

Draft Environmental Assessment

Port Morrow Outdoor Recreation Park Project John Day Lock and Dam Morrow County, Oregon

Draft
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**US Army Corps
of Engineers** ®
Portland District

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1 INTRODUCTION

The following is a National Environmental Policy Act (NEPA) Draft Environmental Assessment (EA) that evaluates the potential environmental impacts from the proposed real estate action on the John Day Lock and Dam property under the jurisdiction of the U.S. Army Corps of Engineers (Corps). NEPA (42 U.S.C. 4321 et seq.) requires that all agencies of the federal government must conduct an appropriate environmental review before taking any federal action that requires compliance with NEPA. As a result, this proposed Corps real estate action (issuance of a lease) is subject to NEPA and requires the preparation of this Draft EA for the use of the site as a recreation area by the Port of Morrow (Port).

A previous Public Notice and EA were completed for this project. The first Public Notice (CENWP-PM-E-11-05) was issued on 19 September 2011 and had an extended comment period which ended on 31 December 2011. This current revised draft edition was warranted due to consideration of an additional alternative which reduced impacts to the riparian area and also to incorporate comments/concerns presented by Native American Tribes into the Corps' evaluation.

1.1 PROJECT LOCATION

The John Day Lock and Dam (John Day) is located near Rufus, Oregon about 216 miles upstream from the mouth of the Columbia River. John Day consists of a navigation lock, spillway, powerhouse, and fish passage facilities. Various recreational facilities are provided along the shores of Lake Umatilla of the Columbia River and on the John Day River. Port of Morrow's proposed recreational development is located directly adjacent to Boardman Park in Boardman, Morrow County, Oregon (Sections 4 and 9, Township 4 North, Range 25 East). The site is approximately 50 acres.



Figure 1. Vicinity Map for Boardman, OR

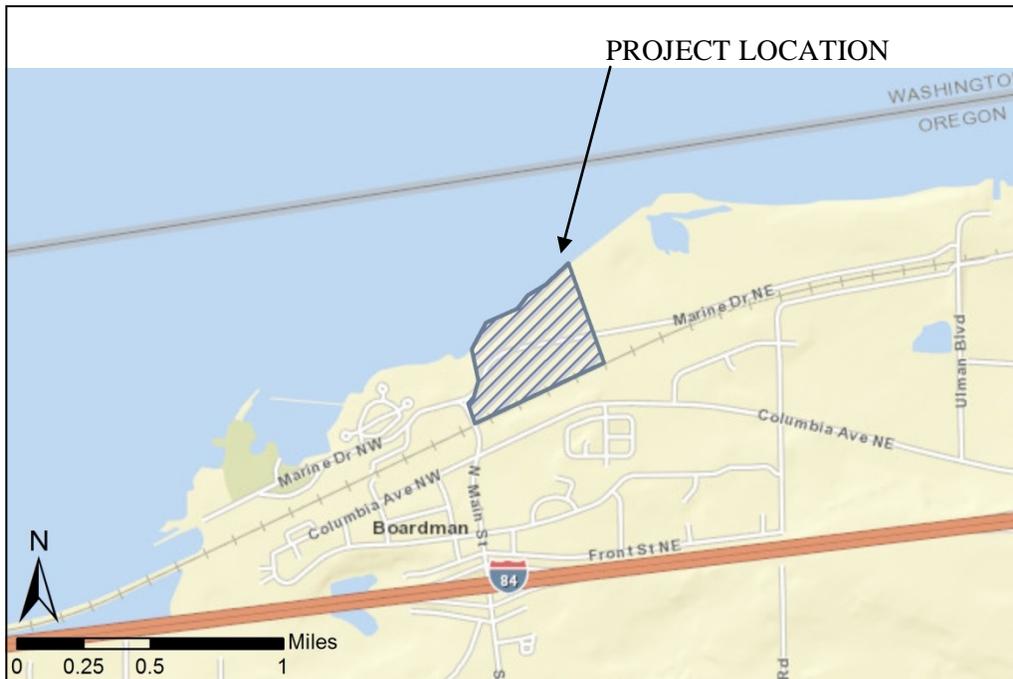


Figure 2. Project Location Map

1.2 LEAD FEDERAL AGENCY

The Corps) is the lead federal agency for this draft EA under the National Environmental Policy Act (NEPA). As the lead federal agency, the Corps ensures overall compliance with all applicable environmental laws, regulations, Executive Orders, and agency policies regarding the proposed federal action.

1.3 AUTHORIZATION

The Flood Control Act of 1950 authorized the construction of John Day Lock and Dam and associated lands. The John Day Lock and Dam is authorized to include navigation, flood control and power production purposes. Water storage at the dam also provides for irrigation, recreation, and fish and wildlife habitat.

The John Day Lock and Dam Master Plan (Corps 1976) was developed to provide a framework for John Day. The master plan evaluates the resources and the impact of the Lock and Dam on the surrounding area. Also considered within the plan is the designation of lands desirable for the enhancement of public recreation, fish and wildlife protection, and resource management. The land at the proposed Port Morrow project site was identified in the master plan for recreational purposes.

1.4 PURPOSE AND NEED FOR ACTION

Corps policy is to provide outdoor recreation opportunities to the public on Corps property where there is an unfulfilled demand and a corresponding deficit of those facilities (Engineer Regulation (ER) 1130-2-550). This shortfall is fulfilled by either the Corps constructing the facilities itself or allowing others to do so on Corps' lands through an out-grant process.

The purpose of this environmental review is to evaluate the Port's request to develop recreational facilities at the proposed site on the John Day Lock and Dam property and disclose any resulting potential environmental effects of the proposed project. The Port has been working collaboratively with the City of Boardman and the Boardman Park & Recreation District to develop and enhance recreational opportunities in the local community.

The purpose for this action is to fulfill a need for recreational opportunities on both the local and regional scale. As part of John Day Lock and Dam, the Corps operates or leases various recreational facilities along the shores of Lake Umatilla and on the John Day River. The proposed parcel is classified under the John Day Lock and Dam Master Plan (1976) for recreational development but has remained undeveloped. Currently, the Corps has no funding to develop new recreational facilities.

The results of a Market and Feasibility Analysis (Anna Aylett 2014) indicate the need for additional recreational facilities in the Boardman area. The analysis found that the Boardman Community Development Association and other key stakeholders have been actively seeking opportunities in Boardman and Morrow County for community and tourism development projects. Baseball, softball, and soccer fields are in demand in the community. For example, a youth soccer club currently practices in the elementary school playgrounds where goals and lines cannot be left setup, making it difficult to have effective practices. Also, one of the playgrounds is uneven and rocky, creating potentially unsafe conditions and causing visiting teams to not use the site. Complexes with multiple sports fields exist within 30 miles, but only cater to baseball and softball. Walking and biking paths with the playground, an amphitheater, a dog park, and the BMX track will also set this facility apart from others in the region. The analysis found that Boardman, as a growing community, would benefit from having safe, public areas for physical activities.

The proposed Port of Morrow project would improve local and regional recreational opportunities. The site is well suited for development as an outdoor recreation park. The property to the west of the proposed park is managed by the Boardman Park and Recreation District and houses a marina, campground, and day use area. This park has year-around visitation. On the east side of the proposed development is Port of Morrow property that provides a conference center, lodging facility, offices, and additional dispersed recreation opportunities. An outdoor recreation park would enhance the use of the neighboring activities and provide a well-designed, safe, and managed area that supports recreational services for the community.

2 PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

The Corps is considering leasing lands to the Port to expand recreational opportunities within the John Day property. The Port is proposing to construct a recreational park

on U.S. Army Corps of Engineers (Corps) property adjacent to the Port of Morrow office building in Boardman, Oregon (Figures 1 and 2). The Port has requested the use of approximately 50 acres to develop as a park and recreation area. This acreage is situated between Boardman Park and Recreation District-leased property and the Port of Morrow property. It is located in the Willamette Meridian, Township 4N, Range 25E, and Section 9 in Morrow County, Oregon.

2.2 ALTERNATIVE 1- NO ACTION ALTERNATIVE

The No Action Alternative is evaluated in order to determine the relative merits and disadvantages between taking no action and that of the action alternatives and provides a baseline for identifying the environmental effects to the human environment. No action is the status quo. The Corps property would not be leased to the Port of Morrow. It would remain under direct management by the Corps. The property would continue to be classified for recreational use but no recreational facilities would be developed. As a small, isolated Corps property, it would continue to receive limited active management. Adjacent non-Corps properties would likely continue to be developed for various economic, industrial, and/or recreational purposes.

2.3 ALTERNATIVE 2- FULL BUILD OUT OPTION

Alternative 2 would allow the Port to lease approximately 50 acres from the Corps and to develop the parcel as a recreational facility and park. Under the Full Build Out Option, the Port has presented a conceptual design (Figure 3) for the recreation park that includes a ball field complex for baseball, softball, and soccer; several outdoor courts for basketball and tennis; an amphitheater; a dog park; a BMX track; picnic areas, playgrounds, and shelters; concession areas; parking and trails. This alternative includes work (placement of fill) below the Ordinary High Water (OHW) line to construct the amphitheater, bus parking and drop off area, and a portion of the baseball field.



Figure 3. Alternative 2, the Full Build Out Option.

2.4 ALTERNATIVE 3 SETBACK OPTION- AGENCY PREFERRED ALTERNATIVE

The proposed action, Alternative 3, is similar to that described in Alternative 2. That is, the intent is to lease approximately 50 acres from the Corps and to develop the parcel as a recreational facility and park. Under the Setback Option, the Port intends to build the same amenities described in alternative 2 for the recreation park that includes a ball field complex for baseball, softball, and soccer; several outdoor courts for basketball and tennis; an amphitheater; a dog park; picnic areas, playgrounds, and shelters; concession areas; parking; and trails. The difference is that Alternative 3 includes a 50-foot setback from the ordinary high water mark of the Columbia River (Figure 4), thereby avoiding any in-water work and retaining the riparian vegetation along the river bank.

