper length, SR 14 borders the north shore of the lake. I-84, following the Old Oregon Trail, is a major transcontinental route following the south shoreline from John Day Dam eastward to Boardman, Oregon, for a distance of 45 miles. US 730 provides access to the lake along the reach from Boardman to the upper end of the lake near Umatilla, Oregon.

Connecting roads or interchanges at varying intervals along the bordering highways provide access to both shores at selected points on the lake. Bridges spanning the Columbia River in this vicinity are located at Umatilla and west of John Day Dam near Biggs, Oregon. Interstate 82 (I-82), connecting Interstate 90 (I-90) at Ellensburg, Washington, with I-84 in northeastern Oregon, crosses the Columbia near Umatilla, Oregon.

The John Day Pool is situated in the rugged, semiarid Columbia River Gorge east of the Cascade Mountains and is dominated by far-reaching northeastern Oregon grasslands. In these areas, sage brush appears less frequently, while bunchgrasses prairies cover broad swathes of the landscape (St. John 2007).

McNary Pool

McNary Dam is located on the Columbia River at RM 292 in Washington/Oregon. The 62-mile-long, 37,000-acre reservoir (Lake Wallulla) directly above McNary Dam extends upstream to the US Department of Energy's Hanford Site (approximately 27 miles above Pasco, Washington) on the Columbia River and up the Snake River to Ice Harbor Lock and Dam. The lake has 242 miles of shoreline and 1,908 acres of associated project-owned shore lands. This acreage has been extensively developed, and is currently used for various public purposes including port and industry, recreation, and wildlife.

The principal highways affording access to the area are I-82, the major east-west route that parallels the Columbia River from Portland to Boardman, and continues east through Oregon; US 12, an east-west route serving Tri-Cities and Walla Walla; and US 395, a north-south route through the study area. Industrial and commercial developments of the study area are served by two main line railroads: the Burlington Northern on the Washington shore and the Union Pacific on the Oregon shore of the Columbia River. Barge transportation on the Columbia-Snake River navigation system also serves these developments.

The 16,908 acres of project lands surrounding the lake are utilized for public recreation purposes, wildlife habitat, wildlife mitigation, and water-connected industrial development. Presently, approximately 2,400 acres are leased to state or local park agencies. The US Fish and Wildlife Service (USFWS) leases roughly 3,500 acres of project lands as part of the McNary National Wildlife Refuge. Port districts own approximately 1,500 acres within the project boundary for industrial development. Facilities operated by commercial concessionaires or boat clubs are available at eight locations. Public boat launching facilities are available at 14 locations along the shoreline.

2.1. Cultural Context

The lower Columbia River Basin, including the areas comprising the Bonneville, The Dalles, John Day, and McNary Projects, has been consistently occupied by Native Americans for approximately 8,000 years before present (BP). Earlier use of this area by Native peoples has been documented; however, this use is not known to have been associated with permanent or long-term occupation of areas and sites. Instead, early activity is believed to be limited to highly mobile groups moving over broad areas of the landscape and practicing a hunter-gather based subsistence. Plateau archeologists divide subsequent recognized occupations by Native American peoples in this region into two general periods: the Middle Period (7,600 to 3,800 years BP) and the Late Period (3,800 years BP to circa 250 BP).

Permanent occupation of the region continues into what is termed the pre-contact and historic periods. Native peoples occupying this broad region at the time of the Lewis and Clark Expedition, and later European-American exploration and settlement include the Wasco, Wishram, Cascades, Klickitat, Umatilla, Wayampam (referred to as the Western Columbia River Sahaptins), Yakama, Cayuse, Walla Walla, and Nez Perce. Fishing camps were often located on islands and near rapids while permanent villages were commonly placed on mainland areas that offered shelter from winter weather. Permanent settlement by Euro-Americans began by the 1830s, and several missions opened after the establishment of the Oregon Trail in the 1840s. The incorporation of multiple towns and cities, transportation networks, irrigation projects, industrialization, and the construction of multiple Federal dams on the Columbia River followed this initial settlement.

Continuous human activity over the past 7,600 years has created an extensive archaeological and cultural resources record. These resources can include, but are not limited to, archaeological sites with buried deposits including human internments, Native American sacred sites or Traditional Cultural Properties (TCP), historic buildings, structures, roads, canals, town sites, cemeteries, and railroads, among others.

3. Coordination and Consultation

Coordination for this inventory and assessment was focused due to the necessary speed of implementation. A communications plan and fact sheets were developed that identified many

interested parties and numerous critical stakeholders including NWP, Walla Walla District (NWW), Bonneville Power Administration (BPA), BIA, and the Treaty Tribes.

NWW's participation in the inventory and assessment was critical because the McNary Dam is located in their Area of Responsibility (AOR). Contact was made at senior levels to discuss the overall effort and assign appropriate staff to the regional PDT. NWW staff participated in daily meetings and performed the initial screening and visits to potential sites around the McNary Pool.

NWD leadership conducted outreach to BPA to inform them of the directive the Corps had received and to review potential financial impacts in the event of housing construction. A fact sheet outlining approach and a timeline followed outreach.

A formal letter to BIA requested their participation. NWP's Deputy District Engineer (DPM) also contacted the BIA's Deputy Director for the region to discuss the directive scope and to confirm support. BIA assigned a staff person to attend the tribal coordination meetings and review any developed products.

Although formal government-to-government consultation was not initiated (given that no action was being taken at that time), informal tribal coordination was conducted. If directed to proceed further, formal consultation would need to occur. On May 3, 2016, coordination letters were sent to all treaty tribes outlining the proposed tribal coordination plan. The plan included two tiers of coordination: the first tier was technical (staff level discussed screening and evaluation criteria of the inventory); the second tier was policy level (technical findings were reviewed and policy issues such as inter-tribal housing and pool preferences were clarified). Personal calls from NWP's Commander to each of the four tribal chairmen followed the letters. All four tribes formally identified representatives to participate in the process. The CTUIR did request formal government-to-government consultation and a briefing to their tribal council; however, CTUIR were advised this would occur during the next phase of work should NWP be directed to continue project development. As such, CTUIR participated in the final policy meeting.

4. Site Screening and Evaluation Process

The area of consideration included over 150 miles of the Columbia River. To identify suitable development areas, NWP developed a site identification, screening, and evaluation process. This process intended to identify and inventory those sites suitable for a housing development. One goal was to identify any sites ready for immediate development (i.e., lands that would not require real estate acquisition, would have utilities present, etc.) and subsequently to evaluate sites based on development risk.

4.1. Site Identification and Screening Process

This consideration process was split into three distinct steps:

- Initial Site Identification and Screening

- Intermediate Screening
- Site Visit Evaluation

4.1.1. Initial Site Identification and Screening

Initial site identification was completed using Geographic Information System (GIS) data from NWP and NWW as well as publicly available data from other federal agencies, state and county databases, and commercial sources.

Basic screening criteria were applied to identify the most suitable parcels under consideration based on limiting factors such as ownership, size, and location.

Land Ownership

The United States Government is in possession of various interests in and around the four mid-Columbia River dams above the water level to ensure ready access along the shoreline for project purposes. Public lands under Corps jurisdiction were inventoried utilizing acquisition tract maps and project boundaries for each pool. Public lands under jurisdiction of other Federal agencies (Bureau of Land Management (BLM), USFWS, USFS, Bureau of Reclamation (BOR), and General Services Administration (GSA)), as well as the States of Oregon and Washington, were inventoried utilizing BLM data.

Public lands were cross-referenced with county tax assessor maps. Ownership information contained in the inventory was for planning purposes only. Only public lands owned by the United States Government in fee simple interest were inventoried for this task. Easement interests were not inventoried.

Private Lands

Per Army Regulation (AR) 405-10, paragraph 1-5.a.(2), no request to acquire real estate by transfer, purchase, lease, or condemnation will be considered or approved unless it is established that:

- (1) The activity to be accommodated is essential to an assigned mission;
- (2) Real property under the control of the Army is inadequate to satisfy the requirement; and,
- (3) No real property under the control of the Navy or Air Force or other Federal agency is suitable and available for use by the Army on a permit or joint use basis.

Therefore, the initial inventory using the Regional Multiple Listing Service only included private lands for sale on the open market as of June 16, 2016. No physical field visits were conducted at any of the privately-owned sites, nor was a right of entry pursued.

Location

Lands in Oregon and Washington in the vicinity of the four mid-Columbia River dams on the Bonneville, The Dalles, John Day, and McNary pools up to the confluence of the Snake and Columbia rivers were inventoried. Initially, the analysis included a 1-mile buffer from the centerline of the Columbia River.

The Yakama and CTWS requested an inventory of lands beyond the 1-mile buffer on the Bonneville and The Dalles Pools to locate a potential site within a population center. Therefore, an additional inventory was conducted, with a 5-mile buffer around the population centers of Wishram, Wasco, Biggs, Goldendale, Dufur, Rufus, Stevenson/Carson, Hood River, The Dalles, and Cascade Locks.

Size

Lands with a minimum size of 10 acres and 200 feet in width were inventoried.

4.1.2. Intermediate Screening

Once sites of suitable size and location were identified, NWP used aerial photography and topographic maps to determine if any substantial development impediments existed to remove a site from further consideration. Criteria used for this screening effort are described below.

Topography

Site topography (i.e., slopes) was considered for constructability. Due to increased constructability risk, sites with moderate or steep slopes were not included in the inventory.

Accessibility

Existing accessibility was considered for each site. Generally, sites with no existing roads or with existing dirt roads in poor condition were not included in the inventory. Additionally, sites that would require construction of several miles of road to gain access to the local transportation system were not included in the inventory.

Site Dimension

Site dimensions, established by property boundaries, were considered for each site. If dimensions were not conducive to providing enough space for streets, setbacks, utilities, etc., the site was not included in the inventory.

Environmental Considerations – Step 1

Designated wildlife refuge areas were removed from consideration during the screening process, as were other parcels with significant and likely unavoidable wetland areas.

Sites in close proximity to major hazardous material clean-up sites or existing pollution generators were not included in the inventory:

- Hazardous material and hazardous material clean-up sites including
 - Brownfields
 - EPA-designated Superfund sites
 - Washington Department of Ecology and Oregon Department of Environmental Quality underground storage tank locations and spills (to be mapped when site locations have been narrowed)
 - Toxic Release Inventory data from 2014 (most recent data set available)
- The parcels originally identified during the screening process nearest the Columbia Gorge Aluminum plant in Washington were removed from consideration since the site is undergoing remediation.

4.1.3. Site Evaluation

Upon completion of steps one and two of the site screening process, NWP completed site visits to each site remaining under consideration. General features, conditions, and characteristics of each site were inventoried. No formal site surveys (i.e., geotechnical investigations, biological surveys, or archaeological surveys) were completed. Site evaluations were completed based on visible site conditions, existing information from available sources, and best professional judgement. If a site appeared unsuitable for construction based on visible site conditions, the site was not included in the inventory.

Environmental Considerations – Step 2

The following environmental characteristics were documented during site visits to assess potential development risk for each site and to consider environmental compliance needs during future phases:

- Wetland (presence/absence), quality, size, location
- Dominant vegetation
- Endangered Species Act (ESA)-listed species by county
- Migratory bird presence/absence or probability thereof
- Presence of cultural resources and cultural significance of particular areas

Areas for attention included: the potential need for cultural resource mitigation and tribal consultation, wetland avoidance and mitigation, ESA species impacts, and presence of hazardous material. Additionally, potential habitat fragmentation and increases in impervious surface that could result from construction of a village site in the Columbia River Basin were considered.

Cultural Resources

Some, but not all, of the federal lands reviewed for this project have been inventoried for cultural resources. The majority of the inventory work was completed to comply with Section 106 of the National Historic Preservation Act (NHPA). These types of inventories are generally conducted where surface visibility is adequate (greater than 25% ground surface visibility) and where

survey is feasible (slope or terrain of less than 30%). The results of these survey types are usually documented in a scientific report and housed in a variety of locations.

Cultural resources staff from NWP, including a district archeologist and one archaeological technician, conducted a standard literature review of all inventoried areas. This literature review included locating and reviewing available archaeological site records, cultural resources studies, and archaeological/historic site surveys for each study area. Existing sources for this information included: the cultural resources section of NWP's technical library; the Oregon State Historic Preservation Office (OR SHPO) electronic records and online geodatabase; the State of Washington Department of Archaeology and Historic Preservation (WA DAHP) electronic records and online geodatabase; the most current Historic Properties Management Plan (HPMP) for NWP's Projects; Project Master Plans, reports, current bibliographies, archaeological testing reports, and monitoring reports; site/survey records and maps located at either the OR SHPO or WA DAHP; site/survey records at NWP District Office Cultural Resources database; historical photos, oral histories, and historic contexts; and any available information at local university libraries.

The records search revealed that a large amount of known cultural resources are present in a high number of the inventoried sites. These resources include prehistoric and historic period archaeological sites, along with several TCPs (locations important for a variety of reasons, including religious and ceremonial) identified by the multiple tribes whose ceded territory these areas fall within. Cultural resources were considered in the site identification and screening process and were documented as part of the overall feasibility of site development.

Hazardous, Toxic, and Radioactive Waste

Although known occurrences of hazardous waste were reviewed and documented prior to site visits, if waste was visually evident on a site, this was documented.

Wetlands

Various types and sizes of wetlands were found at parcels located on each of the pools. Wetlands decrease in number eastward along the Columbia River. The drier the area, the more important wetlands become for habitat diversity within the ecosystem. Wetlands along the Columbia River can be found in the National Wetlands Inventory; however, this database uses high altitude aerial photographs, which may not detect all smaller wetlands. Only a cursory examination of the habitat, flora, and fauna was conducted during the brief site visits; therefore, if a site is selected, a proper wetland delineation must be completed for water quality compliance and mitigation determination purposes prior to potential construction.

Available Utilities

Because construction of utilities increases project costs and risk, availability of electricity, water, and sewer were considered. Sites were not removed from consideration based solely on this factor; however, readily available utilities were noted at each site.

Surrounding Land Uses

Existing and adjacent land uses were documented during site visits to determine whether land use consistency would be a development issue.

Services Travel Time

During technical discussions among NWP and its tribal partners, access to services and amenities emerged as an important variable to a successful site selection process. A GIS analysis was conducted on each of the sites carried forward for evaluation to determine accessibility to services and amenities, including emergency medical services (EMS), hospitals, urgent care clinics, gas stations, fire stations, law enforcement, schools, and grocery stores. Accessibility was evaluated by determining the total number of services and amenities (based on best available data) within 15-, 30-, and 45-minute standard drive times. As the analysis goal was to assess general access, time of day traffic data was not included. Given that a significant proportion of the inventoried sites are located in rural areas, multiple drive times are needed to account for a standard household's daily needs. The results of the analysis will help determine individual site suitability. Sites outside of the 45-minute standard driving time from service and amenities were removed from consideration.