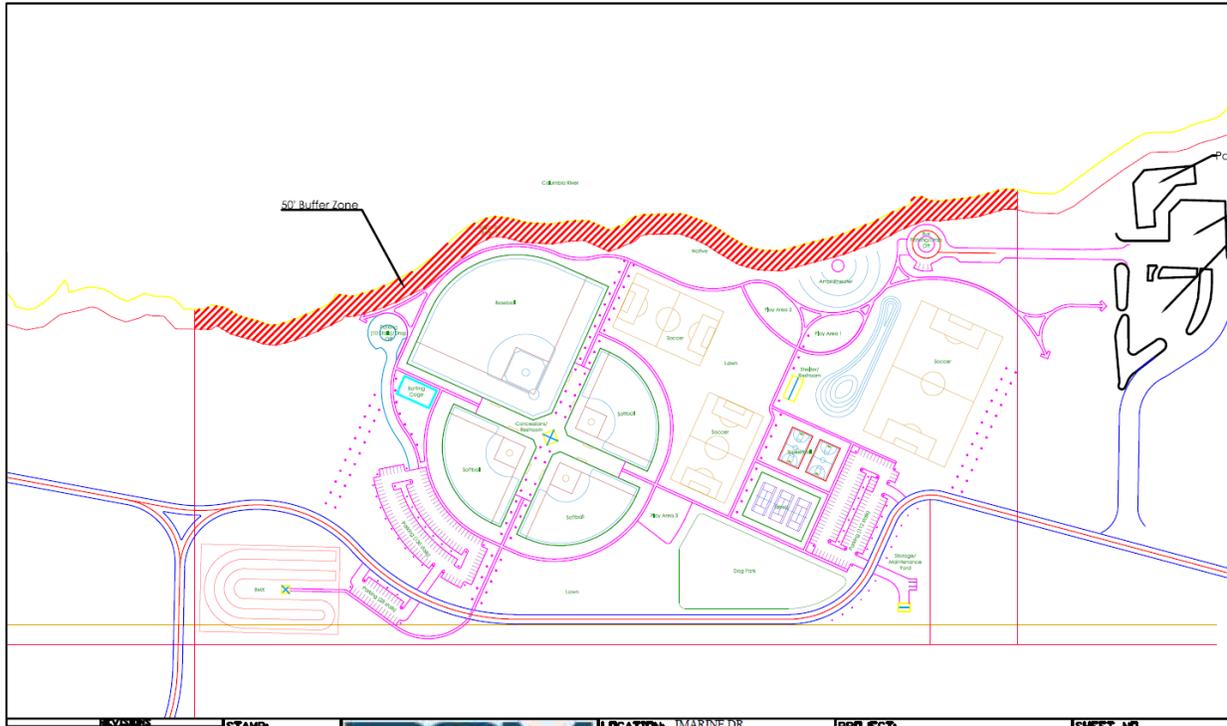


Figure 4. Alternative 3, the setback option showing a 50 foot setback buffer along the Columbia River.

A riparian buffer is contained in the 50 foot setback. This stand of trees would be left along the Columbia River to preserve crucial wildlife habitat and provide some shade. This natural feature would be left in an undeveloped state and incorporated into the recreation park complex as a natural area. Within the shoreline/buffer area, there is a one acre area that is dominated by the invasive Russian olive tree (*Elaeagnus angustifolia*). As part of this alternative the Russian olive would be removed and replaced with native trees such as black cottonwood (*Populus trichocarpa*) or willow (*Salix sp.*).

Alternative 3, the setback option is the agency preferred alternative for this project.

2.5 WORK DESCRIPTION

This work description is common to both of the build alternatives (Alternatives 2 and 3). Construction of the project is expected to take about 7 months once work is initiated. Work for the proposed project includes filling and grading (re-contouring) much of the 50-acre site to resemble the recreational areas shown in Figures 3 and 4. Basketball courts and baseball fields would need a level surface. The soccer court would be excavated and would be 6 to 8 feet below grade. The amphitheater would also need some grading and excavation. The roads would be paved. A sewer line would be extended to get public facilities tied into the City sewer line. Water lines and a sprinkler system would be installed as well as an underground electrical supply. Surface water drainage would be directed to internal bio swales, and there would be no direct discharge to the Columbia River. It is estimated that there would be about

15,000 to 17,000 cubic yards of material excavated on site and about 25,000 cubic yards of fill material needed. Three borrow sites have been proposed nearby; all approximately 1.5 to 2 miles west of the project site (see Figure 5). The Port of Morrow has determined that based on the amount of fill material needed, only one of the three potential borrow sites (Site #1) would be used. The borrow sites are stockpiles of clean earth excavated from projects developed on former agricultural lands. Material would be tested for its suitability prior to use. Construction work is likely to occur between the hours of 7 am to 6 pm. Equipment that would be utilized during construction include: water truck, dump trucks, grader, roller/compacter, excavator, bulldozer and backhoes.



Figure 5. Locations of three proposed borrow sites for the project.

3 AFFECTED ENVIRONMENT

The proposed project area is approximately 50 acres in size and is located between the Port of Morrow property and the Boardman Park and Recreation District-leased property. The project area is currently composed of two distinct areas separated by Marine Drive. The area south of Marine Drive is the location of the former Boardman Wastewater Treatment Facility. This area has been previously disturbed by the construction and operation of the former facility.

3.1 CLIMATE AND GLOBAL CLIMATE CHANGE

The project area is considered semi-arid due to the influences of the Cascade and coastal mountains. Moist marine air from the Pacific Ocean is forced upwards over

the western slopes of the Cascade Mountains. As the air descends on the eastern side of the Cascades it warms and loses the relative humidity and reduces the potential for precipitation. Wintertime temperatures are cool to freezing. Winter snow and precipitation result primarily from frontal systems which have not lost all of their precipitation in the mountains. The majority of precipitation falls as snow. Yearly precipitation is about 8.5 inches with 7 inches of that falling as snow. Summer precipitation is principally from thunderstorms and convection showers. The average maximum temperature in the Boardman area is 65°Fahrenheit (F) with the average minimum temperature of 41°F. The warmest month is July with an average maximum of 90°F. The coolest month is usually January with an average minimum temperature of 27°F (Western Regional Climate Center 2005).

3.1.1 Climate Change

The Council on Environmental Quality (CEQ) issued draft guidance (dated February 18, 2010) requiring all NEPA documents to evaluate the impacts from a project's green house gas (GHG) emissions, if the direct plus indirect emissions exceed a threshold of 25,000 metric tons per year (Council for Environmental Quality 2010). Gases that trap heat in the atmosphere are called greenhouse gases. These include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases (Environmental Protection Agency 2014).

3.2 GEOLOGY AND SOILS

The project area is located within the Columbia Basin physiographic province and the Umatilla Sub-basin which is a large semi-arid region of northeastern Oregon bounded by the Blue Mountains to the south and east and the Columbia River to the north. This portion of the Columbia Basin is a lava-floored plain overlain by sand, gravel, and silt. This material was deposited during past flooding and further worked by the wind. Columbia River basalt underlies much of the project area. Lava flows from the Miocene period provided much of this material. Basalt is typically fine grained, dark grey, and dense in the massive parts of the flows but may be more cinder like in the upper parts. Upper portions of basalt are usually oxidized and partly weathered.

In the Port Morrow area much of the basalt is overlain by sedimentary or alluvial material. In the case of Port Morrow the soils formed in alluvial sands. Aeolian (wind driven) sands make up the primary parent material within the project area.

There are two soil types found within the project area. In the northeast portion of the property a Quincy, loamy fine sand occupies about 20% of the property while the remainder is Quincy fine sand.

The Quincy fine sand is a very deep, excessively drained soil formed in fixed sand. It is usually found on terraces. Quincy fine sand is dark brown in color. It has rapid permeability and is susceptible to soil blowing because of the predominance of fine sand (Soil Conservation Service 1982).

Quincy loamy fine sand is also a deep, excessively drained soil formed in mixed sand and is also found on terraces. The upper horizon (top 6 inches) is characterized as dark brown loamy sand. Permeability is rapid but runoff is usually slow. As with the Quincy fine sand, this soil is susceptible to soil loss due to wind erosion (Soil Conservation Service 1982).

3.3 WATER QUALITY

By volume of water, the Columbia River is the fourth largest river in the United States and the largest on the West Coast. The Columbia is fed by rains and snowmelt from the surrounding mountains and tributaries. Much of the hydrology of the Columbia has been altered by a number of hydroelectric dams along the mainstem as well as water withdrawals for irrigation. The Columbia is a highly regulated system that is managed for hydroelectric production, flood control, transportation, fish passage and irrigation.

The proposed Port of Morrow Recreation Park would be located on the left bank within the John Day Reservoir (Lake Umatilla). Water quality within the reservoir exceeds State standards for a variety of parameters.

Table 1. Water quality issues in the project area.

303 (d) list	Parameter
Category 5	Arsenic
	Temperature
	Polychlorinated Biphenyls (PCBs; from fish tissue)
	Dichlorodiphenyltrichloroethane (DDT) breakdown products [dichlorodiphenyldichloroethylene (DDE)] in fish tissue
Category 4a	Dioxin
	Dissolved gas

According to a recent Oregon Department of Environmental Quality (ODEQ) study that included the Boardman area, the water temperature averaged 22° Celsius (72°F), dissolved oxygen (DO) of 9.4 milligrams per liter (mg/L) and turbidity average of 2 Nephelometric Turbidity Units (NTUs). The temperature and low DO are above state standards. After analyzing a variety of different fish for residual contaminants they found the fish tissue to be high in DDT products and PCBs. Both of these chemicals have a high bioaccumulation potential. They also found the shoreline in the Boardman area to have a diminished riparian habitat along the river (ODEQ 2012). High water temperatures, low dissolved oxygen, and high dissolved gasses all have negative effects on fish, especially salmon.

3.4 LAND USE AND HAZARDOUS MATERIAL

Topography, land ownership patterns and availability of water (both domestic and irrigation) influence land use and development in the vicinity of the project. Agriculture

is the dominant land use in Morrow County. Cattle, wheat and potato production are the major agricultural uses. The Port of Morrow is the second largest port in Oregon, and there are port facilities in the project area. Transportation (water, rail and highway) and some residential areas are also in the project vicinity.

The project area is north of Marine Drive. It is relatively undeveloped and adjoins the Columbia River. Several underground utilities pass through this area including electrical, water, and communication lines. An abandoned railroad bed is also present north of Marine Drive. A stand of mature cottonwood trees interspersed with Russian olive shrubs is located in a portion of the project area. An existing paved trail connects the Port property with the Boardman Parks and Recreation District property.

Past site usage in the project area includes; a cemetery (that has been reclaimed and moved), a waste treatment lagoon, and placement of dredged material in the northwest portion of the project area.

The three proposed borrow sites include stockpiled material. Two nearby agricultural fields were recently developed with the construction of data processing facilities. Excess material from the construction has been stockpiled in three locations and is available for use. Soils containing hazardous waste, even if naturally occurring, are not eligible as borrow material. Though extensive analysis is not mandated, to minimize inadvertent transfer of contamination, borrow material whether being brought onto Corps property or taken from Corps property would be screened for environmental contaminants prior to transfer. Soil exceeding background levels is unsuitable as borrow material and would not be used.



Figure 6. Remnants of the sewage lagoon on the project site.

3.5 VEGETATION

In regards to vegetation, the project site is mostly disturbed based on past use and current conditions, as the site contains many invasive plant species. The site is bisected by railroad tracks, a telephone line, roads, and a recreation trail. Past uses include a cemetery, sewage lagoon, and a disposal area for dredged material. The majority of the site consists of grasses and shrubs (see Figure 7), but along the shoreline of the Columbia there are many large trees, primarily cottonwoods and the invasive Russian olive. Table 2 shows many of the plant species that can be found at the project site.

The borrow sites are unvegetated stockpiles.

Table 2. Plant species present in the project vicinity.

	Common Name	Scientific Name
Grass/Forbs	Cheatgrass	<i>Bromus tectorum</i>
	Russian thistle	<i>Kali tragus</i>
	Bulbous blue grass	<i>Poa bulbosa</i>
	Fiddleneck	<i>Amsinkia intermedia</i>
	Pepperweed	<i>Lepidium latifolium</i>
	Ragweed	<i>Ambrosia artemisiifolia</i>
	Common mullen	<i>Verbascum thapsus</i>

	Yarrow	<i>Achillea millefolia</i>
	Salsify	<i>Tragopogon dubius</i>
	Bentgrass	<i>Agrotis</i> sp.
Shrubs	Bitterbrush	<i>Purshia tridentata</i>
	Rabbit brush	<i>Ericameria nauseosa</i>
	Sand sage	<i>Artemisia filifolia</i>
	Tumbleweed	<i>Salsola iberica</i>
Trees	Black cottonwood	<i>Populus trichocarpa</i>
	Russian olive	<i>Elaeagnus angustifolia</i>
	Tree of Heaven	<i>Ailanthus altissima</i>
	Black locust	<i>Robinia pseudoacacia</i>



Figure 7. Typical vegetation at the project site.

3.6 WETLANDS

Although the National Wetlands Inventory (UFSWS 2014) identified a historic wetland (Palustrine emergent wetland) in the northwestern portion of the project area, a site visit conducted in July of 2012 by Corps personnel determined there were no wetlands on-site. Similarly, no wetlands impacts are expected from use of the borrow sites as these are existing stockpiles of material and no excavation is expected.

3.7 WILDLIFE

Wildlife near the project area includes: the desert cottontail rabbit (*Sylvilagus audubonii*), ground squirrel (*Otospermophilus beecheyi*), and mule deer (*Odocoileus hemionus*). Birds include: white crowned sparrow, crows, starlings and English sparrows. Predatory birds such as the red tailed hawk (*Buteo jamaicensis*) use the large cottonwoods on the bank for perches and roosting. Even though the habitat provided in the project area is somewhat disturbed, it still provides several functions for local wildlife such as nesting, burrowing opportunities, refuge and a source of food.

3.8 FISHERIES

Tribal and sports fishing are important activities in the mid-Columbia area. Fishing includes migratory fish (such as salmon and steelhead), resident fish, and introduced species (such as walleye and bass). The Oregon Health Advisory has issued a health advisory for the Mid-Columbia that due to moderate levels of mercury and PCBs found in fish tissue and recommends, no more than one resident fish should be consumed per week.

As previously noted, the northern edge of the project area abuts the Columbia River. The Columbia is an important river for both migrant and resident fish. The land-water interface that runs the length of the Columbia is important habitat for a variety of fish as it provides refuge for juvenile fish, spawning opportunities, thermal refuge in some locations, and is an important source of food. Many of the introduced fish species are predators for native salmon and trout. Table 3 is a partial list of fish found in the Mid-Columbia River.

Table 3. Fish species present in the project vicinity.

	Common Name	Scientific Name
Salmon and Trout	Chinook	<i>Oncorhynchus tshawytscha</i>
	coho	<i>O. kisutch</i>
	sockeye	<i>O. nerka</i>
	steelhead	<i>O. mykiss</i>
	westslope cutthroat trout	<i>O. clarki lewisi</i>
	rainbow trout	<i>O. mykiss</i>
	Bull trout	<i>Salvelinus confluentus</i>
	mountain whitefish	<i>Prosopium williamsoni</i>
Other Native Fish	lamprey	<i>Lampetra tridentata</i>
	white sturgeon	<i>Acipenser transmontanus</i>
	dace	<i>Rhinichthys sp.</i>
	sucker	<i>Catostomus sp.</i>
	sculpin	<i>Cottus sp.</i>
	shiner	<i>Richardsonius balteatus</i>
Introduced (non-native)	northern pikeminnow	<i>Ptychocheilus oregonensis</i>
	carp	<i>Cyprinus carpio</i>
	shad	<i>Alosa sapidissima</i>

Fish	catfish	Ameiurus sp.
	bluegill	Lepomis sp.
	bass	Micropterus sp.
	yellow perch	Perca flavescens
	walleye	Sander vitreus

*sp. indicates there is more than one species present in the Mid-Columbia.

3.9 ENDANGERED SPECIES

Since the early days of European settlement, the Columbia River has gone through a variety of alterations. Many of these alterations are large in scale. A partial list of changes include loss of riparian areas along the river, filling of the shoreline, installation of several hydroelectric dams, aquatic habitat loss, over-harvesting of fish, genetic manipulation (hatchery-origin fish), and the introduction of non-native aquatic species of which many compete for the same resources as native species. Over time these modifications have taken their toll on the native fishery, especially migratory fish. As a result, several salmon and trout have been listed under the Endangered Species Act (ESA). Additionally, critical habitat has been designated. Critical habitat is habitat needed by fish species in order to fulfill life requirements such as spawning, migration or rearing. Table 4 shows which ESA listed species (and their respective runs) have a good probability of occurring in or near the project area.

Table 4. ESA listed species in the project vicinity.

	Species	ESA status	Critical habitat in project area?
Chinook	Upper Columbia spring ESU	Endangered	Yes
	Snake River spring/summer ESU	Threatened	Yes
	Snake River fall ESU	Threatened	Yes
Steelhead	Upper Columbia DPS	Threatened	Yes
	Middle Columbia DPS	Threatened	Yes
	Snake River DPS	Threatened	Yes
Sockeye	Snake River ESU	Endangered	Yes
Bull trout	Columbia River DPS	Threatened	Yes

*DPS is a distinct population segment, ESU is evolutionarily significant unit

3.10 TRIBAL TREATY RIGHTS

Treaty reserved rights are outlined in each of the four Treaties of 1855 signed between the U.S. Government and each of the Columbia River Treaty Tribes, including the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), the Confederated Tribes and Bands of the Yakama Nation (Yakama Nation), the Confederated Tribes of the Warm Springs (CTWS), and the Nez Perce Tribe. In each of the individually signed treaties, the tribes relinquished or “ceded” their lands to the U.S. Government and retained (or reserved) certain rights. These rights include the

right to hunt and gather on lands of the United States, as well as to fish at all usual and accustomed stations (U&A) in common with other citizens and to erect structures to cure fish.

The proposed project lies within an area considered as a U&A fishing area for the CTUIR, the Yakama Nation, the CTWS, and the Nez Perce Tribe.

3.11 RECREATION

Within the City of Boardman there are five city parks, three of which are undeveloped, to serve the local inhabitants. Table 5 shows a summary of recreational opportunities in the Boardman area. Aylett (2014) found that youth sports are popular in the area. In Boardman, the Columbia Youth Soccer Club league averages between 130 and 150 kids from ages 4 to 14. The Boardman Little League program averages about 130 youths annually. In 2014 there are two tee ball teams, two coach pitch teams, one minor, two major, and two junior teams covering baseball and softball (Aylett 2014). Each team has between 12 and 16 players. Boardman is missing an opportunity to host local and regional tournaments for Little League baseball and softball, ASA softball, American Legion baseball, and any other related events. Soccer is also quite popular in Boardman and opportunities for local and regional, youth, high school, and adult tournaments are also missed due to the lack of a venue.

Table 5. Recreational opportunities in the project vicinity.

Recreation Area		Size (acres)	Facilities
Local Parks	Boardman City Park	3.4	Baseball, basketball/volleyball and playground equipment
	Thomas Brownwell Park	1.1	Open space
	Dunes St. Park	1.1	undeveloped
	Hill View Park	4.4	undeveloped
	Desert Springs Estate Park	0.1	Play area, basketball court
RV Park/marinas	Boardman Marina Park (Corps)	141	Basketball, swimming, volleyball, softball
	Driftwood RV Park	approx. 11	Tennis, basketball
School facilities	Riverside high school	approx. 35	Football, baseball, tennis, soccer field and gym
	Sam Boardman Elementary School	approx. 11	School play equipment, basketball, open space
	Windy River Elementary School	approx. 11	School play equipment, basketball, open space

Source: City of Boardman 2003

3.12 AIR QUALITY

Air quality in the Boardman area is not the best when compared to the rest of Oregon in regards to air pollution, although it seems to be improving. While there are odors from local feedlots and some exhaust from motor vehicles, the major impact to local air quality comes from Portland General Electric's (PGE's) coal-fired power plant. According to ODEQ, the Boardman plant is the largest single source of air pollution in Oregon. The plant emits about 25,000 tons of air pollution per year (ODEQ 2010). The power plant is due to be closed in 2020. The air quality index for Boardman is 33 while the rest of the State of Oregon averages 25. The air quality index runs from 0 to 500, with higher values indicating greater pollution. Boardman air quality index is 33% greater than the Oregon average and 11% less than the national average. The Boardman air pollution index is 4,405,170 pounds. The air pollution index is the sum of the most hazardous air pollutants displayed in pounds. Boardman air pollution index is 31% less than the Oregon average and 33% less than the national average (Area vibes 2014). Major air quality concerns include particulate matter, carbon monoxide, sulfur dioxide, and lead.

3.13 NOISE

The major noise contributor to Boardman is Interstate 84, which bisects the city going east-west (City of Boardman 2003). The railroad and wind turbines east of town are also important contributors to noise levels.

3.14 TRANSPORTATION

Transportation is an important aspect of the project area. The Boardman area is a major transportation hub in eastern Oregon. The Port of Morrow, which is near the project site, is the second largest port in the state. The Columbia River also offers important water transportation opportunities especially for agricultural products. Interstate 84 is a major east-west transportation link and is also very close to the project area. Included within the project area are railroad tracks, and Boardman is an important railroad connection for getting produce to markets. Trains also are the major source of providing coal to the PGE power plant.

3.15 SOCIO-ECONOMICS

Boardman is the fastest growing city in Morrow County, due in large part to the growth at the Port of Morrow (Aylett 2014). The population of Boardman was 3,235 in the 2010 census, with the population of Morrow County at 10,995. Average annual growth rate (2000-2010) was 1.21% for Boardman and 0.16% for the county. Over 3,900 jobs are generated by industries at the port (FCS Group 2013 in Aylett 2014). It is estimated that 70% of the Port employees commute from the surrounding area (Aylett 2014). A 2012 Oregon Solutions survey found that employees choose not to live in Boardman due to the lack of recreational opportunities, as well as a lack of housing and other services and amenities.