Quantity of Houses per Site

For the purpose of this inventory, quantity of houses per site was based on the presumption that housing would consist of single family dwellings similar to what was constructed at Celilo Village. High density, multi-family housing units were not used in the development of these estimations. The range for number of single-family houses per site was determined using the following criteria:

- Acres available
- Site dimension
- Slope less than 15%
- Areas with less than 20% rock
- Avoidance of wetland and drainage areas

Lot sizes of 15,000 square feet for low density lots and 7,500 square feet for high density lots set the limits of housing capacity for each site. Each lot size included total development requirements containing the house, streets, sidewalks, parking, utility lines, and storm drainage requirements. Community facilities were sized to accommodate the number of houses proposed at each site. At sites that could not be connected to a municipal system, sewage treatment

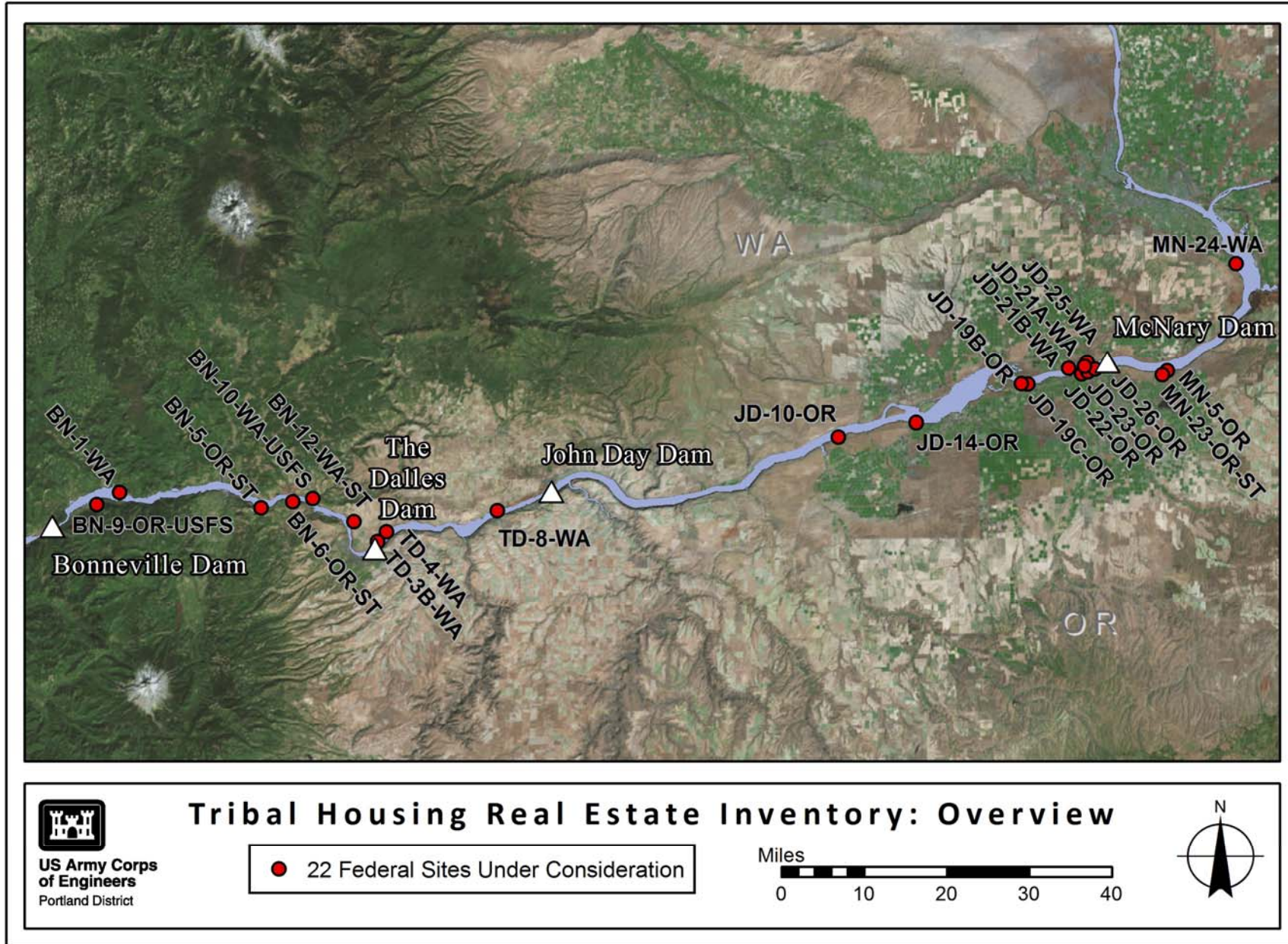
facilities and water systems were sized by order of magnitude for the number of houses proposed at each site.

5. Sites Remaining Under Consideration

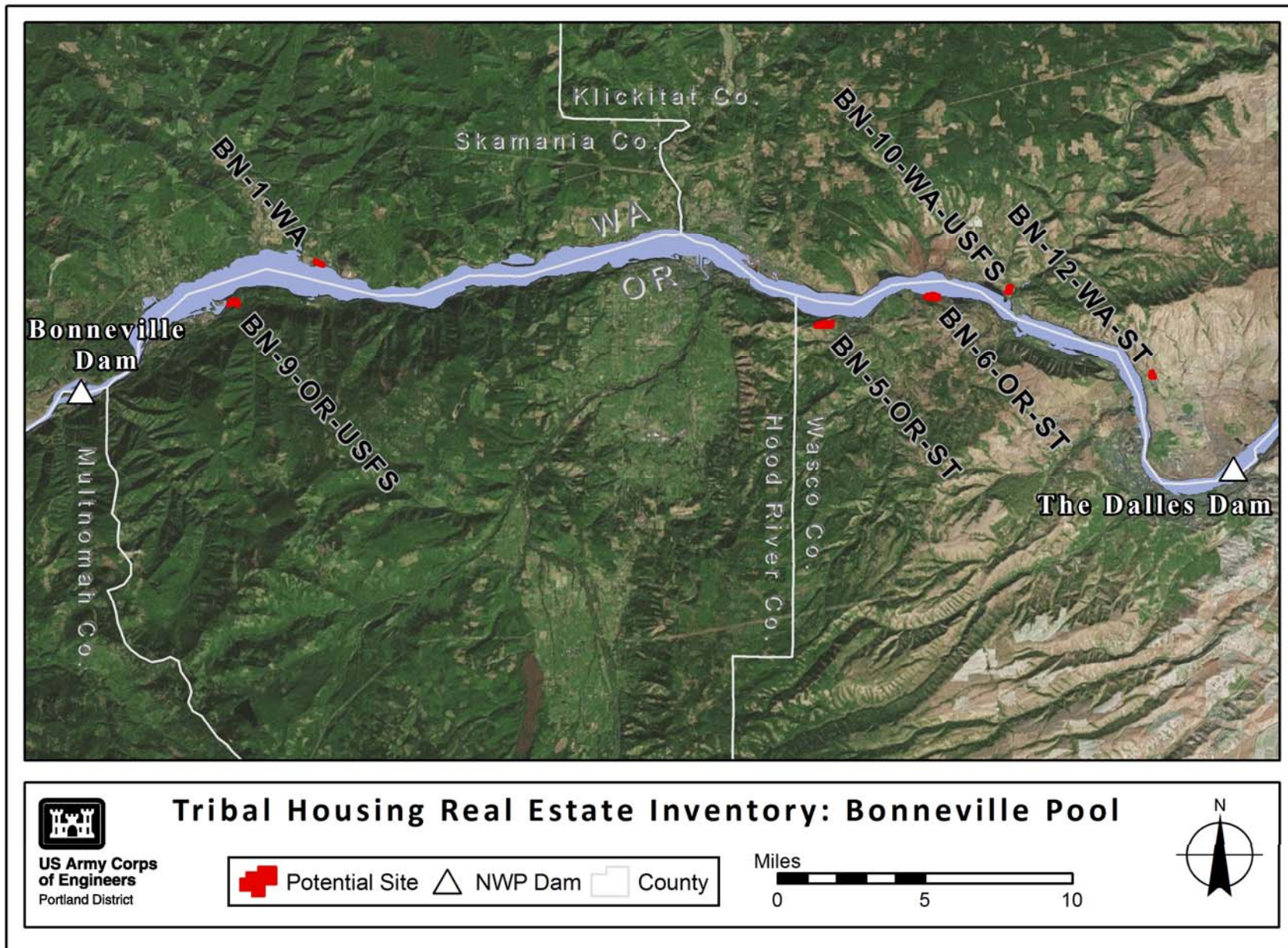
After completion of the site evaluation process, the sites presented below identify NWP's assessment and inventory of real estate that may be suitable for village development.

5.1. Public Lands

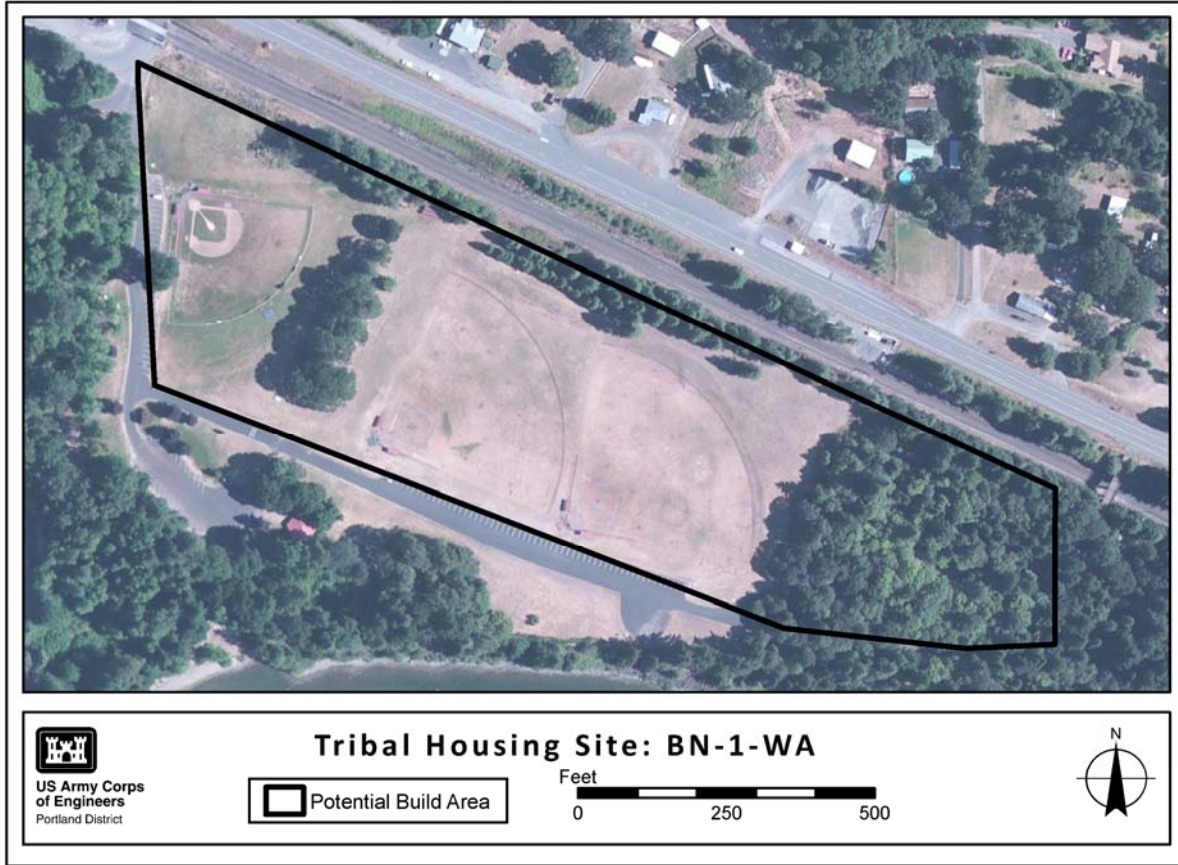
The following publicly owned sites remain under consideration.



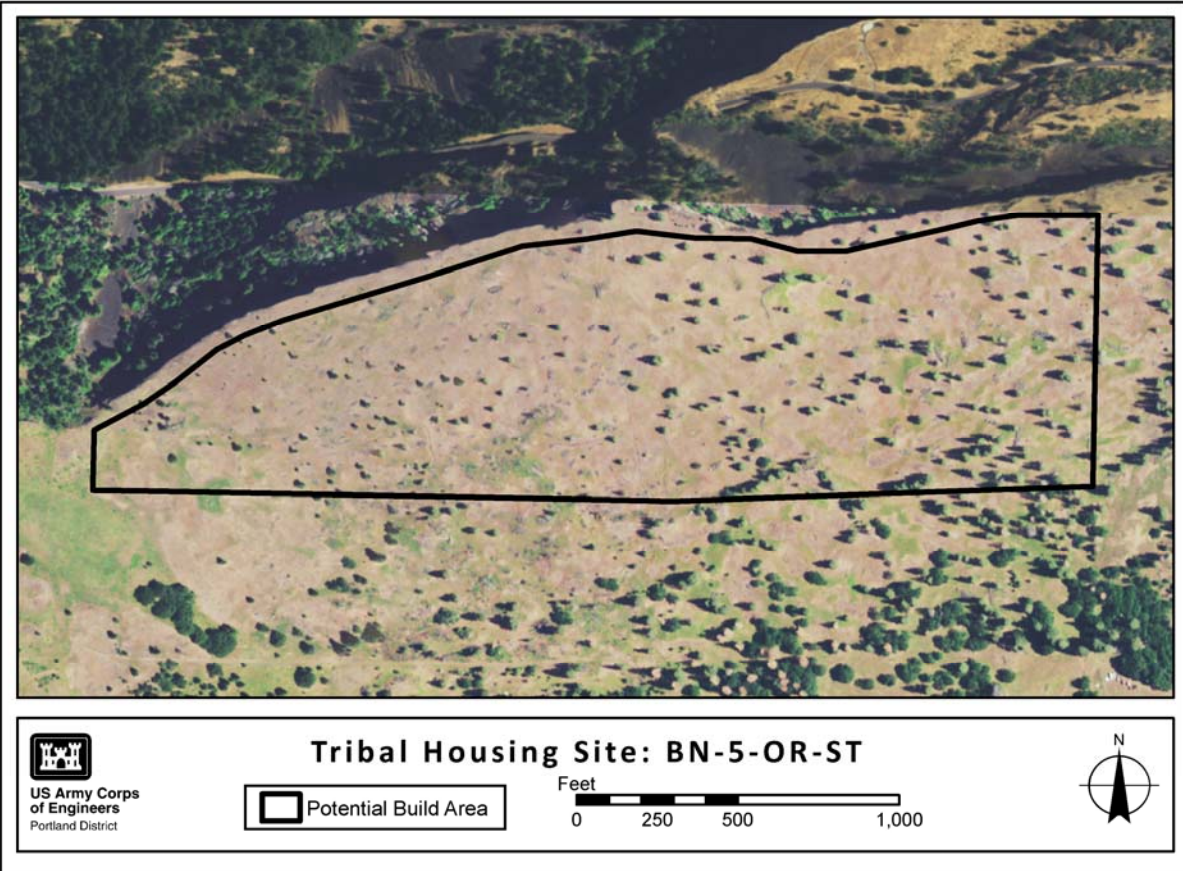
	River Mile	County	Acreage	Land Ownership	Permanent, Single-family Housing Capacity	Notable Risk
BONNEVILLE DAM POOL						
BN-1-WA, Home Valley Park	155	Skamania	12	USACE	15-29	Loss of recreation
BN-5-OR-ST	174	Wasco	29	Oregon	46-93	Uncertainty of land ownership
BN-6-OR-ST, Memaloose State Park	178	Wasco	12	Oregon	15-29	Loss of recreation
BN-9-OR-USFS, NSA	153	Hood River	29	USFS	35-70	Land acquisition from USFS for a housing development in the NSA
BN-10-WA-USFS, NSA	180	Klickitat	19	USFS	17-35	Land acquisition from USFS for a housing development in the NSA
BN-12-WA-ST, DNR - Murdock/Zoo	185	Klickitat	14	Washington	20-41	Land acquisition from USFS for a housing development in the NSA