The median household income and per capita income in Morrow County is increasing, but is below the state and national average. Over 84 percent of children in the community's elementary schools qualify for free and reduced lunch.

Boardman has a young population, with a median age of 27.5 years of age. The population of Boardman and Morrow County is expected to continue to grow (Aylett 2014). With the increase in population, especially of young families, demand for positive youth recreation activities is also expected to increase.

Table 6. Median Household and Per Capita Incomes (FCS Group 2013 in Aylett 2014)

		1999	2011	Annual Growth Rate
Median Household Income	Morrow County	\$37,521	\$46,110	1.7%
	Umatilla County	\$36,249	\$45,911	2.0%
	Oregon	\$40,916	\$49,850	1.7%
	Washington	\$45,776	\$58,890	2.1%
	U.S.A	\$41,994	\$52,762	1.9%
Per Capita Income	Morrow County	\$15,802	\$20,215	2.1%
	Umatilla County	\$16,410	\$20,904	2.0%
	Oregon	\$20,940	\$26,561	2.0%
	Washington	\$22,973	\$30,418	2.4%
	U.S.A	\$21,587	\$27,915	2.2%

Source: Census (in 1999 dollars) and ACS for 2007-2011 (in 2011 dollars)

3.16 CULTURAL RESOURCES

The Corps has coordinated its environmental review of impacts on cultural resources for NEPA with its responsibilities to take into account effects on historic properties as required by Section 106 of the National Historic Preservation Act (NHPA). The Corps has determined and documented the area of potential effect (APE) for both direct and indirect effects, as required by 36 C.F.R § 800.4. The APE includes all areas to be leased from the Corps for the proposed recreation and park development, as well as any borrow, staging or access areas. The APE encompasses approximately 51 acres.

The following efforts have been coordinated in for review of the proposed real estate action to meet the requirements of Section 106 of the NHPA.

In 2010 and 2011, Plateau Archaeological Investigations, L.L.C. (Plateau) completed a literature and records review and undertook field surveys for cultural resources for portions of the north and south half of the APE. The results are provided in a report entitled *Archaeological Probing for the Boardman Waterfront Park, Morrow County, Oregon* (Noll and Harder 2011, revised) and are summarized as follows: A total of 173 shovel probes were excavated in the northern portion of the APE; three isolates were identified, including a waterworn piece of debitage, a piece of asphalt from a former road, and a glass jar base dating to the 1900s; the three isolates were recommended not eligible for inclusion on the National Register of Historic Places (NRHP).

Willamette Cultural Resources Associates (Willamette CRA) is currently completing additional cultural resources survey within the APE. The focus of the additional field investigation is to survey areas not included within the Plateau investigations, to supplement information or address questions raised by the prior survey, to further delineate and evaluate cultural resources within the APE, and to explore whether there are archaeological remnants of the Riverview Cemetery that was relocated as

part of the building of the John Day Lock and Dam during the 1960s. Willamette CRA has not yet submitted the results of their current investigations to the Corps.

The Corps is currently reviewing the information garnered from the cultural resources survey efforts to determine whether there are historic properties within the APE. The Corps has initiated consultation with the Oregon State Historic Preservation Office (SHPO), but has not yet made findings of effect or offered recommendations for the undertaking. The Corps has also notified Indian Tribes seeking information about properties to which they might attach religious and cultural significance. Consultation with SHPO and Tribes for purposes of compliance with Section 106 of the NHPA is ongoing and has not been concluded. The Corps will make determinations of eligibility, findings of effect, offer recommendations and conclude consultation for Section 106 upon receipt of final reports, comments and recommendations before preparation of the Final EA.

4 ENVIRONMENTAL CONSEQUENCES

This section of the EA discusses the potential environmental benefits and/or impacts of each of the alternatives.

4.1 CLIMATE AND GLOBAL CLIMATE CHANGE

Under the No Action Alternative, since no actual work would be accomplished the current condition would remain the same, and there would be no affect on the global climate. Construction activities under either build alternatives (Alternatives 2 and 3) would have unmeasurable impacts on global climate change. These impacts would be minimal because the construction activity associated with the proposed action is minor and temporary, primarily consisting of the use of construction equipment over a 7-month period (diesel and gas emissions) and the clearing and grading over a predominantly flat area of roughly 50 acres. Alternative 2 would have slightly increased impacts because the large cottonwood trees along the shoreline would be removed and replaced by grass. The loss of these shade trees would be felt locally as well as the loss of carbon sequestering from the live trees. Alternative 3 would retain the trees along the shoreline. Upon completion of the construction activities with either Alternatives 2 or 3, the site would be planted in grass, and with a water system in place there would be more vegetation over the site than currently exists.

Upon completion, the project would not emit any greenhouse gases. There would be a short term release of greenhouse gases during construction, and the expected amount does not exceed the threshold of 25,000 metric tons per year for direct plus indirect emissions.

4.2 GEOLOGY AND SOILS

Under any of the alternatives, there would be no change to the on-site geology. Any excavations that occur under the build alternatives (Alternatives 2 and 3) would be surficial, but there would be a change in soils.

Under the No Action Alternative, since no actual work would be accomplished, the soils in the project area would remain unaffected. Under Alternatives 2 and 3, there would be a change in local soil conditions in the project area. Under these two build options, local soils would have some alterations. On-site soils would be excavated and graded. There also would be the import of off-site soil material. Imported soils would likely be of different grain, size, and texture than on-site material. In addition, the use of heavy equipment during construction could compact soils in the construction areas affecting local drainage. Alternative 2 would have a slightly greater impact on soils as fill is proposed along the shoreline covering the existing substrate.

The soils from the borrow areas that would be imported under Alternatives 2 and 3 (shown in Figure 5) would need to be evaluated for chemical constituents to determine if the material is suitable for use (ER-200-2-3 paragraph 9-3). The results of the chemical analysis of borrow material would be included in the final EA.

4.3 WATER QUALITY

Since no actual work would be done under the No Action Alternative, the current baseline condition would remain the same, and there would be no affect on water quality in the area.

Under Alternative 2, there would definitely be water quality impacts as this alternative proposes to place fill material into the Columbia, thereby increasing turbidity. The removal of shoreline vegetation under this alternative would diminish shoreline vegetation acting as a buffer for surface waters during rain events. Other impacts to water quality are the potential to increase local water temperatures as much of the shoreline vegetation would be removed, and there would be temporary disturbance to near-shore aquatic organisms during the construction phase. As with any in-water work utilizing heavy equipment, there is always the possibility of a ruptured hydraulic line that would spill oil into the near-shore. If Alternative 2 (Full Build Out Option) was pursued, there would be a need for mitigation to off-set impacts to the aquatic environment and a Section 404 and 401 permit of the Clean Water Act (CWA) would be required prior to any in-water work.

Water quality under Alternative 3 is not likely to be affected as much as Alternative 2 because the project area will be 50 feet landward of the Columbia River. Another feature of this alternative is the retention of the riparian vegetation along the shore (with the exception of removing Russian olive). The riparian vegetation offers some local thermal benefits as well as providing a buffer for surface runoff to the Columbia. Local water temperature could be affected by the loss of shade provided by the cottonwoods along the shoreline. Alternative 3 does not propose to place any fill into waters of the U.S.

Both Alternatives 2 and 3 would require a Section 402 storm water discharge permit for construction activity under the CWA, also known as a National Pollutant Discharge Elimination System (NPDES) Permit. The applicant will be responsible for obtaining

this permit prior to construction. With either Alternatives 2 or 3, the following best management practices would be employed during construction to reduce the risk of any deleterious substances entering the near-shore environment:

- Drive trains of equipment would not operate near the Columbia or along the shoreline.
- No refueling would occur near the Columbia River.
- Construction equipment would be regularly checked for drips or leaks.
- A silt fence would be deployed on the north edge of the construction area and the riparian buffer along the shoreline to minimize movement of soils and construction debris off the project site.
- Construction equipment would keep away from shoreline vegetation to limit the risk of nicking and killing trees.

As mentioned previously, surface water drainage in both build alternatives would be directed to internal bio swales, and there would be no direct discharge to the Columbia River. Although there would be an increase in chemical applications of fertilizer and herbicides for maintaining a groomed lawn, there would be no measurable impact to the river. Environmental Protection Agency-approved fertilizers and herbicides would be assessed by the Corps prior to application to lessen the potential environmental impact to water quality.

4.4 LAND USE AND HAZARDOUS MATERIAL

Since no actual work would be done under the No Action Alternative, the current condition would remain the same, and there would be no affect on local land use.

Under both of the build alternatives (Alternatives 2 and 3) there would be a very finite change as a fallow field is converted to park and recreation activities. This parcel of land was identified as recreational land under the John Day Master Plan (Corps 1976). This proposed development is aligned with and implements the Master Plan. As part of the evaluation on the feasibility of the project, the preparation of an Environmental condition of property (ECP) report needs to be accomplished. This report summarizes the historical, cultural and environmental conditions of the property. In short, it provides an accurate summary of the environmental condition of the property. This report is anticipated to be completed prior to completion of the final EA. The results of the ECP will be included in the Final EA.

No impact is expected from the potential use of the borrow materials. These materials will be tested for chemical constituents to determine if the material is suitable for use (ER-200-2-3 paragraph 9-3). If materials are found not to be suitable, then the material will not be used.

4.5 VEGETATION

Since no actual work would be accomplished under the No Action Alternative, the existing vegetation would remain the same (reference Section 3.5 for existing vegetation).

If Alternative 2 was implemented, there would be an impact with the loss of shoreline vegetation. This alternative proposes to remove many of the cottonwoods and shrubs that can be found along the bank line.

Under Alternatives 2 and 3, there would be a complete change in vegetation at the site from a disturbed vegetative community with several weedy species to an irrigated, managed lawn. The managed lawn would require that more water be used at the site to maintain the grass as well as additional work to keep invasive weedy species at bay. There would be an increase in chemical application in the project area as fertilizer and herbicides would be included in maintaining a groomed lawn. EPA-approved fertilizers and herbicides assessed by the Corps prior to application to lessen the potential environmental impact to water quality.

Alternative 3 would have some benefit in regards to vegetation. Not only does this alternative maintain some of the existing vegetation, particularly along the bank, about one acre of the invasive Russian olive would be removed and replaced with cottonwoods and or willow.

Under Alternatives 2 and 3, best management practices for vegetation include:

- Using the minimum amount of fertilizer on site to limit the amount of nitrogen-based products that could be discharged to ground water. Soils on site are sandy and have minimal fines content to bind fertilizer to the soil.
- Using only herbicides and pesticides that have been approved by EPA including approval for use to nearby ESA-listed species. Herbicides and pesticides would be low in toxicity and non-persistent to protect the humans that use the park as well as fish in the Columbia River.