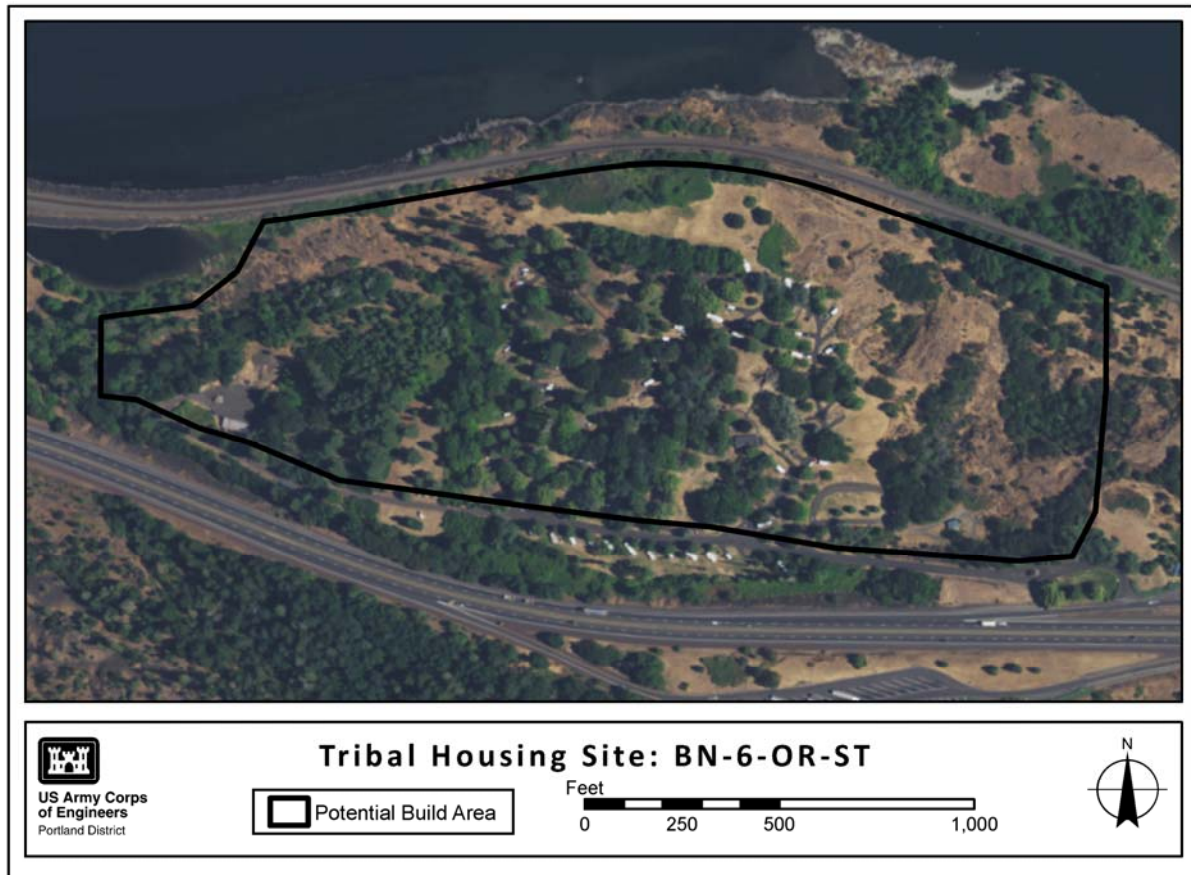
BN-1-WA, Home Valley Park	
Ownership	USACE
Location	River Mile 155
Acreage	12 acres
Permanent, Single-family Housing Capacity	15-29
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Law Enforcement, Public School 30 minutes: Hospital 45 minutes: Urgent Care
Accessibility	Paved road access with gated, at-grade railroad crossing
Topography	Flat
Environmental Constraints	7 acres of the site are not included in the acreage due to wetlands. Site included wooded area. Cultural resources are present and may require mitigation.
Available Utilities	Electricity; no water or sewer
Land Uses	Heavily used for recreation
Notable Risk	Loss of recreation



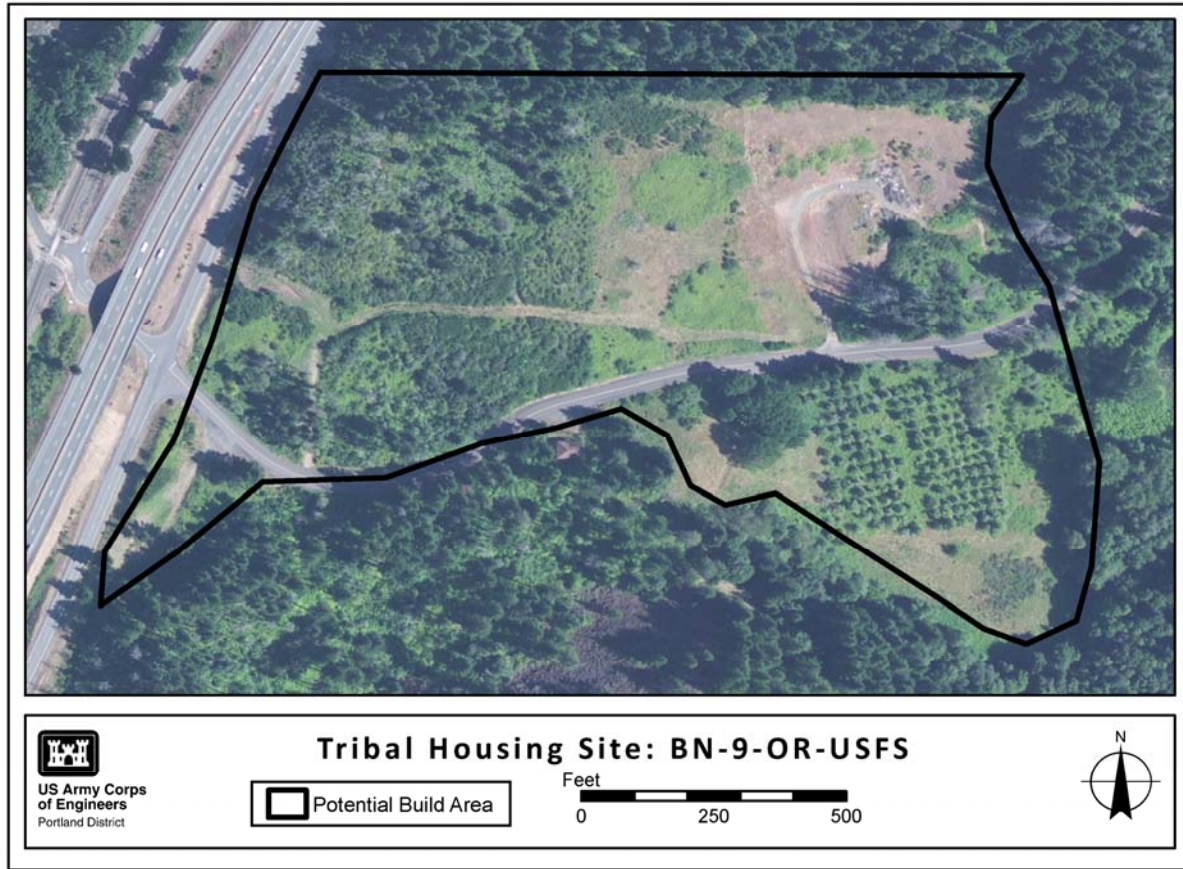
BN-5-OR-ST, Above Mosier – West	
Ownership	State of Oregon
Location	River Mile 174
Acreage	29 acres
Permanent, Single-family Housing Capacity	46-93
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Hospital, Law Enforcement, Public School 45 minutes: Urgent Care
Accessibility	Paved road to access right-of-way; however, no current access road to site
Topography	Flat to gently sloped; 60% rock outcropping
Environmental Constraints	Minimal natural resource impacts anticipated. Site has not been surveyed for cultural resources.
Available Utilities	Electricity adjacent; no water or sewer
Land Uses	Rural residential and undeveloped open space
Notable Risk	Land ownership uncertainty



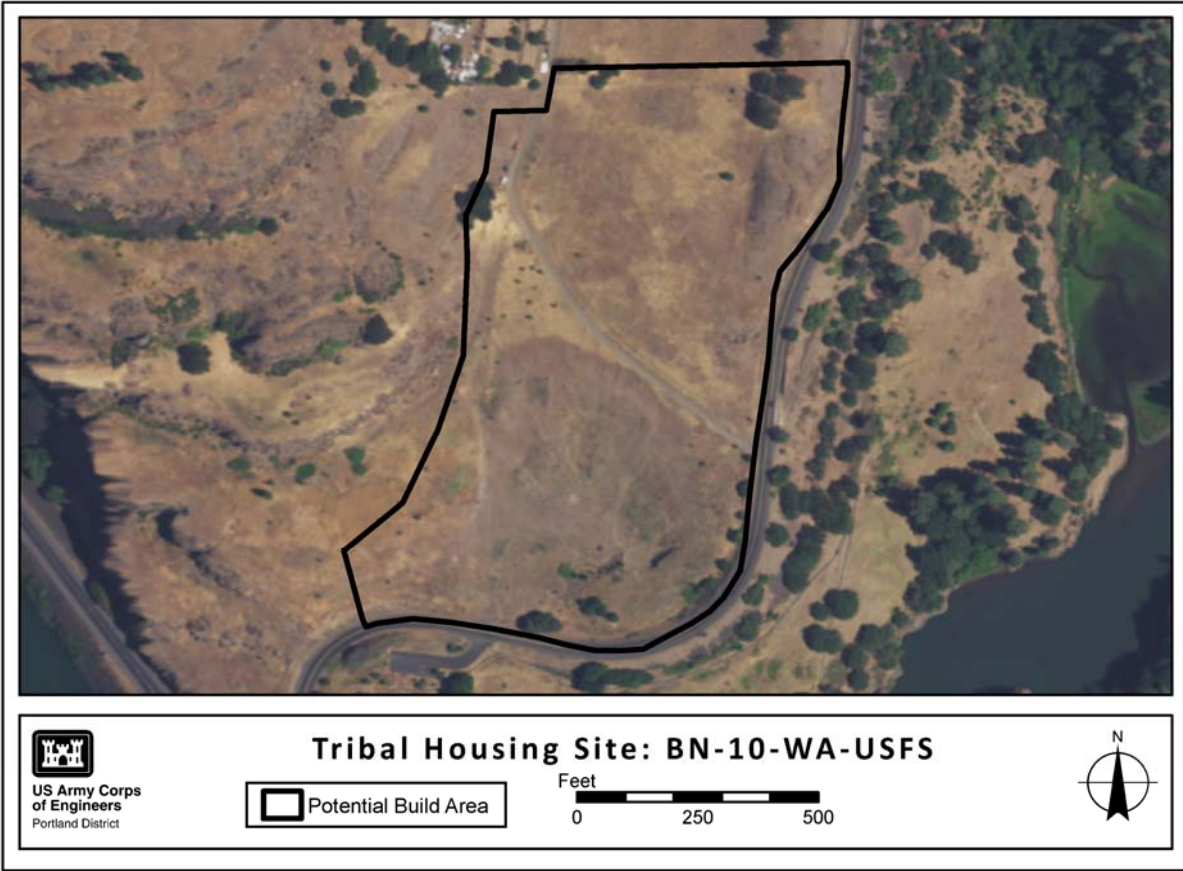
BN-6-OR-ST, Memaloose State Park	
Ownership	State of Oregon
Location	River Mile 178
Acreage	12 acres
Permanent, Single-family Housing Capacity	15-29
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Hospital, Law Enforcement, Public School 30 minutes: Urgent Care
Accessibility	Paved road; no railroad conflict
Topography	Flat, gently sloped
Environmental Constraints	Minimal natural resource impacts anticipated. Known cultural resource sites on the island and in portions of the park.
Available Utilities	Electricity; no water or sewer
Land Uses	State park camping and day use
Notable Risk	Loss of recreation



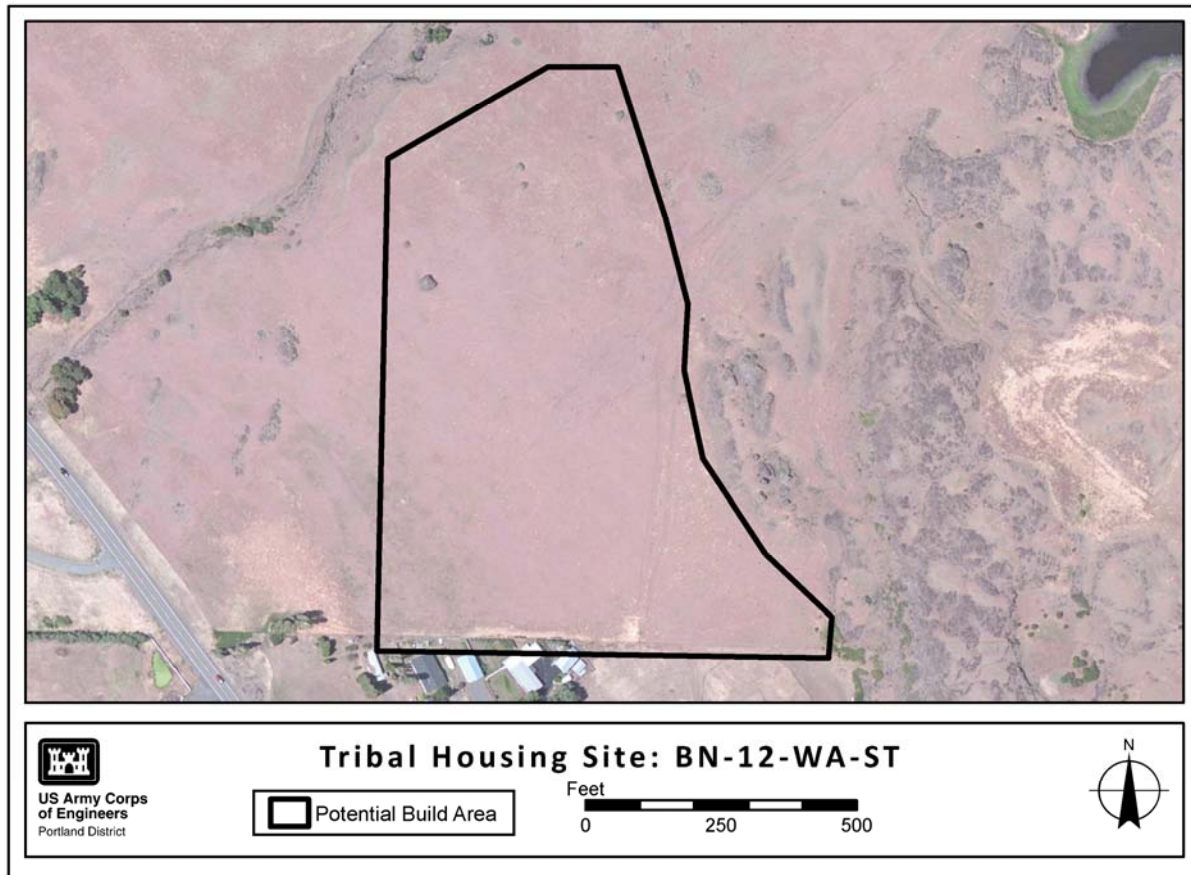
BN-9-OR-USFS, Herman Creek Road	
Ownership	USFS
Location	River Mile 153
Acreage	25 acres
Permanent, Single-family Housing Capacity	35-70
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Law Enforcement, Public School 30 minutes: Grocery Store, Hospital 45 minutes: Urgent Care
Accessibility	Paved road
Topography	Flat, gentle sloped area, with some varying elevations
Environmental Constraints	Minimal natural resource impacts anticipated. Site has not been surveyed for cultural resources.
Available Utilities	Electricity adjacent; water may be on site with pump house; no sewer
Land Uses	Open space and forest
Notable Risk	Land acquisition from USFS for a housing development in the NSA