Because the proposal is to lease Corps-owned lands to the Port of Morrow for this project, the Port would be required to confer annually with the Corps on proposed chemical treatments of the land. Corps lessees are required to comply with all federal and state standards. Standard lease conditions require that lessees provide pesticide use projections annually for Corps consideration and approval. Lessees are required to utilize certified applicators to apply pesticides and to report the location, types and quantities for Corps review and cross reference with EPA-approved chemicals suitable for use in proximity to streams.

4.6 WETLANDS

Since there are no wetlands at the project site nor at the borrow site, none of the alternatives would affect wetlands.

4.7 WILDLIFE

Since no actual work would be done under the No Action Alternative, the current condition would remain the same, and there would be no affect on local wildlife.

Under the Full Build Out Option (Alternative 2), there would be long-term impacts to wildlife at the project site. The trees along the shoreline would be removed under this alternative, making it difficult for raptors like the red-tailed hawk to roost. Other bird species, especially passerines, would also find nesting and perching difficult since most of the trees would be gone. Under Alternative 2 (Full Build Out), mule deer that utilize the site may be affected by the loss of trees and brush that currently affords some level of cover. The mule deer would probably graze on the newly-planted grass, but would be more exposed out in the open.

Under both build alternatives (Alternatives 2 and 3), the somewhat-disturbed steppe type vegetation (sagebrush, rabbit brush, bitterbrush, cheatgrass) would be replaced with a grass monoculture that would require irrigation. It is likely that there would be an increase in moist soils which would make it more difficult for ground squirrels that rely on their burrows. Rabbits on site would be negatively affected by the loss of sagebrush and rabbit brush that would normally provide for some cover. The large extent of grass would provide little cover but would increase foraging opportunities.

In summary, the No Action Alternative would have no impacts on wildlife in the project area. The Full Build Out Alternative (Alternative 2) would have greater impacts on local wildlife, affecting almost all of the resident species. Alternative 3 (Setback Alternative/Agency Preferred Alternative) would have similar but less impacts than Alternative 2 since the shoreline trees would remain for predatory and perching birds.

4.8 FISHERIES

Since no actual work would be done under the No Action Alternative, the current condition would remain the same, and there would be no affect on local fisheries.

Of all the alternatives proposed, Alternative 2 would have the greatest impact on fish in the project area. The proposed fill would cause a loss of near-shore area and, as a result, a loss of juvenile fish rearing habitat. The proposed fill would also smother both benthic and epi-benthic invertebrates which are food sources for fish. The removal of the riparian vegetation along the shoreline would also cause an impact from both the loss of shading and the loss of fall out insects that would no longer be available for juvenile fish as they feed in the near-shore area.

Alternative 3 (the Setback Alternative/Agency Preferred Alternative) would have very little or no impact on fish in the project area since there would be no in water work and the cottonwood trees along the bankline would remain.

For Alternatives 2 and 3, best management practices to minimize impacts to fish include:

- Only herbicides and pesticides that have been approved by EPA for use that includes approval for areas near ESA-listed species would be permitted for use. Herbicide and pesticide use would be low in toxicity and non-persistent to protect the humans that use the park as well as fish in the Columbia River.

- Drive trains of equipment would not operate near the Columbia or along the shoreline.
- No refueling would occur near the Columbia River.
- Construction equipment would be regularly checked for drips or leaks.
- A silt fence would be deployed on the north edge of the construction area and the riparian buffer along the shoreline to minimize movement of soils and construction debris off the project site.
- Construction equipment would be kept away from shoreline vegetation to limit the risk of nicking and killing trees. The riparian area would be off-limits for construction equipment.

The design includes internal bio swales. All surface water drainage from the completed recreational facility would be directed to the swales and there would be no discharge to the Columbia River. With the implementation of the best management practices and the inclusion of the bio swales, no impact to fishery resources from storm water runoff is expected.

4.9 ENDANGERED SPECIES

Since no actual work would be done under the No Action Alternative, the current condition would remain the same, and there would be no affect on listed ESA species.

As noted in Section 3.8, there are four species and eight different runs of fish that are listed under ESA in the project area. Many of these runs of fish have designated critical habitat also protected under ESA in the project area.

There are a number of indicators that regulators evaluate to determine if habitats used by ESA species are functioning properly. The Mid-Columbia area has several habitat elements, some of which function well, and a few not so well. Table 6 below shows habitat indicators relevant to this project (not all indicators are included), their current baseline status, and what effect the proposed alternatives would have on the indicator. Table 6 evaluates both ESA listed salmon and steelhead for the two build alternatives only, as the No Action Alternative would have no effect on the current status.

Table 6. Environmental indicators for salmon and steelhead and their anticipated impact per alternatives 2 and 3

Indicator		Baseline condition	Potential Effects	
			Alternative 2	Alternative 3
Water quality	Temperature	Not functioning properly (high water temps)	<u>Degrade</u> – Loss of bankline vegetation would increase local water temperatures	<u>Unchanged from current conditions</u>
	Chemical contamination	Not functioning properly (high levels of PCBs and mercury)	<u>Unchanged from current conditions</u>	<u>Unchanged from current conditions</u>
Habitat Elements	Woody debris	At risk	<u>Degrade</u> – Loss of bankline vegetation would inhibit recruitment of woody debris	<u>Unchanged from current conditions</u>
Watershed Conditions	Riparian reserves	At risk	<u>Degrade</u> – This alternative would remove riparian vegetation	<u>Unchanged from current conditions</u>

Another way to evaluate the potential impact of each of the alternatives is to look at the critical habitat types associated with the listed species and see how the proposed alternatives could alter these habitat elements. Table 7 shows critical habitat elements that are relevant to the project area and evaluates effects on critical habitat by each of the build alternatives.

Table 7. The affect of the build alternatives on critical habitat.

Species	Critical habitat element	Alternative 2	Alternative 3
Steelhead	Freshwater rearing sites with water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility.	This alternative would fill in a portion of juvenile rearing habitat	No in water work and no impact
	Freshwater migration corridors free of obstruction with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, supporting juvenile and adult mobility and survival.	Loss of bank line riparian vegetation would affect water quality and natural cover	No in water work and no impact
Chinook and Sockeye	Spawning and Juvenile Rearing Areas. This component is further broken out into specific habitat components: spawning gravel, water quality, water temperature, cover/shelter, food, riparian vegetation, and space.	Nearshore fill and loss of shoreline vegetation would impact Chinook and sockeye juvenile rearing	No in water work and no impact
	Juvenile Migration Corridors. This component is further broken out into specific habitat component, including substrate, water quality, water quantity, water temperature, water velocity, cover/shelter, food, riparian vegetation, space, and safe passage conditions.	Loss of food (fall out insects) and riparian areas and impact on water quality would affect Chinook and sockeye juveniles in the project area	No in water work and no impact
Bull trout	Migration corridors – migratory habitats with minimal physical, biological, or water quality impediments between spawning, rearing, overwintering, and freshwater and marine foraging habitats, including but not limited to permanent, partial, intermittent, or seasonal barriers.	Change in local water temperature from loss of vegetation may affect bull trout migration	No in water work and no impact

By evaluating both Tables 6 and 7, Alternative 2 has the greatest potential adverse impacts to ESA listed species. With the proposed removal of the riparian area adjacent to the Columbia River and in-water filling of the nearshore area, many of the juvenile listed species would incur a loss of habitat, higher local water temperatures, and loss of prey resources. Under ESA, Alternative 2 would result in a “may affect likely to

adversely affect” determination for most of the listed species. Therefore this alternative would require coordination under ESA.

Alternative 3 has no impacts on listed species because the riparian vegetation essentially remains in-place (with the exception of removing some Russian olive trees). Additionally, under Alternative 3, there would be no filling and no loss of nearshore habitat. Per ESA, Alternative 3 would result in ‘no effect’ to listed ESA species and critical habitats.

In addition to ESA, the project area is designated as essential habitat for Chinook and Coho, as defined by Magnuson-Stevens Act. Essential fish habitat is defined by the Act as “...those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The project reach serves as a migratory corridor for anadromous salmonids, including these two species. If Alternative 2 (this alternative includes in-water work) is the chosen alternative, an impact to EFH could occur due to the in-water and shoreline work. If the No Action or Alternative 3 (the Setback Alternative) is implemented, no effect to EFH is expected. Potential impacts to EFH from the construction would be mitigated by the use of internal bio swales. All surface water drainage from the completed recreational facility would be directed to the swales and there would be no discharge to the Columbia River. With the implementation of the best management practices and the inclusion of the bio swales, no impact to EFH from storm water runoff is expected under Alternative 3.

4.10 TRIBAL TREATY RIGHTS

Since no work would be done under the No Action Alternative, the current condition would remain the same, and there would be no affect on Tribal Treaty Rights.

As discussed above, Alternative 2 would have the greatest impact on fish in the project area due to the in-water work and loss of riparian vegetation. Alternative 3 would have very little or no impact on fish in the project area since there would be no in water work and the cottonwood trees along the bankline would remain.

Both Alternatives 2 and 3 allow for continued use of the area as a treaty fishing access site and should not result in the displacement of sites. Roadways and parking within the proposed project may improve accessibility for bank fishing. Navigable boat access to the shoreline will be unchanged.

Alternative 2 also has a greater potential to disturb fisherman due to noise from the sports fields. Maintaining existing standing trees and incorporating the riparian buffer, as in Alternative 3, provides a sound buffer that may reduce noise from ball fields that otherwise may have carried acoustically to disturb tribal fisherman and others using the riverbank.

Neither Alternative 2 nor 3 would be expected to impact the gathering of traditional plants. Based on the disturbed nature of the site and the plants identified in a vegetation survey done by a Corps Botanist in July 2012 (predominantly invasive species), it does not appear that the site is of high value for traditional plant gathering.

4.11 RECREATION

Since no actual work would be done under the No Action Alternative, the current condition would remain the same, and there would be no change in local recreational opportunities. This alternative does not accomplish the stated purpose for this project and does not fulfill the need for recreation as described in the John Day Master Plan.

For Alternative 2 and 3, the changes to recreation in the Boardman area over the current conditions would be the same. That is, both alternatives provide the exact same features. The only difference is the location and total size of the features. Both alternatives would be a large improvement for recreation over the current situation. Boardman currently does not have a park that includes all of the amenities that are proposed under this project (soccer field, basketball courts, baseball diamonds, tennis courts, a BMX track, an amphitheater, a dog park, picnic areas, playgrounds, and shelters). Similar facilities are located more than 40 miles away in Heppner, Oregon or the Tri-Cities in Washington State.

As described above in Section 1.4, a Market and Feasibility survey was completed to evaluate recreational opportunities in the Boardman area. The results of the analysis (Anna Aylett 2014) indicate the need for additional recreational facilities in the Boardman area as evidenced by the difficulty in scheduling practices. Additionally the analysis found that the Boardman Community Development Association and other key stakeholders have been actively seeking opportunities to improve recreation in Boardman and Morrow County for community and tourism development.

4.12 AIR QUALITY

Since no actual work would be done under the No Action Alternative, the current condition would remain the same, and there would be no affect on local air quality.

Alternatives 2 and 3 would have very similar impacts to air quality. Almost all of the impacts to air quality occur during construction as a result of emissions from the use of heavy equipment. There is also an expected temporary impact from fugitive dust in the area during the construction period. The duration of construction is expected to last 7 months. In addition, the area frequently experiences gusty winds which would assist in dissipating any airborne pollutants but would aggravate the loose soils exposed during construction

Best Management Practices (BMPs) would be used to mitigate some of the anticipated impacts to local air quality for Alternatives 2 and 3. These BMPs include;

- Standard practices would be used to control fugitive dust during the construction phase and during daily operations and maintenance of the constructed park.
- All temporary access roads and staging areas would be within the footprint of the proposed park.
- The work requires the use of a water truck to wet down any piles of dirt used for construction as well as to clean off roads in the construction area. This would reduce fugitive dust in the construction area. The water will be pulled from the Port's water system via a fire hydrant.

4.13 NOISE

Since no actual work would be done under the No Action Alternative, the current condition would remain the same, and there would be no affect to local noise conditions.

The impacts to noise would be similar under Alternatives 2 and 3. Most noise would be a result of the use of heavy equipment during construction which is expected to take about seven months. Noise impacts for both alternatives would be mitigated by the distance to receptors. The nearest residences to the project site are located across Marine Drive and Interstate 84. It is doubtful that the residences to the south of the project (the closest residences) area would ever hear the construction activities due to the noise generated by traffic from Interstate 84.

Under Alternatives 2 and 3; there would be noise disturbance to wildlife in the vicinity due to operating heavy machinery during excavation and construction at the project site. The current conditions at the project site do not support much wildlife use. This impact would be short duration for the actual project construction. However, there would be increased noise in the area after the parks are completed as people use the proposed park.

There is also a potential that noise from the recreation area may carry to the riverbank and pose a disturbance to fisherman that would be fishing along the banks of the Columbia River. This would be a concern under Alternative 2, where the river side vegetation would be removed. Since Alternative 3 retains the vegetation and includes the 50 foot buffer, from the play areas would reduce noise levels from that of Alternative 2.

4.14 TRANSPORTATION

Since no actual work would be done under the No Action Alternative, the current condition would remain the same, and there would be no affect on local transportation.

For Alternatives 2 and 3, there would be short term impacts to transportation during construction. Construction vehicles would temporarily increase the volume of traffic in

the immediate project vicinity. Local residents may be inconvenienced by an increase in traffic during the construction period, which is expected to take seven months.

There is a small, local road that currently runs through the project area. The road is a section of Marine Drive which connects North Main Street to Ulman Boulevard on the river side of the railroad tracks. Marine Drive is a paved, two-lane road with a speed limit of 40 miles per hour. This road would be incorporated into the park. The road is expected to remain open throughout construction. Speed limits through the park may permanently decrease for safety and there is a potential for increased volumes of traffic during events at the facility. The decrease in the speed limit of a portion of road and the increase of traffic during events at the site are not expected to greatly impact transportation in the region.

4.15 Socio-Economics

Since no work would be done under the No Action Alternative, the current condition would remain the same, and there would be no effect on socio-economics.

For both Alternatives 2 and 3, there would be long-term benefits to social and economic factors in Boardman and Morrow County. The sports fields would provide needed practice and playing fields for existing local leagues and may encourage additional leagues to form. The site would provide a venue for the community to host local and regional tournaments. Adding a sports complex could serve as an economic driver for the city and increase tourism in the area.

4.16 Cultural Resources

Under the No Action Alternative, there would be no change in the current condition. Existing management and consideration of cultural resources in the area of potential effect (APE) would continue, and there would be no historic properties affected under this alternative.

The Corps is currently reviewing the information garnered from the cultural resources survey efforts to determine whether there are historic properties¹ within the APE. The Corps has initiated consultation with the Oregon State Historic Preservation Office (SHPO) but has not made findings of effect or offered recommendations pursuant to Section 106 of the National Historic Preservation Act (NHPA) for the proposed project. The Corps has also notified Indian Tribes, seeking information about properties to which they may attach religious and cultural significance. Consultation with SHPO and Tribes for purposes of compliance with Section 106 of the NHPA is ongoing and has not been concluded. There are currently no known cultural resources which are eligible for or listed on the National Register of Historic Places located within the APE. The Corps will make final determinations of eligibility and findings of effect for all cultural resources identified within the APE, offer recommendations and conclude

¹ *Historic properties* is used synonymously with properties on or eligible to the National Register of Historic Places.

consultation for Section 106 of the NHPA upon receipt of final reports, comments and recommendations.

5 UNAVOIDABLE AND ADVERSE EFFECTS

Unavoidable adverse effects of the proposed action (Alternatives 2 and 3) include:

- Noise disturbance to wildlife in the vicinity due to operating heavy machinery during excavation and construction at the project site; most wildlife are anticipated to avoid the area while work is in progress. To reduce impacts, work would be conducted only during daylight hours in accordance with local noise ordinances.
- Disruption of local traffic in the project vicinity during construction. Proper signage and flagmen would be utilized to address safety concerns and move traffic through the area as quickly as possible.

These impacts will be temporary, localized, and minor.

5.1.1 Effects Summary

Table 6. Overview of Environmental Consequences. The 0 indicates no change. The + indicates a beneficial impact and the – indicates a negative impact. Additional symbols (+ + or - -) indicate a larger impact relative to the other alternatives. The ? indicates that a final determination has not yet been made.

	Alternative 1: No Action	Alternative 2: Full Build Out Option	Alternative 3: Setback Option
Climate and Global Climate Change	0	--	-
Geology and Soils	0	--	-
Water Quality	0	--	-
Land Use and Hazardous Materials	0	+	+
Vegetation	0	--	-, +
Wildlife	0	--	-
Fisheries	0	-	0
Endangered Species	0	--	0
Recreation	0	+	+
Air Quality	0	-	-
Noise	0	-	-
Transportation	0	-	-
Socio-Economics	0	+	+
Cultural Resources	0	?	?

6 CUMULATIVE EFFECTS

Cumulative effects are defined as, “The impact on the environment which results from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” (40 *Code of Federal Regulations* Section 1508.7).

Historically, post-European settlement in the Boardman area focused on agricultural-related activities. In the early 1920s, with the advent of irrigation in the area, farming greatly expanded. In the early days, large crops of watermelons and cantaloupes were produced in the sandy soils of the surrounding area. Most farms also included areas for cattle grazing as well. But starting in the 1930s, farms became less productive as the shallow sandy soils over the basalt bedrock resulted in poorly drained soils combined with over-irrigation. By the late-40s and 50s, with more modernized farming techniques being utilized and a shift toward potatoes, agriculture again regained its dominance in the area. In the 1960s, the town of Boardman was relocated upslope of the Columbia with the anticipation of the John Day Dam construction and associated deepening and widening of the new reservoir. In the 1970s, the John Day Master Plan was developed which identified recreational areas to off-set the loss of recreational opportunities from the dam construction. During the 70s and 80s, the Corps developed some of the recreational areas identified in the Master Plan, such as Boardman Marina Park – which is located just to the west of the proposed project site – but not all of the recreational sites were developed.

Although, the Corps is not currently considering recreational proposals for improvements to Boardman Park, the Port of Morrow and the Boardman Park and Recreation District have presented conceptual plans for potential future development. Conceptual plans include additional camping sites within the tract of land just east of the current Boardman Marina Park and west of the proposed project. The concept design is similar to the Boardman Marina Park (Figure 8).

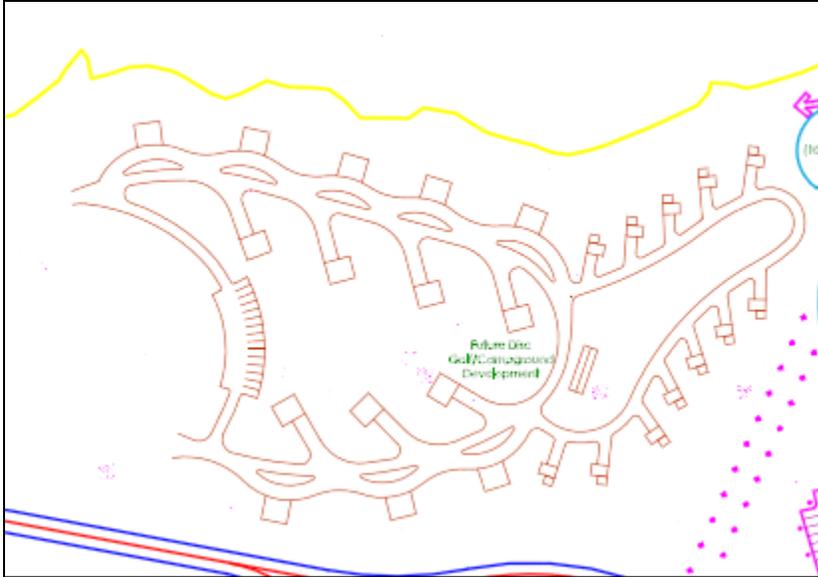


Figure 8. Concept of proposed additional recreational site adjacent to the current proposal.

Development within the City of Boardman is expected to continue. The City has developed a Storefront Façade Improvement Program (City of Boardman 2013) which provides loans or grants to local businesses to improve their exterior appearances and help to attract further investment in Boardman. The City is also providing gap lending and incentives for construction of residential units within the city (City of Boardman 2013). The recent construction of two data processing facilities is evidence of the attraction of Boardman for industrial growth as well.

6.1 CLIMATE AND GLOBAL CLIMATE CHANGE

Temperatures increased across the Northwest from 1895 to 2011, with a regionally averaged warming of about 1.3°F (U.S. Global Change Research Program 2014). Precipitation in the region has shown a slight increase, though trends are small as compared to natural variability. An increase in average annual temperature of 3.3°F to 9.7°F is projected by 2070 to 2099, with the largest increase occurring in the summer (U.S. Global Change Research Program 2014). Models disagree on if annual average precipitation will increase or decrease, but most agree that summer precipitation will decrease by as much as 30% by the end of the century.

Development is expected to continue in Boardman, with the consequence of increased emissions of greenhouse gases. State and local regulations are not expected to change which would keep emissions levels within acceptable ranges.

The construction of either Alternative 2 or 3 would not be expected to have a cumulative effect on air quality in conjunction with other local sources.

6.2 GEOLOGY AND SOILS

No cumulative effects to geology are expected. The development expected in the Boardman area will continue to have small local changes in soils with excavation and grading for construction.