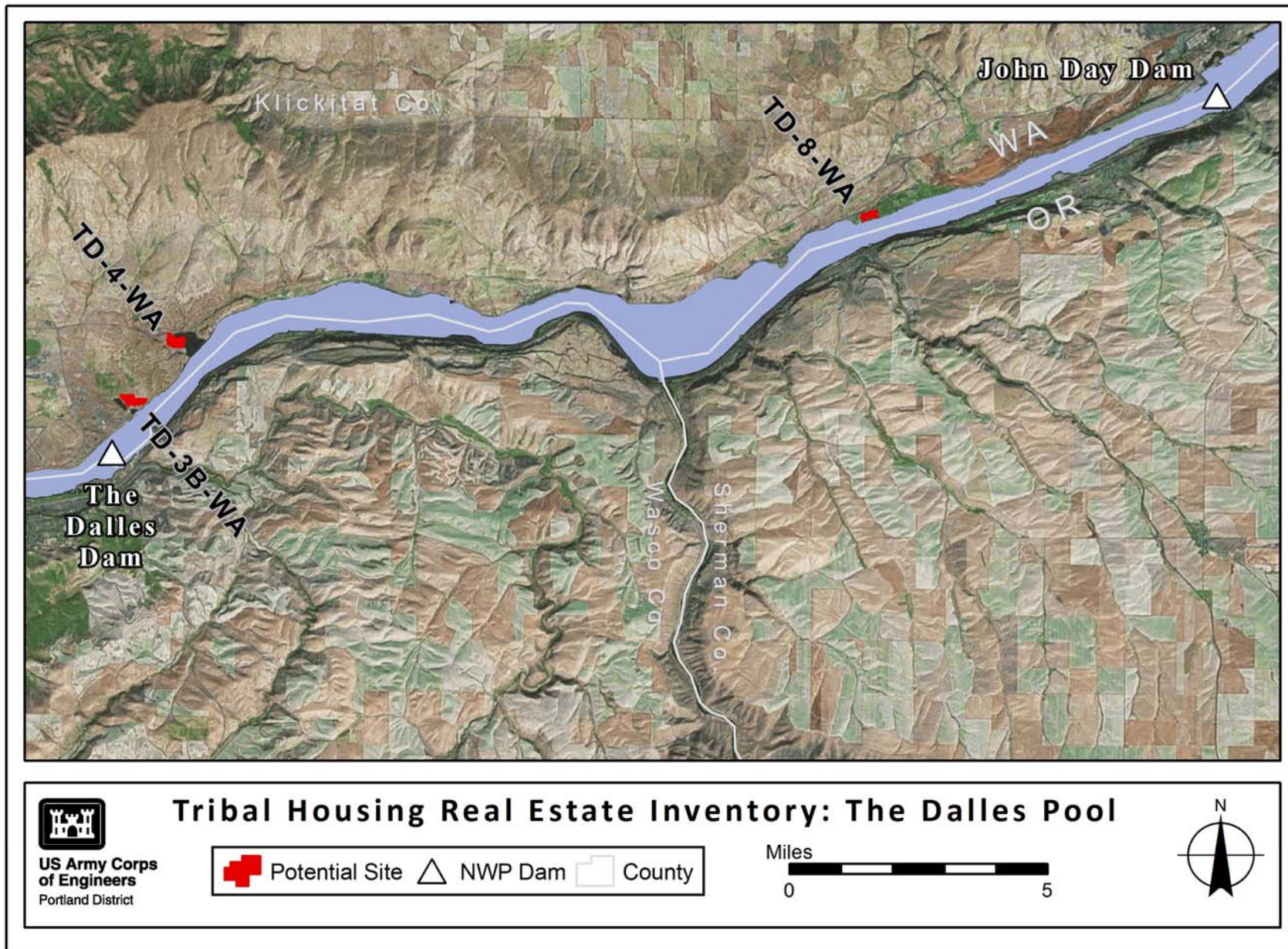
BN-10-WA-USFS, NSA, West of Lyle	
Ownership	USFS
Location	River Mile 180
Acreage	19 acres
Permanent, Single-family Housing Capacity	17-35
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Hospital, Public School 30 minutes: Grocery Store, Law Enforcement, Urgent Care
Accessibility	Paved road
Topography	Sloped from highway
Environmental Constraints	Minimal natural resource impacts anticipated. Site has not been surveyed for cultural resources.
Available Utilities	Electricity adjacent; no water or sewer
Land Uses	Rural residential and open space
Notable Risk	Land acquisition from USFS for a housing development in the NSA



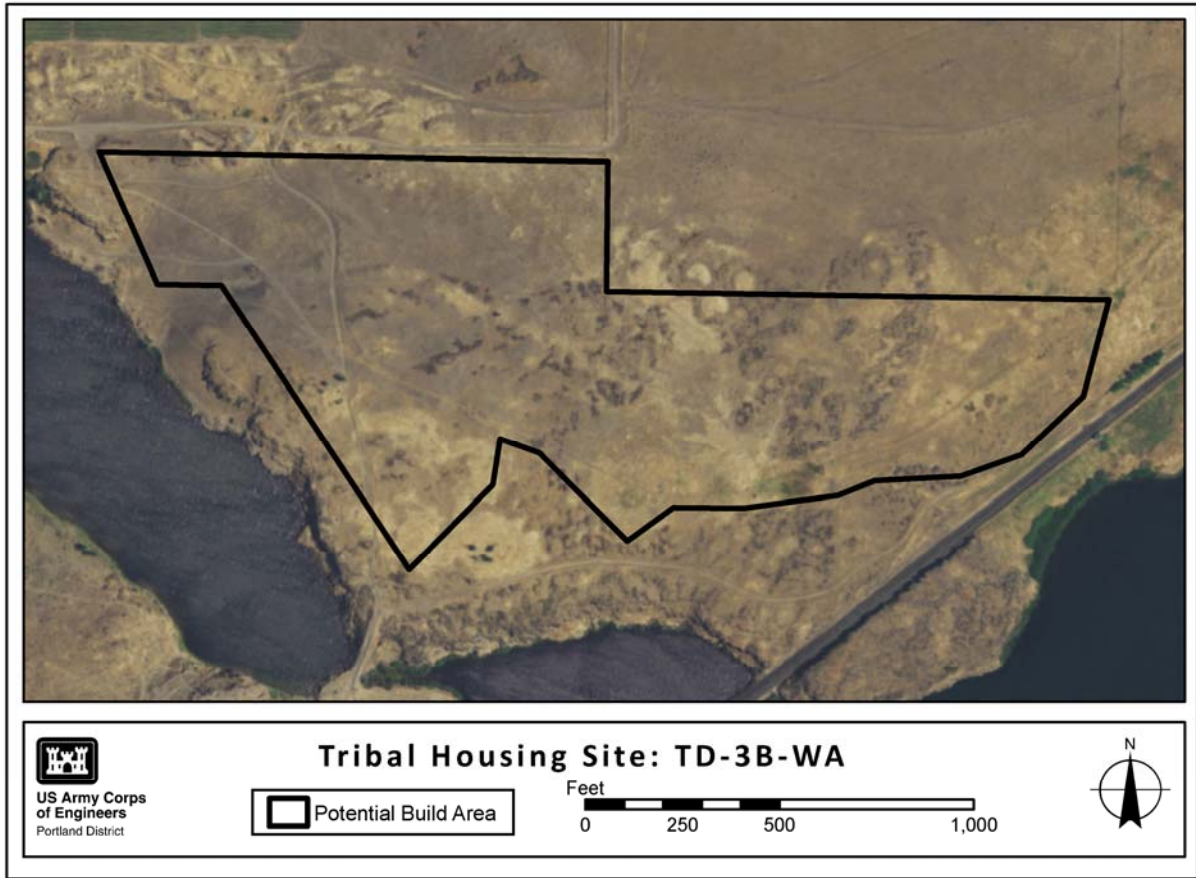
BN-12-WA-ST, Murdock	
Ownership	State of Washington
Location	River Mile 185
Acreage	14 acres
Permanent, Single-family Housing Capacity	20-41
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Hospital, Law Enforcement, Public School 30 minutes: Urgent Care
Accessibility	Near paved highway, but would require new access right-of-way
Topography	Flat to gently sloping
Environmental Constraints	None anticipated
Available Utilities	Electricity adjacent; no water or sewer
Land Uses	Residential and open space
Notable Risk	Land acquisition from USFS for a housing development in the NSA



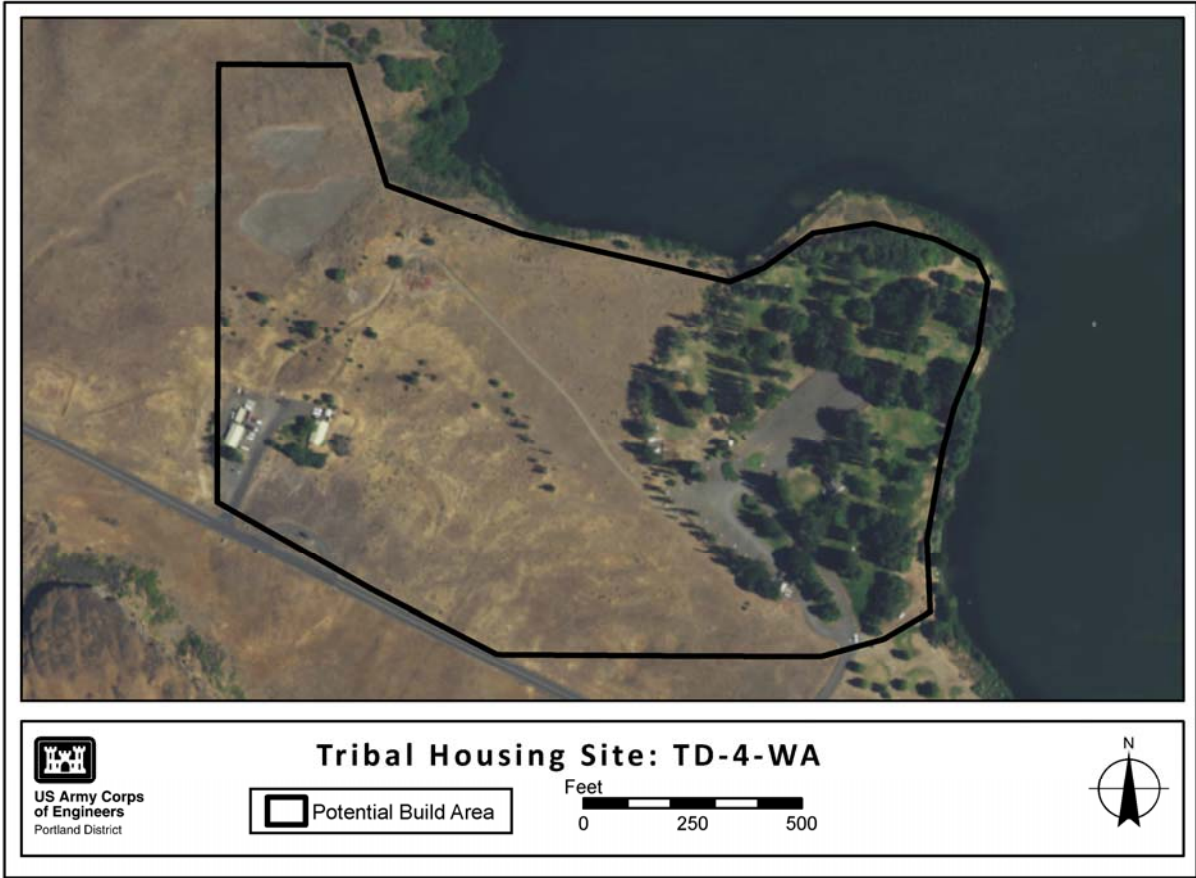
	River Mile	County	Acreage	Land Ownership	Permanent, Single-family Housing Capacity	Notable Risk
THE DALLES DAM POOL/LAKE CELILO						
TD-3B-WA, Spearfish - upper	193	Klickitat	30	USACE	49-99	Cost and time associated with cultural resource mitigation
TD-4-WA, Horsethief Lake	194	Klickitat	25	USACE	35-70	Cost and time associated with cultural resource mitigation; loss of recreation
TD-8-WA, Maryhill	208	Klickitat	20	USACE	29-58	Cost and time associated with cultural resource mitigation; loss of recreation



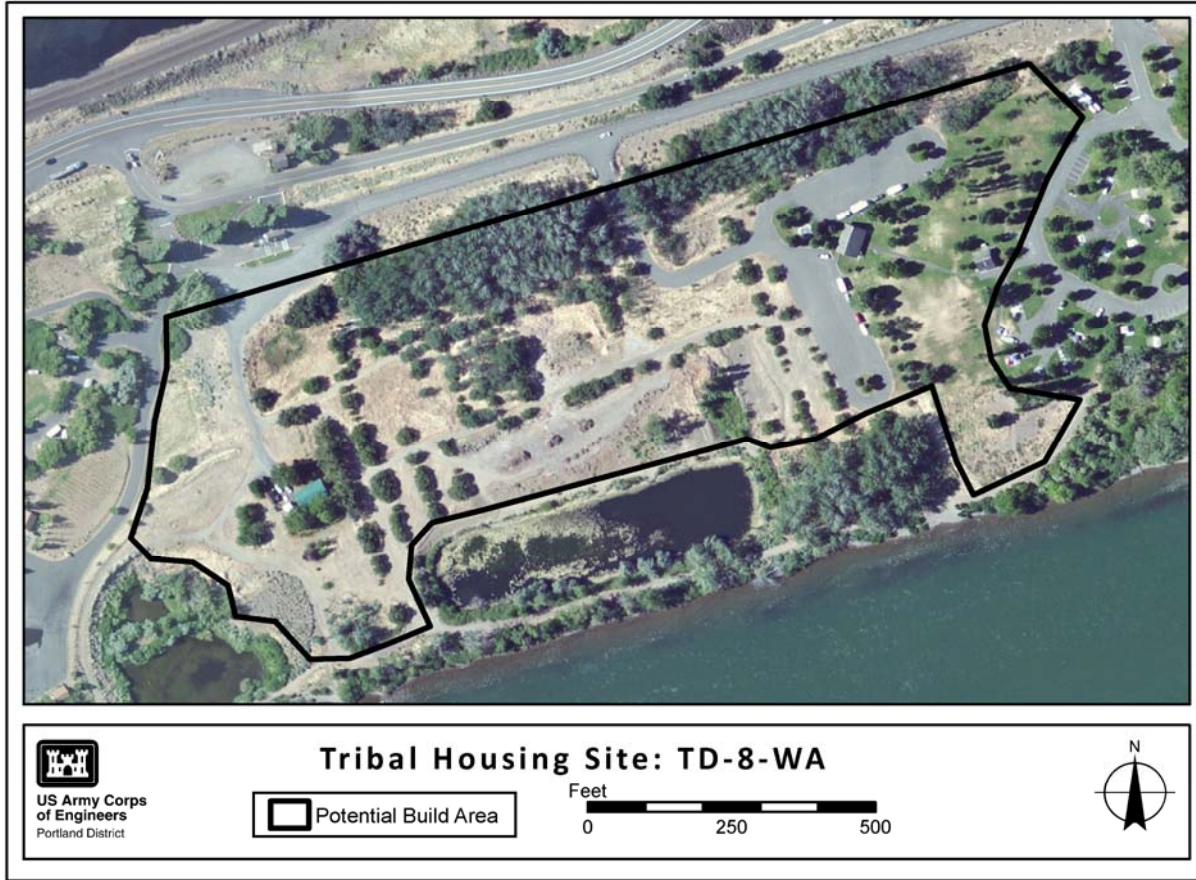
TD-3B-WA, Spearfish Upper	
Ownership	USACE
Location	River Mile 193
Acreage	30 acres
Permanent, Single-family Housing Capacity	49-99
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Hospital, Law Enforcement, Public School, Urgent Care
Accessibility	Rough dirt road: requires new road access with dedicated right-of-way
Topography	Flat to gently sloping
Environmental Constraints	Adjacent industrial uses may result in some air quality issues. Known location of sensitive cultural sites will require mitigation.
Available Utilities	Electricity adjacent; no water or sewer
Land Uses	Recreation; nearby industrial and agricultural
Notable Risk	Cost and time associated with cultural resource mitigation



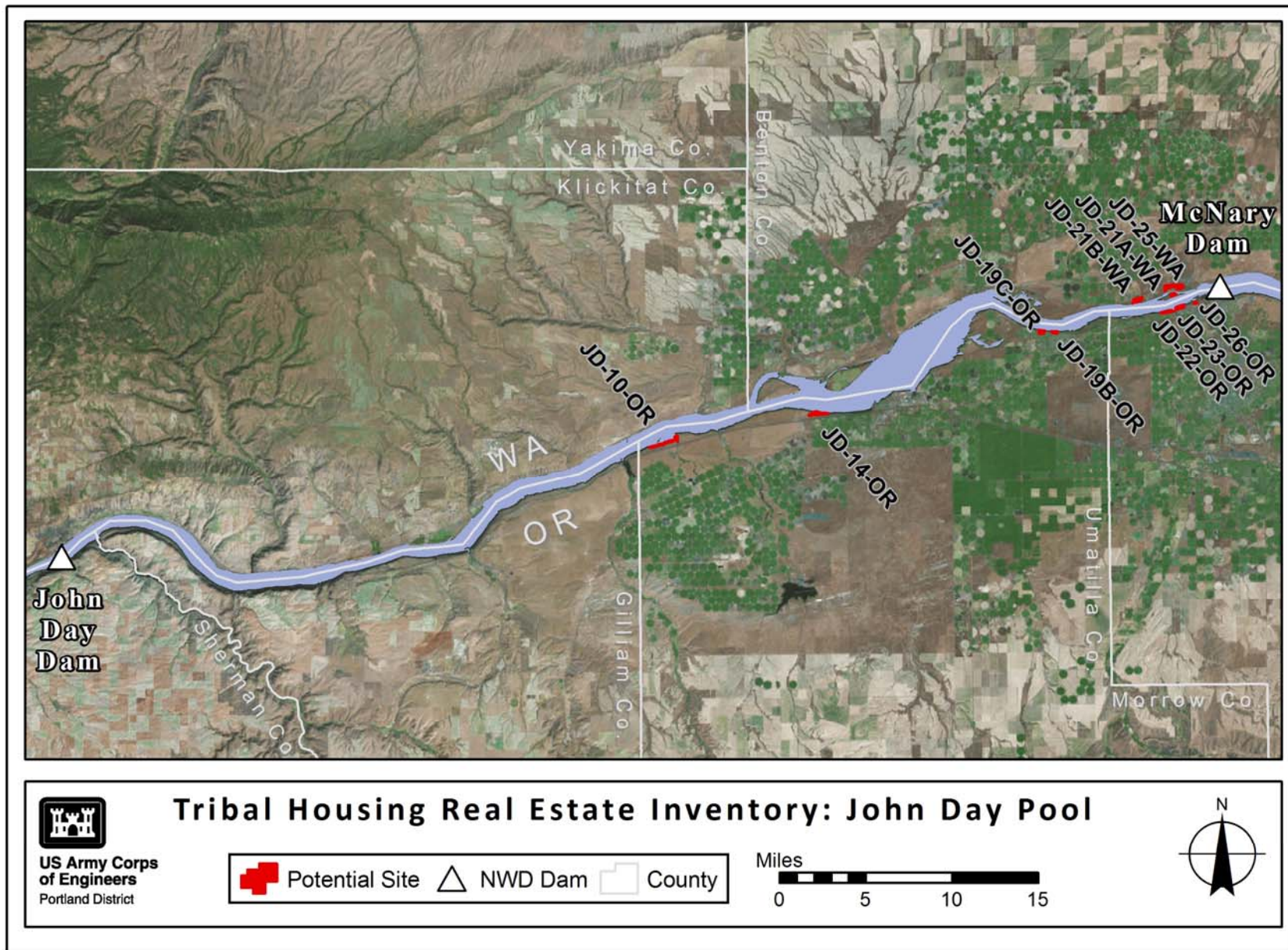
TD-4-WA, Horsethief Lake	
Ownership	USACE – Leased to Washington State Parks
Location	River Mile 194
Acreage	25 acres
Permanent, Single-family Housing Capacity	35-70
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Hospital, Law Enforcement, Public School, Urgent Care
Accessibility	Paved road
Topography	Slightly sloping to lake
Environmental Constraints	High quality vegetation along the shoreline and old growth poplars and cottonwoods located in the day use area. Significant cultural resources are present and require mitigation.
Available Utilities	Electricity adjacent; no water or sewer
Land Uses	Recreation day use and camping
Notable Risk	Cost and time associated with cultural resource mitigation; loss of recreation



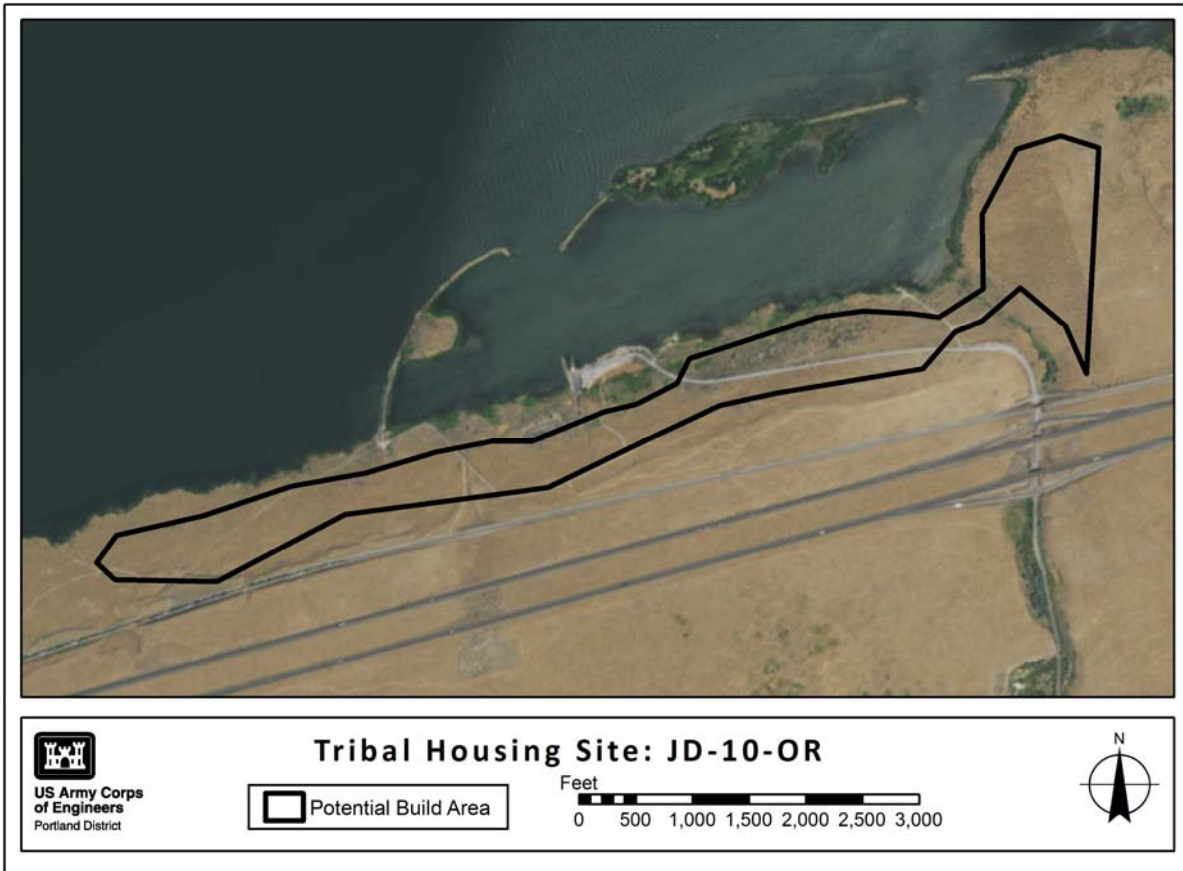
TD-8-WA, Maryhill	
Ownership	USACE – Leased to Washington State Parks
Location	River Mile 208
Acreage	20 acres
Permanent, Single-family Housing Capacity	29-58
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Public School 30 minutes: Grocery Store, Hospital, Law Enforcement
Accessibility	Paved road
Topography	Flat
Environmental Constraints	Wetlands present but could be avoided. Cultural resources scattered throughout the parcel and require mitigation.
Available Utilities	Electricity, water, and sewer on site but may require upgrading
Land Uses	Recreation day use and camping
Notable Risk	Cost and time associated with cultural resource mitigation; loss of recreation



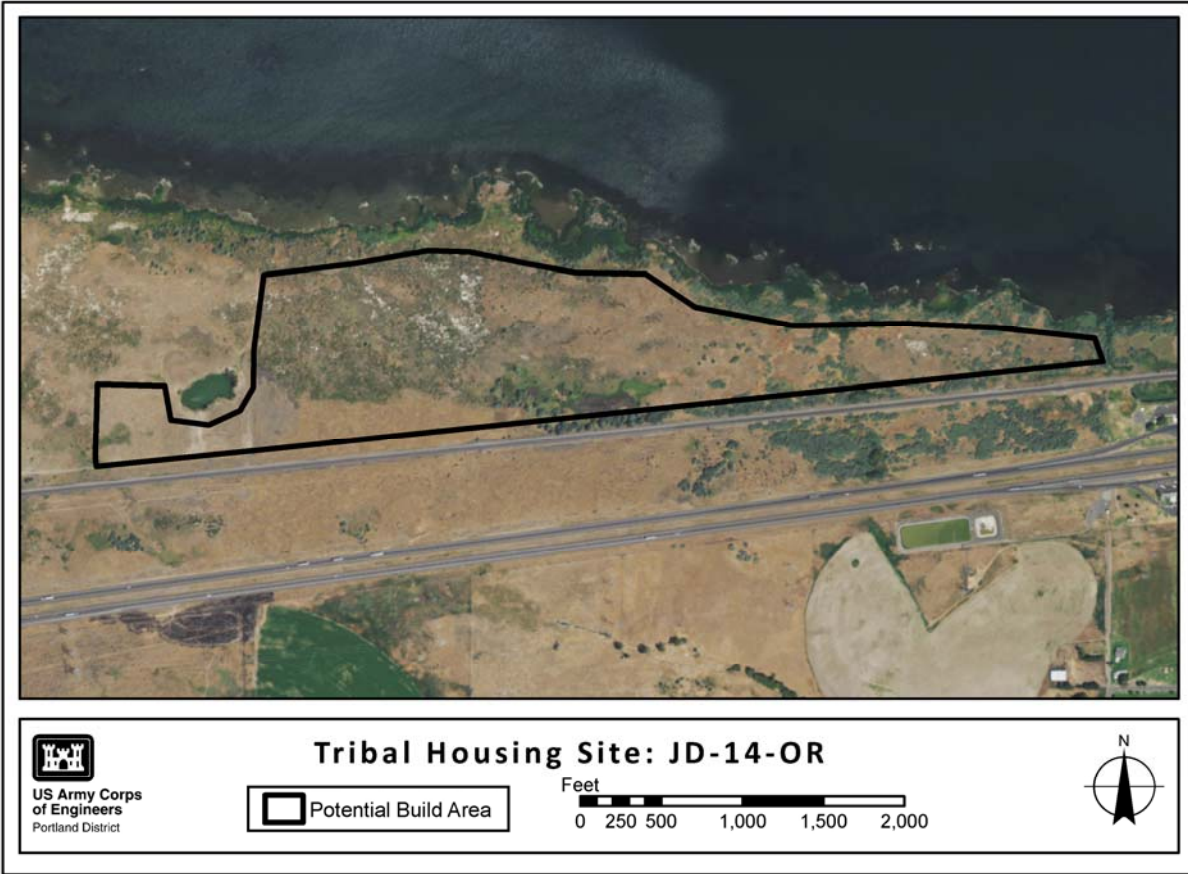
	River Mile	County	Acreage	Land Ownership	Potential Housing Site Capacity	Notable Risk
JOHN DAY DAM POOL						
JD-10-OR, Threemile Canyon	255	Morrow	54	USACE	102-203	Remoteness from amenities
JD-14-OR, East of Boardman Rest stop Area, North of I84	266	Morrow	36	USACE	67-134	At-grade railroad crossing
JD-19B-OR, West of Irrigon Park	282	Morrow	21	USACE	44-87	Potential adjacent land use conflicts
JD-19C-OR, East of Irrigation Pumps	281	Morrow	43	USACE	99-197	Potential adjacent land use conflicts
JD-21A-WA, Western Plymouth including Park	290	Benton	30	USACE	49-99	Potential adjacent land use conflicts
JD-21B-WA, Western Plymouth - by Natural Gas Line	290	Benton	71	USACE	151-302	Proximity to natural gas pipeline
JD-22-OR, West of Umatilla River	288	Umatilla	43	USACE	99-197	Potential adjacent land use conflicts
JD-23-OR, Umatilla Old Town Site	289	Umatilla	55	USACE	134-267	Cost and time associated with cultural resource mitigation
JD-25-WA, Plymouth City, North of Engineer's Road	290	Benton	68	USACE	171-343	Land use conflicts
JD-26-OR, Umatilla Marina Park	290	Umatilla	12	USACE	26-52	Portions of land included in transfer to the BIA under the Right Of First Refusal