The construction of either Alternative 2 or 3 would not be expected to have a cumulative effect on geology or soils in conjunction with other local activities.

6.3 WATER QUALITY

Water quality regulations are expected to remain in place. These regulations are intended to maintain or improve environmental conditions, including water quality. While development is expected to continue in the area, with potential associated increases in impervious surfaces and runoff, appropriate designs and continued oversight are expected to maintain water quality at its current levels.

The construction of either Alternative 2 or 3 would not be expected to have a cumulative effect on water quality in conjunction with other local activities.

6.4 LAND USE AND HAZARDOUS MATERIALS

The Corps has been directed by Congress in the Water Resources Development Act (WRDA) of 1996 and amended in 2007 to convey and transfer approximately 141 acres of land currently leased by the Boardman Park and Recreation to the lessee. Upon completion of the property transfer, the lands would no longer be held in Federal ownership but would transfer to the Boardman Park and Recreation District to be retained in public ownership and used for public park and recreation purposes. The WRDA legislation also requires that the property first be offered to the Bureau of Indian Affairs (BIA) through the right of first refusal for treaty fishing purposes. If the BIA elects to exercise the right of first refusal, all (or portions of) the park may be transferred to BIA for treaty fishing use.

Continued development is expected as Boardman becomes an attractive location for data processing. Agriculture is expected to continue to be one of the foundations of the local economy.

The construction of either Alternative 2 or 3 would have only a minor cumulative effect on land use by increasing recreational facilities in Boardman, and no effect on hazardous materials in conjunction with other local activities.

6.5 VEGETATION

Continued development would be expected to limit or decrease vegetated areas through construction of new facilities. Undeveloped land in the area largely consist of consisting of blow sand and sagebrush (City of Boardman 2003). Loss of this type of land will be inconsequential when related to the area as a whole where this land is

readily available. Conversion of rural farm land to urban use is also expected. The foreseeable level of future development is not expected to greatly change the vegetation landscape of the area. Recreational areas and open space are expected to be maintained with their associated vegetation.

The construction of either Alternative 2 or 3 would have only a minor cumulative effect on vegetation in conjunction with other local activities.

6.6 WETLANDS

Regulations protecting wetlands are expected to remain in place. While development is expected to continue in the area, existing wetlands would be expected to be maintained or any loss would require appropriate compensation.

The construction of either Alternative 2 or 3 would not be expected to have a cumulative effect on wetlands in conjunction with other local activities.

6.7 WILDLIFE

Wildlife in this urban area is habituated to human presence and noise. Continued development is expected to maintain this condition and continue to favor species that benefit from living close to human habitation. As noted above, continued development of the area will also alter the vegetation and habitat characteristics in the area. The foreseeable level of future development is not expected to greatly change the landscape of the area and wildlife is not expected to be appreciably affected.

The construction of either Alternative 2 or 3 would have only a minor cumulative effect on wildlife in conjunction with other local activities.

6.8 FISHERIES

Continued regulation of harvests, water quality, and shoreline development is expected to maintain the current condition of fisheries in the project area.

The construction of Alternative 2 would have a minor cumulative effect on fisheries due to the in-water construction and loss of riparian vegetation. Construction of Alternative 3 would have no cumulative effect on fisheries in conjunction with other local activities.

6.9 ENDANGERED SPECIES

Continued protection and recovery efforts of listed species are expected to maintain or improve conditions for imperiled species in the region.

The construction of Alternative 2 would have a minor cumulative effect on listed fish species due to the in-water construction and loss of riparian vegetation. Construction

of Alternative 3 would have no cumulative effect on listed fish species in conjunction with other local activities.

6.10 TRIBAL TREATY RIGHTS

Tribal Treaty Rights are expected to be maintained in perpetuity. Shoreline development can impact river access for tribal fishing. Continued consideration of these rights is anticipated in all future actions and access would be expected to be maintained.

The construction of either Alternative 2 or 3 would not be expected to have a cumulative effect on Tribal Treaty Rights in conjunction with other local activities.

6.11 RECREATION

As new businesses are attracted to the Boardman area, the associated increase in population would drive the need for additional recreation facilities. This point is reinforced in the Boardman Community Outdoor Recreation Complex Market and Feasibility Analysis (Aylett 2014).

The results of the Market and Feasibility Analysis, prepared by Anna Aylett (May 2014) indicate the need for additional recreational facilities in the Boardman area. The analysis found that the Boardman Community Development Association and other key stakeholders supported the project and had been actively seeking opportunities in Boardman and Morrow County for community and tourism development projects. Baseball, softball, and soccer fields are in demand in the community. Complexes with multiple sports fields exist within 30 miles, but only cater to baseball and softball. Walking and biking paths with the playground, an amphitheater, a dog park, and the BMX track will also set this facility apart from others in the region. The analysis found that Boardman, as a growing community, would benefit from having safe, public areas for physical activities.

Construction of either Alternative 2 or 3 would benefit recreational opportunities in the area. With other proposed projects, these alternatives would have a minor beneficial cumulative effect on recreation in the region.

6.12 AIR QUALITY

Development is expected to continue in Boardman, with the consequence of increased emissions. State and local regulations are not expected to change which would keep emissions levels and air quality within acceptable ranges. Air pollution due to increased vehicular emissions is unlikely due to the characteristics of the local airshed and the low density profile foreseen from Boardman (City of Boardman 2003).

The construction of either Alternative 2 or 3 is not expected to have a cumulative effect on air quality in conjunction with other local sources.

6.13 NOISE

Development is expected to continue in Boardman, with the potential consequence of increased traffic and industrial noise. State and local noise ordinances are not expected to change which would require that noise levels continue to be within acceptable ranges.

The construction of either Alternative 2 or 3 is not expected to have a cumulative effect on noise in conjunction with other local sources.

6.14 TRANSPORTATION

Development is expected to continue in Boardman, with the potential consequence of increased traffic in the area. The City of Boardman has reviewed traffic patterns in several planning documents (2003 and 2008) to maintain and improve the city's multi-modal network of major highway, rail and water facilities. Goals include strengthening linkages to promote growth of commercial districts. Commercial growth areas are planned near I-84 to facilitate truck access.

The construction of either Alternative 2 or 3 is not expected to have a cumulative effect on transportation in conjunction with other local activities.

6.15 SOCIO-ECONOMICS

Future development in the area looks promising as Boardman becomes an attractive location for data processing. Two data processing facilities are currently under construction. Agriculture is expected to continue to be one of the foundations of the local economy with Conagra expanding a potato processing center and Tillamook Cheese building a whey and lactose plant. The energy sector is also well represented in the Boardman area with Pacific Gas and Electric (PG&E) constructing a natural gas facility and another plant being proposed. A coal terminal by the Morrow Pacific Project is also proposed but is currently unpermitted.

Construction of either Alternative 2 or 3 would promote recreational improvements in the area to serve the expected increase in population and to serve as an added attraction for employers and employees to the area. This could have a beneficial cumulative effect on social and economic factors in the area in conjunction with other local activities.

6.16 CULTURAL RESOURCES

Development of Boardman is expected to continue which could affect significant cultural resources, assuming they exist within the project area. Cultural resources within the Columbia River basin have been highly impacted by industrial expansion and shoreline use over time, exposing a number of cultural properties to both disturbance and loss of integrity. Under Section 106 of the NHPA, identification and

management of significant cultural resources, or historic properties, would continue within the project area.

The construction of Alternative 2 or 3 has the potential to cause cumulative effects on historic properties, assuming they would exist within the project area. If historic properties are located within the project area, development of the property would contribute to an ongoing loss of cultural properties in the John Day Lock and Dam reservoir area and would require mitigation under the NHPA.

7 COORDINATION AND REVIEW

The Draft Environmental Assessment is issued for a 30-day public review period. The Draft EA and Public Notice will be supplied to the agencies listed below. Review comments are requested from federal, Tribal and state agencies as well as various interested parties. The EA and Public Notice also be posted at the Portland District's web site (<http://www.nwp.usace.army.mil/Missions/Environment/Publicnotices.aspx>) Questions or comments should be directed to Bobbi Jo McClain, (206) 764-6968, via e-mail at bobbi.j.mcclain@usace.army.mil, or written comments to Matthew Eppard, PM-E at P.O. Box 2946, Portland, OR 97208, or by phone at 206-764-6968.

U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service
National Marine Fisheries Service
Oregon Department of Fish and Wildlife
Oregon State Parks and Recreation
Oregon State Historic Preservation Office
Oregon Department of Environmental Quality
Oregon Division of State Lands
Port of Morrow
Morrow County
Confederated Tribes of the Umatilla Indian Reservation
Confederated Tribes of the Warm Springs
Nez Perce Tribe
Confederated Tribes and Bands of the Yakima Nation
City of Boardman
Boardman Park and Recreation District
Boardman Public Library

7.1 TRIBAL COORDINATION, TRIBAL TREATY RIGHTS AND RIGHTS OF FIRST REFUSAL

7.1.1 Tribal Coordination

In accordance with the Corps' Federal trust responsibility, each of the Treaty Tribes was contacted to determine if they wished to consult regarding tribal members' treaty rights. The Corps requested comments on how tribal members' rights may be affected and how they may continue to exercise their right to hunt, fish and gather within the

potential lease area. An initial letter requesting the Tribes' interest was sent on October 25, 2012. Two Tribes, CTWS and CTUIR responded and provided comments regarding the proposed project. Neither the Yakama Nation nor the Nez Perce Tribe provided comments pertaining to the project. Follow-up consultation letters were also sent on April 18, 2014 to CTWS, Yakama Nation and Nez Perce and on April 28, 2014 to CTUIR.

The CTWS Department of Natural Resources (DNR) responded to the Corps' initial 2012 letter and invited the Corps to participate in their November 27, 2012 staff meeting and provided comments and concerns during the meeting. In response to the Corps' April 2014, letter, the CTWS invited the Corps to participate in their May 13, 2014 staff meeting.

The concerns identified by the CTWS DNR and how they have been addressed and incorporated into the Corps' evaluation are outlined below:

1. Treaty Fishing – the proposal lies within an area considered by CTWS as a usual and accustomed (U&A) fishing area. Aspects that affect tribal use include fisherman access points and anchor points (trees along the bank) typically used for net sites. CTWS expressed particular concern that trees be left available for anchoring.

The CTWS provided clarification that it considers a long stretch of the Columbia River to be a U&A rather than discrete pin-point locations along the riverbank. This is based on the nature of tribal use along the river, bank conditions changing over time as well as the dynamic (rather than static) fluctuations in fish migration and water current and flow patterns.

In response to the CTWS' concerns and in an effort to avoid impacts to ESA-listed fish species, the Corps coordinated with the Port of Morrow to incorporate a 50-foot riparian buffer and reconfigure the park development plans to avoid impacts to trees along the bank with Alternative 3. The riverbank and riparian area would remain undeveloped allowing continued availability and access by tribal members for fishing.