JD-10-OR, Threemile Canyon	
Ownership	USACE
Location	River Mile 255: surrounds the Threemile Canyon Treaty Fishing Access Site
Acreage	54 acres
Permanent, Single-family Housing Capacity	102-203
Services Travel Time	15 minutes: Fire Station, Gas Station 30 minutes: EMS, Grocery Store, Public School 45 minutes: Hospital, Law Enforcement, Urgent Care
Accessibility	Gravel access road to the park and Treaty Fishing Access Site
Topography	Primarily flat, but slopes gently to the river
Environmental Constraints	High quality wetlands at the river's edge. Natural resource impacts anticipated to be avoidable. Site has not been surveyed for cultural resources.
Available Utilities	No electricity, water, or sewer
Land Uses	Open space
Notable Risk	Remoteness from amenities



JD-14-OR, Northeast of Boardman Rest Stop Area off I-84	
Ownership	USACE
Location	River Mile 266
Acreage	36 acres
Permanent, Single-family Housing Capacity	67-134
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Law Enforcement, Public School 45 minutes: Hospital, Urgent Care
Accessibility	Limited vehicle access, new road required; good I-84 interchange access to the site; at-grade railroad crossing
Topography	Flat
Environmental Constraints	Minimal natural resource impacts anticipated. Cultural resources can be avoided.
Available Utilities	Electricity adjacent; no water or sewer
Land Uses	Undeveloped: surrounded by agricultural lands and low density residential housing
Notable Risk	At-grade railroad crossing



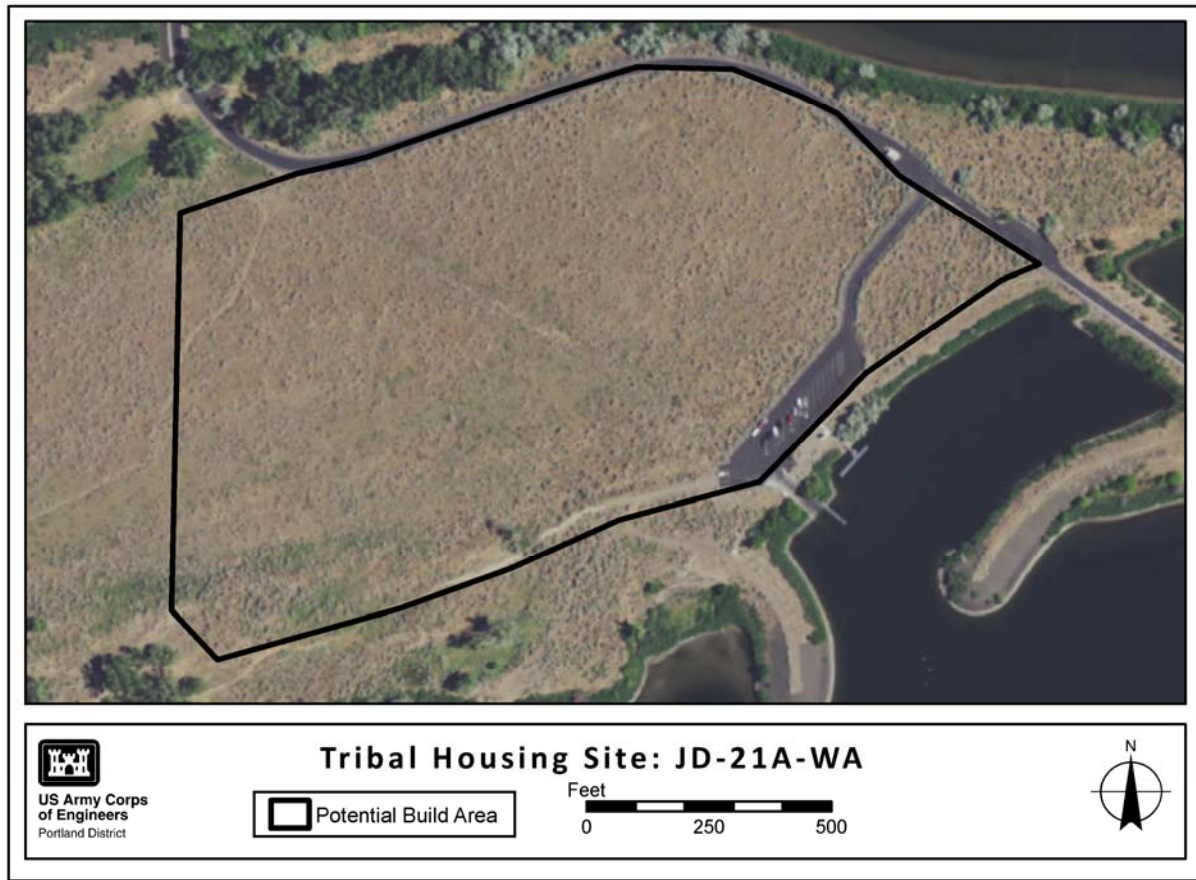
JD-19B-OR, West of Irrigon Park	
Ownership	USACE
Location	River Mile 282
Acreage	21 acres
Permanent, Single-family Housing Capacity	44-87
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Law Enforcement, Public School 30 minutes: Hospital, Urgent Care
Accessibility	Paved roads
Topography	Flat
Environmental Constraints	Minimal natural resource impacts anticipated. Site has not been surveyed for cultural resources.
Available Utilities	Electricity and water adjacent; sewer may be available
Land Uses	Adjacent to Irrigon Park and residential development
Notable Risk	Potential adjacent land use conflicts



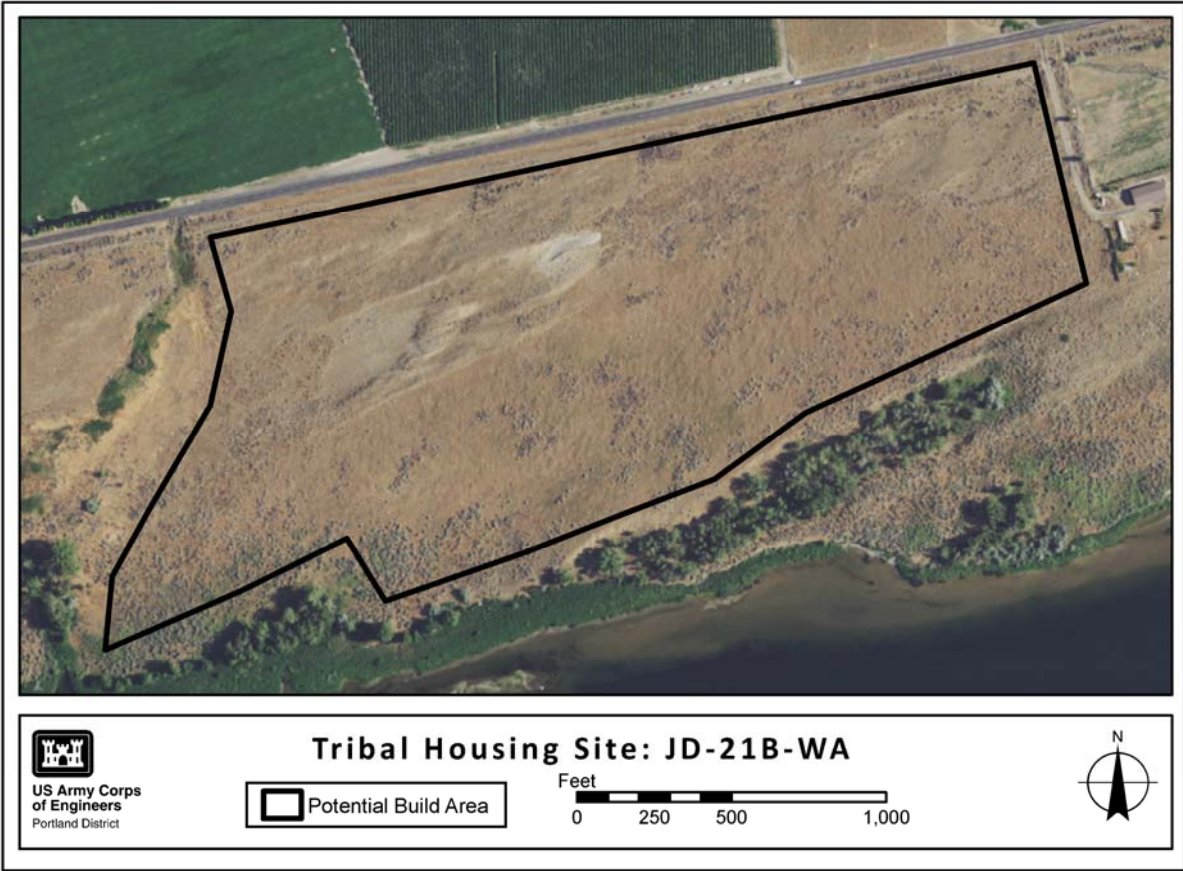
JD-19C-OR, Irrigon – East of Irrigation Pumps	
Ownership	USACE
Location	River Mile 281
Acreage	43 acres
Permanent, Single-family Housing Capacity	99-197
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Law Enforcement, Public School 30 minutes: Hospital, Urgent Care
Accessibility	Paved road
Topography	Flat
Environmental Constraints	Minimal natural resource impacts anticipated. Site has not been surveyed for cultural resources.
Available Utilities	Electricity adjacent; no water or sewer
Land Uses	Undeveloped open space with adjacent residential
Notable Risk	Potential adjacent land use conflicts



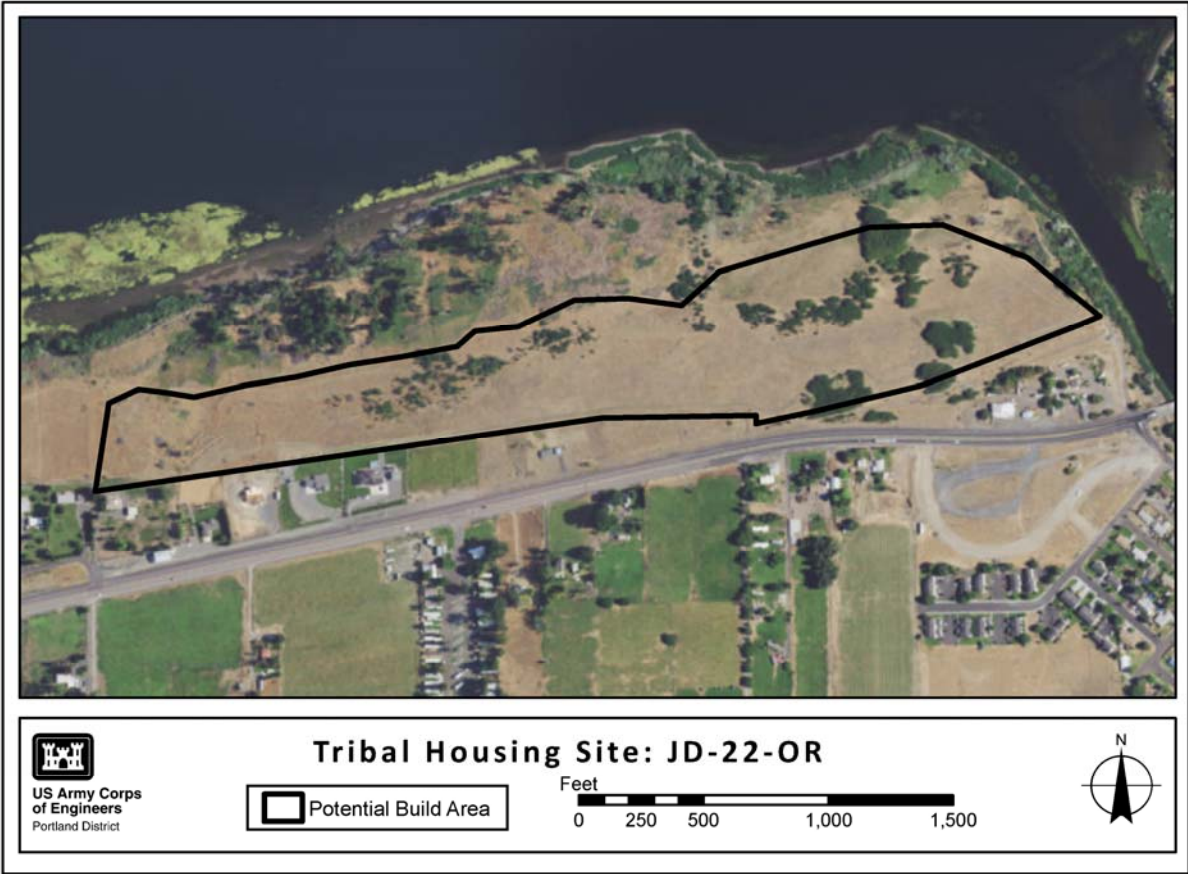
JD-21A-WA, Western Plymouth including undeveloped portion of Plymouth Park	
Ownership	USACE
Location	River Mile 290
Acreage	30 acres
Permanent, Single-family Housing Capacity	49-99
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Law Enforcement, Public School, Urgent Care 30 minutes: Hospital
Accessibility	Local road network
Topography	Flat
Environmental Constraints	Minimal natural resource impacts anticipated. Known cultural resources may require mitigation.
Available Utilities	Electricity adjacent; no sewer or water
Land Uses	Adjacent to the city of Plymouth and surrounding agricultural land
Notable Risk	Potential adjacent land use conflicts



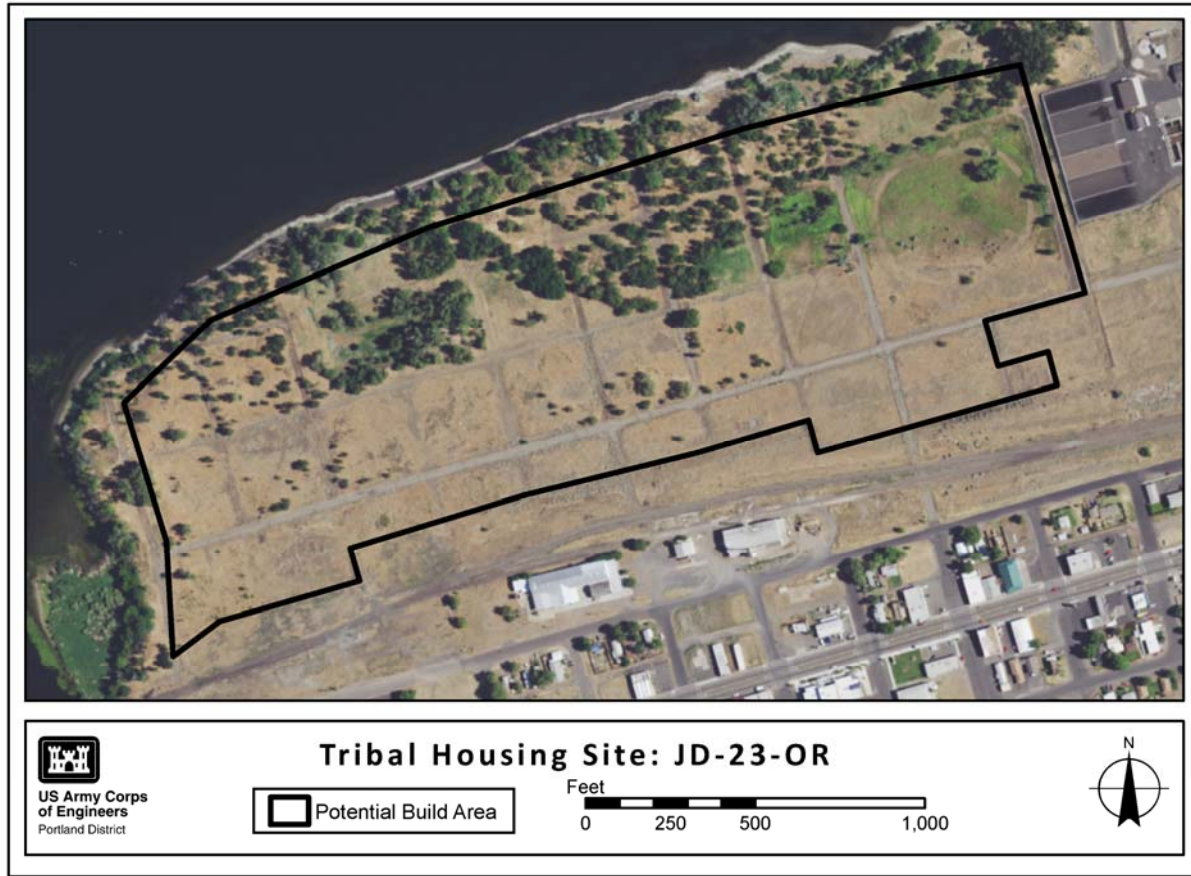
JD-21B-WA, Western Plymouth – by Natural Gas Line	
Ownership	USACE
Location	River Mile 290
Acreage	71 acres
Permanent, Single-family Housing Capacity	151-302
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Law Enforcement, Public School, Urgent Care 30 minutes: Hospital
Accessibility	Paved road; gravel road into the site
Topography	Flat
Environmental Constraints	Minimal natural resource impacts anticipated. Cultural resources can likely be avoided.
Available Utilities	Electricity adjacent; no water or sewer
Land Uses	Undeveloped open space; easement for buried natural gas line
Notable Risk	Proximity to natural gas pipeline



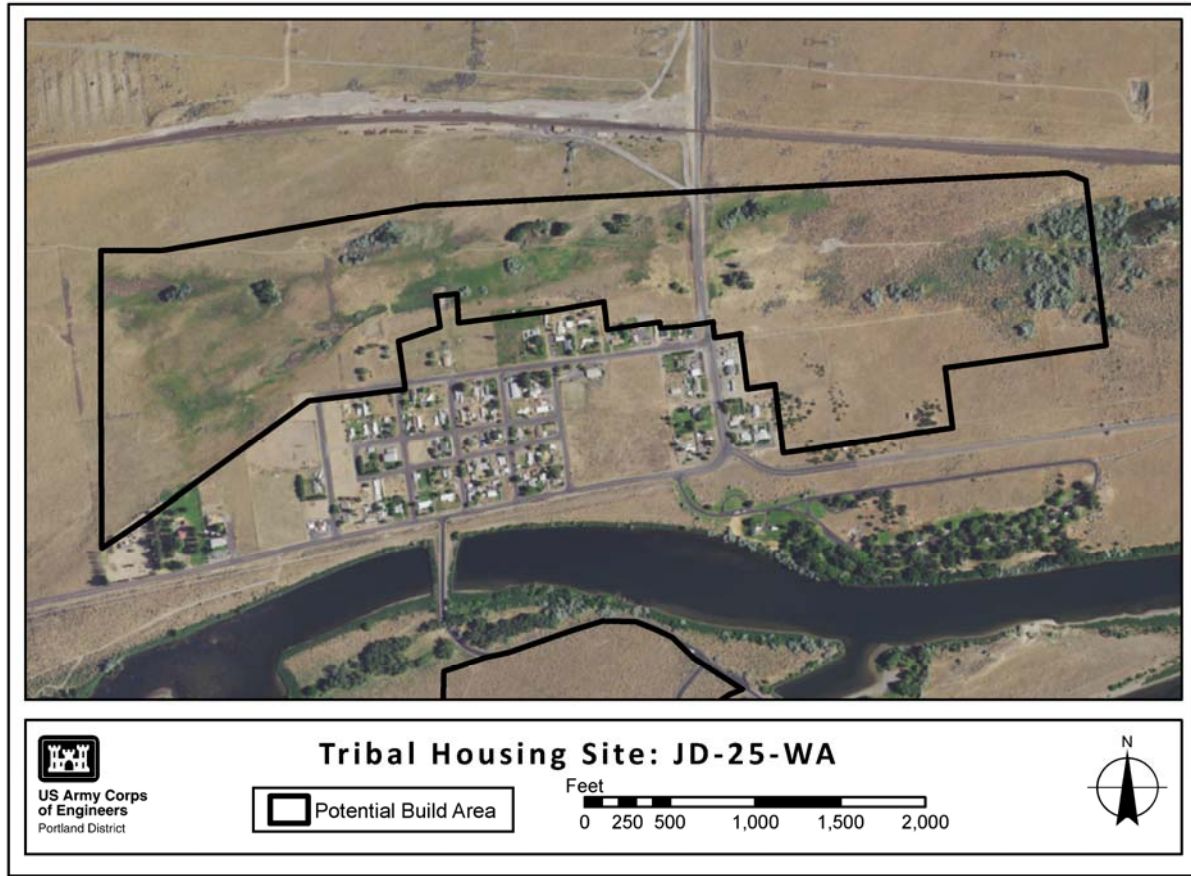
JD-22-OR, West of Umatilla River	
Ownership	USACE – Stewardship Land
Location	River Mile 288
Acreage	43 acres
Permanent, Single-family Housing Capacity	99-197
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Hospital, Law Enforcement, Public School, Urgent Care
Accessibility	Local road network
Topography	Flat
Environmental Constraints	Minimal natural resource impacts anticipated. Significant cultural resources are present and will require mitigation.
Available Utilities	Electricity, water, and sewer adjacent
Land Uses	Hunting, part of wildlife area; adjacent residential properties across the access road
Notable Risk	Potential adjacent land use conflicts



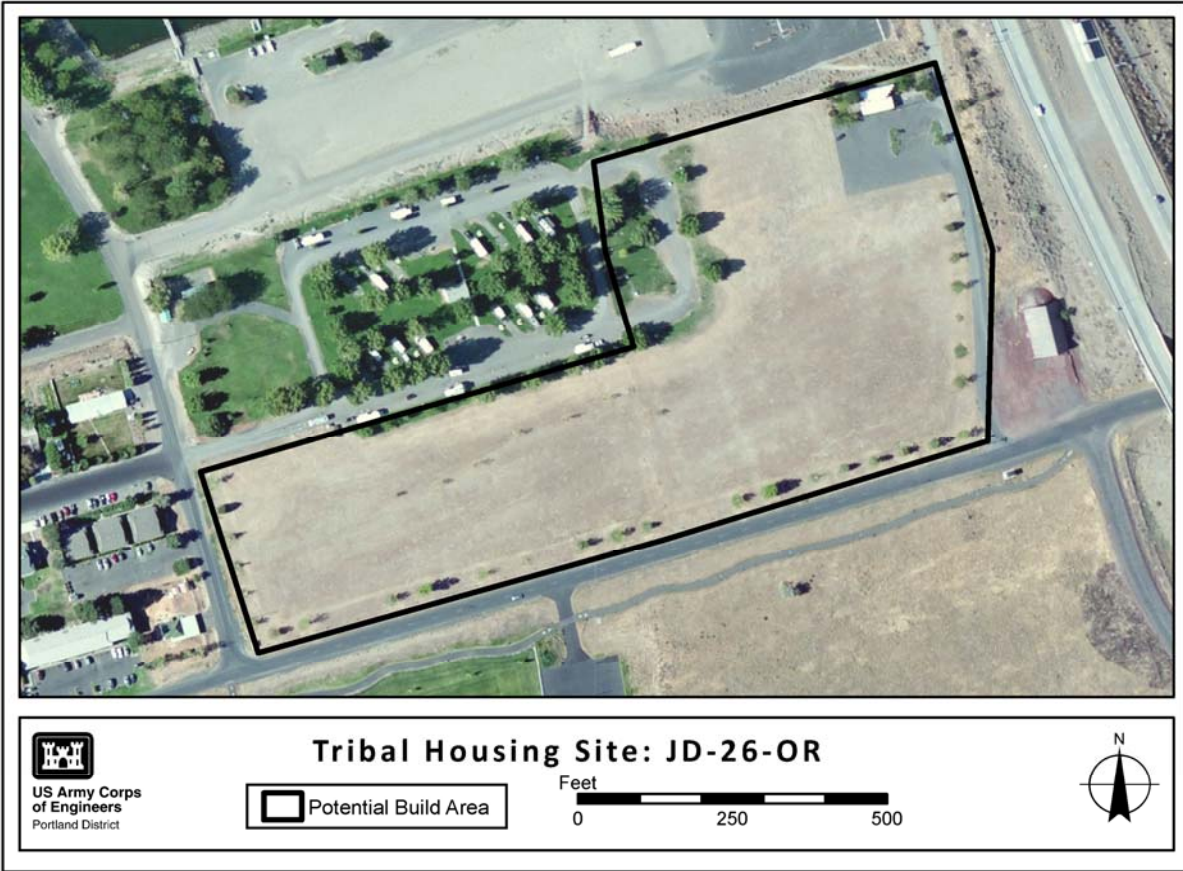
JD-23-OR, Umatilla Old Town Site	
Ownership	USACE
Location	River Mile 289
Acreage	55 acres
Permanent, Single-family Housing Capacity	134-267
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Hospital, Law Enforcement, Public School, Urgent Care
Accessibility	Local road network
Topography	Flat
Environmental Constraints	Significant cultural resources are present and will require mitigation.
Available Utilities	Electricity, water, and sewer adjacent
Land Uses	Adjacent to recreational site
Notable Risk	Cost and time associated with cultural resources mitigation



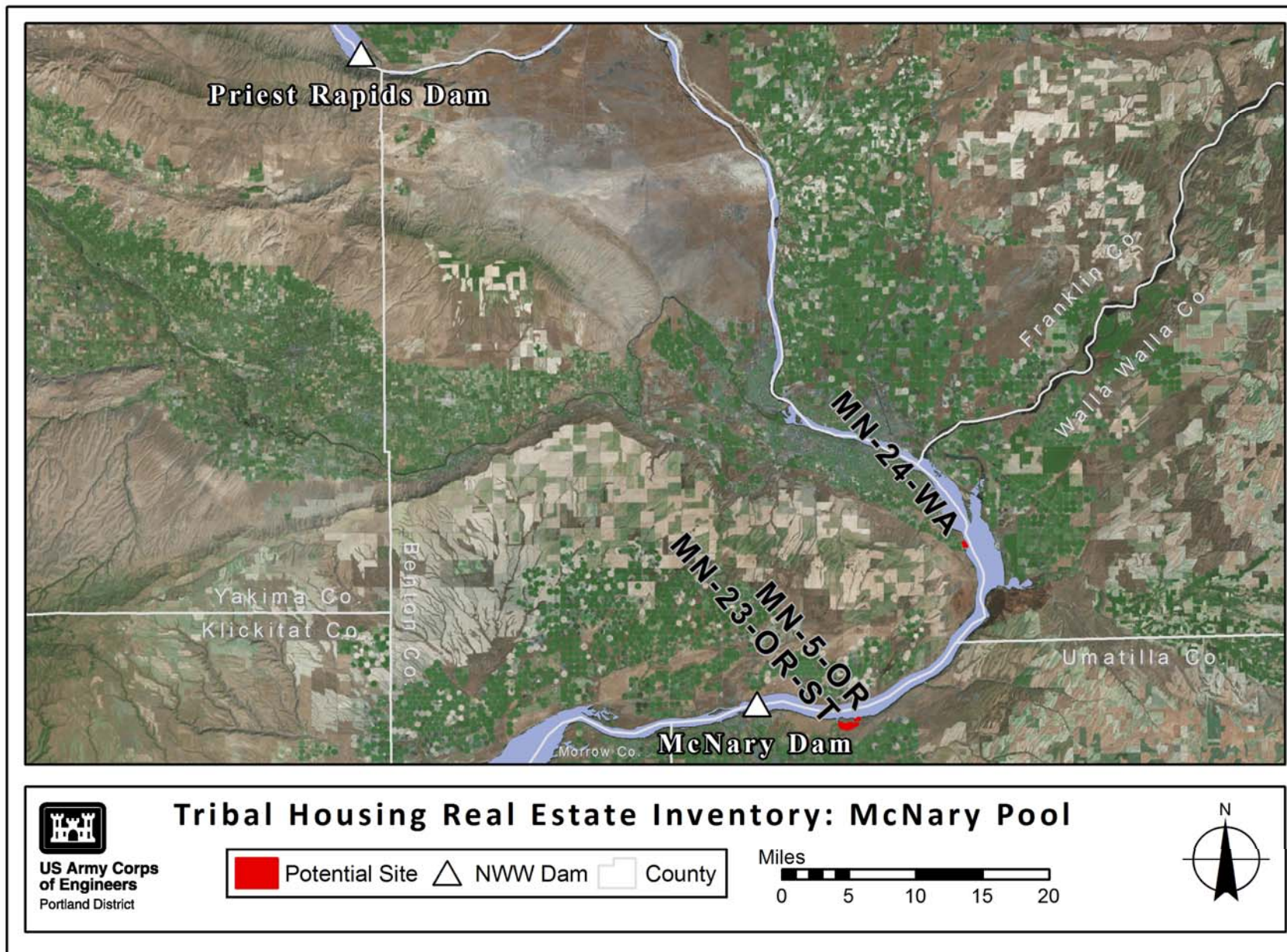
JD-25-WA, North of Plymouth	
Ownership	USACE
Location	River Mile 289-290
Acreage	68 acres
Permanent, Single-family Housing Capacity	171-343
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Hospital, Law Enforcement, Public School, Urgent Care
Accessibility	Local road network
Topography	Light slope
Environmental Constraints	Minimal natural resource impacts anticipated. Much of the site has not been surveyed for cultural resources.
Available Utilities	Electricity, water, and sewer adjacent
Land Uses	Adjacent to the city of Plymouth
Notable Risk	Potential adjacent land use conflicts



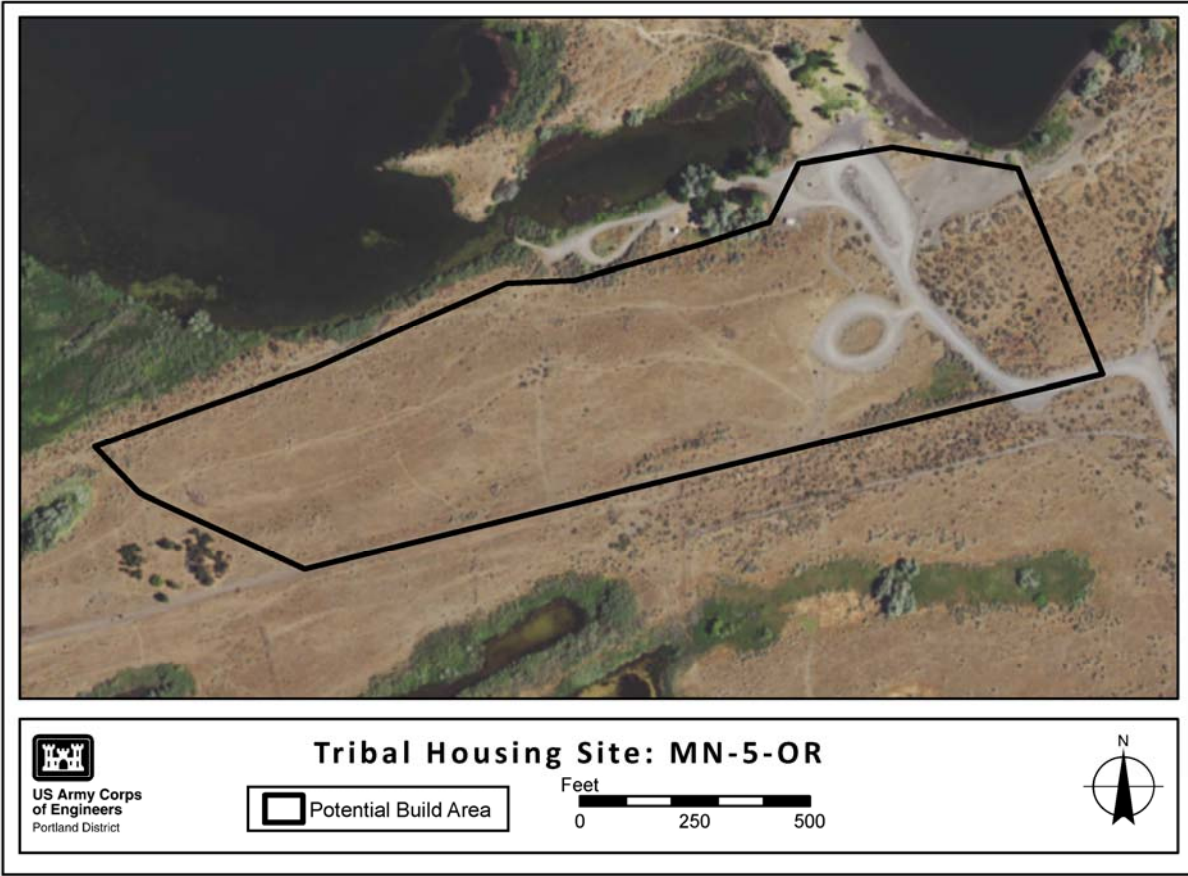
JD-26-OR, Umatilla Marina Park	
Ownership	USACE
Location	River Mile 290
Acreage	12 acres
Permanent, Single-family Housing Capacity	26-52
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Hospital, Law Enforcement, Public School, Urgent Care
Accessibility	Local road network
Topography	Flat
Environmental Constraints	Minimal natural resource impacts anticipated. Much of the site has not been surveyed for cultural resources.
Available Utilities	Electricity; municipal water and sewer from the City of Umatilla
Land Uses	Adjacent to a park and marina
Notable Risk	Portions of land included in transfer to the BIA under the Right Of First Refusal



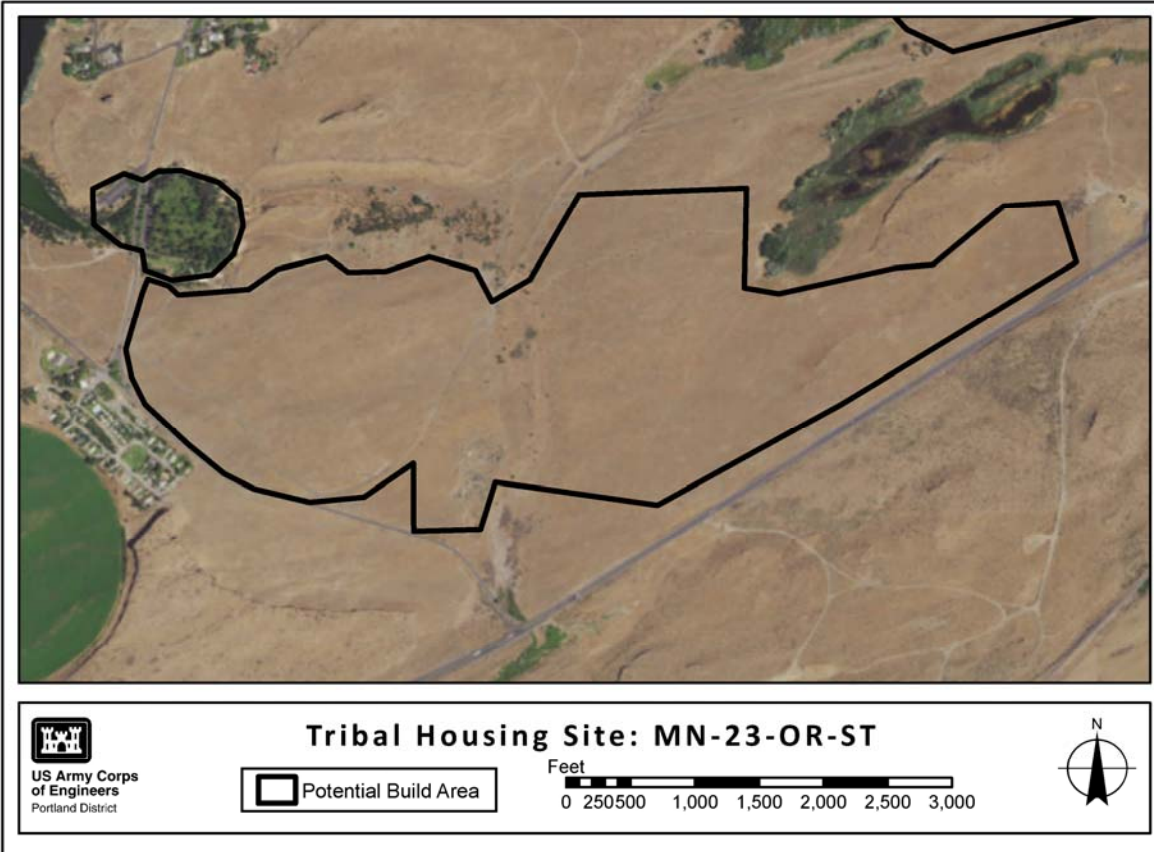
	River Mile	County	Acreage	Land Ownership	Potential Housing Capacity	Notable Risk
MCNARY DAM POOL						
MN-5-OR, Warehouse Beach	299	Umatilla	22	USACE	26-52	Potential adjacent land use conflicts
MN-23-OR, Hat Rock State Park	299	Umatilla	160	Oregon	357-714	Potential adjacent land use conflicts
MN-24-WA, Hover Park, South of Toothacre	317	Benton	50	USACE	90-180	At-grade railroad crossing



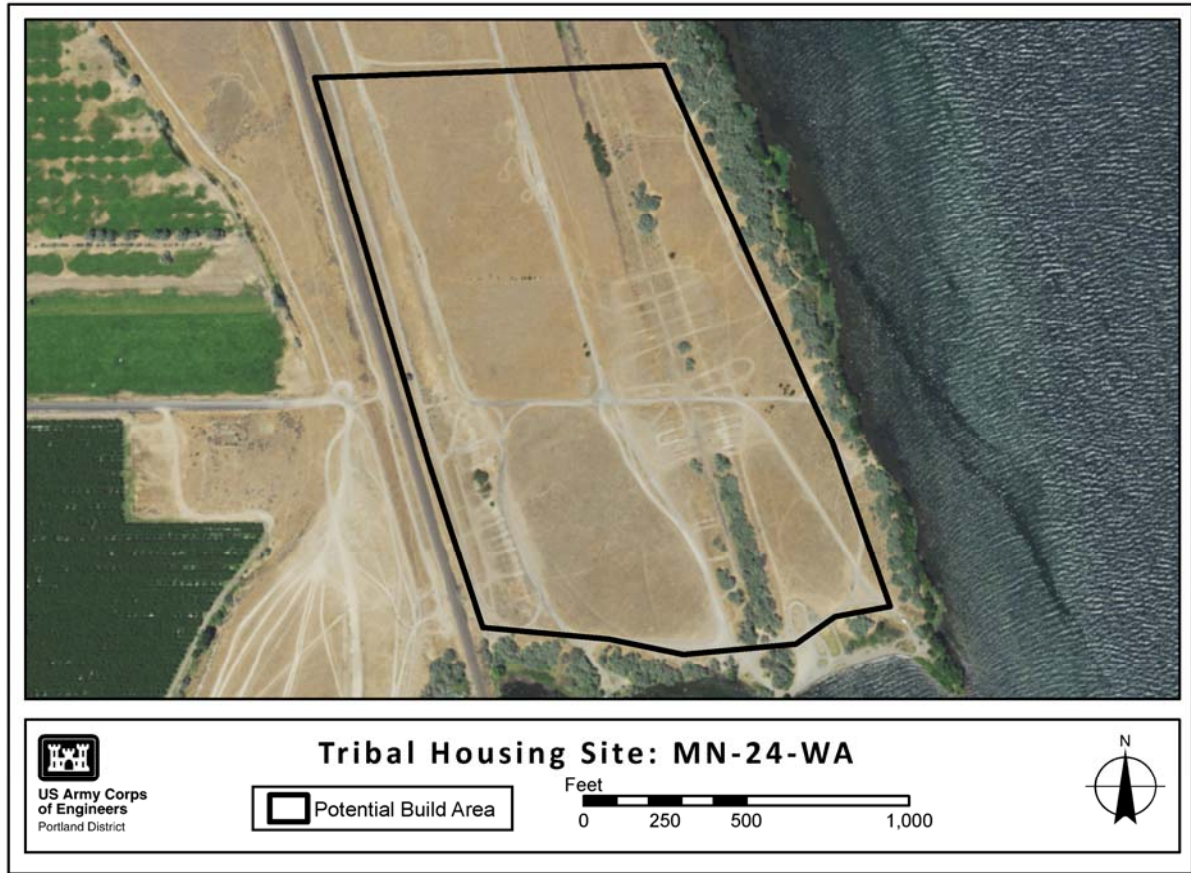
MN-5-OR, Warehouse Beach	
Ownership	USACE
Location	River Mile 299
Acreage	22 acres
Permanent, Single-family Housing Capacity	26-52
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Law Enforcement, Public School 30 minutes: Hospital, Urgent Care
Accessibility	Gravel road (old railroad bed) off Highway 730
Topography	Side hill, estimated 100 foot drop from the north to the south; large amount of basalt rock outcrops
Environmental Constraints	Minimal natural resource impacts anticipated. Cultural resources can likely be avoided.
Available Utilities	Electricity adjacent; no water or sewer
Land Uses	Small primitive campsite on northern edge of site; remaining area undeveloped open space
Notable Risk	Potential adjacent land use conflicts



MN-23-OR, Adjacent to Hat Rock State Park	
Ownership	State of Oregon
Location	River Mile 299
Acreage	160 acres
Permanent, Single-family Housing Capacity	357-714
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Law Enforcement, Public School 30 minutes: Hospital, Urgent Care
Accessibility	Adjacent to highway; direct access to park facilities on paved road
Topography	Mild slope: developable
Environmental Constraints	Natural resource impacts not anticipated. Unknown cultural resources require survey.
Available Utilities	Electricity adjacent; no water or sewer
Land Uses	Some of the area is park land; primarily undeveloped open space
Notable Risk	Potential adjacent land use conflicts



MN-24-WA-Hover Park, South of Toothacre	
Ownership	USACE
Location	River Mile 317
Acreage	50 acres
Permanent, Single-family Housing Capacity	90-180
Services Travel Time	15 minutes: EMS, Fire Station, Gas Station, Grocery Store, Public School 30 minutes: Hospital, Law Enforcement, Urgent Care
Accessibility	Primitive road: railroad crossing required
Topography	Flat
Environmental Constraints	Minimal natural resource impacts anticipated. Site has not been surveyed for cultural resources.
Available Utilities	Electrical service exists across railroad tracks; on-site water system and sewage treatment facility required
Land Uses	Undeveloped open area
Notable Risk	At-grade railroad crossing



5.2. Private Lands

Review of the RMLS on June 16, 2016 identified 14 sites on the Bonneville, The Dalles, and John Day pools that may warrant further consideration. No private lands meeting the initial screening criteria were discovered on the McNary pool. Pending confirmation from Army General Counsel, legal authority to acquire private lands for the construction of a Native American fishing village pursuant to the 1950 Flood Control Act is presumed to exist in 33 U.S.C. § 701c-1. For the purposes of this inventory, it was assumed that private land acquisition is authorized.

	River Mile	County	Acreage
BONNEVILLE POOL			
BN-13-OR-P, Hood River	161	Hood River	34
BN-14-WA-P, Stevenson	151	Skamania	49
BN-15-OR-P, Lonepine Development	191	Wasco	28
BN-16-OR-P	178	Wasco	26
BN-17-WA-P, Wishram I	155	Skamania	40
THE DALLES DAM POOL/LAKE CELILO			
TD-14-WA-P, Wishram	200	Klickitat	11
TD-15-WA-P	200	Klickitat	60
TD-16-WA-P	200	Klickitat	20
JOHN DAY DAM POOL			
JD-31-OR-P, Arlington	242	Gilliam	11
JD-32-OR-P, Boardman 1	269	Morrow	20
JD-33-OR-P, Boardman 2	268	Morrow	48
JD-34-OR-P, Irrigon 1	281	Umatilla	22
JD-35-OR-P, Irrigon 2	285	Umatilla	11
JD-36-OR-P, Umatilla	290	Umatilla	85



6. Summary

NWP completed the assessment and inventory of lands available in the Bonneville, The Dalles, John Day, and McNary Pools. Of the sites screened and evaluated, a total of 22 public (16 USACE, two USFS, and four state) and 14 private sites may be feasible sites for constructing a Native American village.

7. References

Brown, A.M. Memorandum for the Deputy Assistant Secretary of the Army for Civil Works (Policy and Legislation). Subject: Authority to construct a new Indian village satisfactory to the Indians and the Bureau of Indian Affairs, The Dalles Dam. 7 March 2016. Department of the Army Office of the General Counsel.

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