- a. Acoustics / Noise – CTWS presented an initial concern that noise from the ball fields may carry to the riverbank and pose a disturbance to fisherman. Maintaining existing standing trees and incorporating the riparian buffer provides a sound buffer that may reduce noise from ball fields that otherwise may have carried acoustically to disturb tribal fisherman and others using the riverbank.
- b. Cumulative Effects – the potential cumulative effects related to piecemeal development from multiple projects along the Columbia River that have reduced the number of fishing sites available to tribal members was a CTWS concern about potential for displaced fishing

sites. CTWS concern relates to instances when tribal access is affected when one site is developed, and tribal members go to alternate locations that are also later developed and no longer available for use. The proposal allows for continued use of the area as a treaty fishing access site and should not result in the displacement of sites. Roadways, trails, and parking within the facility may improve accessibility for bank fishing. Navigable boat access to the shoreline will remain unchanged. Consideration of the projects cumulative effects are more fully described in the Cumulative Effects Section 6.

2. Fish Habitat Impacts - Proximity to the Columbia River presented a concern for potential erosion and exposure of soils due to features (such as proposed amphitheatre and walking trail) located near the shoreline. Impacts to fish habitat and ESA-listed species have been avoided through incorporating the 50-foot riparian buffer. See Section 4.8 on ESA above.
3. Other Concerns (Stormwater Management, Vegetation Management/Pesticide Use).
 - a. Stormwater Management –the Ports is developing the construction stormwater management plan.. After construction, surface water drainage will be directed to internal bio swales and there will be no discharge to the Columbia River.
 - b. Vegetation Management / Pesticide Use – The CTWS questioned what standard the Port of Morrow would be held to for pesticide applications and expressed concerns with potential migration of pesticides into the soil and potential for intercepting groundwater and migrating into the Columbia River and thus indirectly affecting fish.

The Port of Morrow is developing their vegetation management plan for weed control in the outdoor recreation fields. Corps lessees are required to comply with all federal and state standards. Standard lease conditions require that lessees provide projected pesticide use annually for Corps consideration and approval (see Appendix A – Standard Lease to Non-State Governmental Agencies for Public Park and Recreational Purposes). Lessees are required to utilize certified and applicators to apply pesticides and to report the location, types and quantities for Corps review and cross reference with EPA-approved chemicals suitable for use in proximity to streams.

4. Involvement during the NEPA process – CTWS expressed the desire to be included during development of the NEPA document to ensure full consideration and incorporation of comments. The Corps addressed this concern through the above consultation and coordinated with the CTWS

during the development of the NEPA document to ensure that tribal concerns were given due consideration and incorporated in the analysis prior to public disclosure.

The CTUIR Department of Natural Resources (DNR) provided comments and concerns similar in nature to those identified by the CTWS. The concerns identified by CTUIR DNR staff in the December 14, 2012 letter include and are being addressed as follows:

1. Treaty fishing – As of the date of CTUIR’s letter, the CTUIR DNR was unaware of any current treaty uses occurring in the area. Because the project does not involve any in-water structures or obstructions to the shoreline, access to fishing in the area does not appear to be impacted. Roadways, trails, and parking within the facility may improve accessibility for bank fishing. Navigable boat access to the shoreline will remain unchanged.
2. Traditional plants – CTUIR requested that a survey for traditional and rare plants be conducted as part of the environmental review to evaluate whether any traditional plants would be affected and/or may be protected on site. A plant survey was conducted by a Corps Botanist in July 2012. The results of the survey and summary of plants identified are discussed in Section 4.5. Based on the disturbed nature of the site and plants identified in the survey (predominantly invasive species), it does not appear that the site is of high value for traditional plant gathering. This assessment of traditional plant uses is still being confirmed in consultation with CTUIR, and findings will be incorporated into the Final EA.
3. Fish habitat impacts – potential run-off from construction or from proposed use which may affect fish habitat or survival should be addressed. These concerns have been addressed and are discussed above and in Section 4.7.
4. Right of First Refusal – request that discussion of Public Law 100-581 as it applies to the project be included in the EA. In response to CTUIR’s concern, discussion of Right of First Refusal is included in Section 7.1.2 (below).

The Corps has considered comments and concerns identified by the CTWS and CTUIR in consultation with each tribe as presented (above) and has worked in coordination the Port of Morrow to incorporate each tribe’s comments and address their concerns.

7.1.2 Right of First Refusal

The Right of First Refusal requirement under Public Law No. 100-581 Sec. 401(e) refers to lands adjacent to the Columbia River within the Bonneville, The Dalles, and

John Day Lock and Dam pools. It specifies that such lands under Federal control that are “declared to be excess lands or otherwise offered for sale or lease...” must be offered to the Secretary of Interior, Bureau of Indian Affairs (BIA) for treaty fishing purposes.

At the completion of the NEPA evaluation, if the Corps determines that the lands are available for the proposal, a Determination of Availability will be completed to offer the property for lease to the Port of Morrow. Prior to granting a lease for the property, the lands will first be offered to the BIA through the right of first refusal process. If the BIA, in consultation with the Columbia River Treaty Tribes, determines to exercise their right of first refusal, the Corps will then transfer the land to the BIA. The lease request by the Port of Morrow would be denied, and they could not develop their recreational park. The property would be transferred to the BIA for use/development in treaty fishing access purposes.

If the BIA does not exercise the right of first refusal, the proposed real estate transaction may proceed with the Corps issuing a lease to the Port of Morrow after the completion of the NEPA process.

8 ENVIRONMENTAL COMPLIANCE

8.1 NATIONAL ENVIRONMENTAL POLICY ACT

This Draft Environmental Assessment has been prepared to meet Corps NEPA compliance requirements under the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.) and Corps NEPA implementing regulations at ER 200-2. A final Environmental Assessment will be developed after appropriate public review and comment.

8.2 ENDANGERED SPECIES ACT

In accordance with Section 7(a) (2) of the Endangered Species Act of 1973, as amended, federally funded, constructed, permitted, or licensed projects must take into consideration impacts to federally listed or proposed threatened or endangered species. If Alternative 2 (this alternative includes in-water work) is the chosen alternative, consultation would be required. If the No Action or Alternative 3 (the Setback Alternative) is implemented, a *No Effect* determination can be made for listed species and critical habitats and consultation would not be required.

8.3 CLEAN WATER ACT

Section 401 of the Clean Water Act of 1977, as amended, requires certification from the state or interstate water control agencies that a proposed water resources project is in compliance with established effluent limitations and water quality standards. Section 404 requires a permit if there is fill into waters of the U.S. which would include the Columbia River. Section 402 regulates point source discharges of pollutants into

waters of the U.S. A Section 402 permit, also known as a National Pollutant Discharge Elimination System (NPDES) Permit, is required if over 1 acre of land is disturbed. A Storm Water Pollution Prevention Plan must be developed as a part of the permitting process.

Under Alternative 2 (the Full Build Out Option), there is fill proposed into waters of the U.S. so both a 401 and 404 permit would be required if this alternative moved forward. Under Alternative 3 (the Setback Alternative), there will be no discharges to waters of the U.S., and no 401 and 404 permits would be needed. Both alternatives would require a Section 402 permit which would be obtained prior to construction.

8.4 MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

The Sustainable Fisheries Act of 1996 amended the Magnuson-Stevens Act establishing requirements for essential fish habitat (EFH) for commercially important fish. Essential fish habitat is defined by the Act as "...those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The project area is a part of the Middle Columbia-Lake Wallula hydrologic unit which is designated as essential habitat for Chinook and Coho. Affected portions of the Columbia River serve as a migratory corridor for anadromous salmonids, including these two species. If Alternative 2 (this alternative includes in-water work) is the chosen alternative, an impact to EFH could occur due to the in-water and shoreline work. If the No Action or Alternative 3 (the Setback Alternative) is implemented, no effect to EFH is expected.

8.5 CLEAN AIR ACT

The Clean Air Act of 1970, as amended, established a comprehensive program for improving and maintaining air quality throughout the United States. Its goals are achieved through permitting of stationary sources, restricting the emission of toxic substances from stationary and mobile sources, and establishing National Ambient Air Quality Standards (NAAQS). Title IV of the Act includes provisions for complying with noise pollution standards. All equipment used on site would be required to meet State and Federal emission requirements to ensure compliance with this act. The project complies with the Clean Air Act as only temporary and minor effects on air quality would occur due to the operation of motorized vehicle and equipment.

8.6 NATIONAL HISTORIC PRESERVATION ACT

Section 106 of the National Historic Preservation Act requires that a federally assisted or federally permitted projects account for the potential effects on sites, districts, buildings, structures, or objects that are included in or eligible for inclusion in the National Register of Historic Places. The entire project area has been surveyed, and results will be coordinated with state and tribal offices and will be incorporated into the Final EA. The Section 106 consultation process will be completed prior to the finalization of the EA in order to incorporate those findings.

8.7 NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT

The Native American Graves Protection and Repatriation Act (NAGPRA) provides for the protection of Native American and Native Hawaiian cultural items, and establishes ownership and control of Native American cultural items, human remains and funerary objects to Native Americans. It also establishes requirements for the treatment of Native American human remains and sacred or cultural objects found on federal land. Should there be any discoveries with Alternatives 2 or 3, these would be handled according to federal law and Corps, Portland District Inadvertent Discovery Plan policy.

Furthermore, the Port of Morrow has also developed a Project Inadvertent Discovery Plan (IDP) describing procedures and protocols to follow in the event of any inadvertent discovery of cultural materials and/or human remains (Port of Morrow 2014). These procedures would allow for the proper protection, plan of action, official notification of Corps staff and treatment of such discoveries as required under federal laws. The Project IDP shall include a human remains plan of action (POA) and treatment plan (TP) which will address protection, notification, handling and deposition protocols to be implemented in the event that non-Native American and/or modern human remains and burial items associated with the decommissioned Riverview Cemetery are inadvertently discovered during construction activities.

8.8 EXECUTIVE ORDER 11988, FLOODPLAIN MANAGEMENT

This executive order requires federal agencies to consider how their actions may encourage future development in floodplains, and to minimize such development. The proposed action is not within a designated floodplain.

8.9 EXECUTIVE ORDER 11990, PROTECTION OF WETLANDS

This executive order requires federal agencies to protect wetland habitats. There are no wetlands in the project vicinity.

8.10 EXECUTIVE ORDER 12898, ENVIRONMENTAL JUSTICE

This executive order requires federal agencies to consider and minimize potential impacts on subsistence, low-income, or minority communities. The goal is to ensure that no person or group of people should shoulder a disproportionate share of the negative environmental impacts resulting from the execution of this country's domestic and foreign policy programs. Alternatives 2 and 3 would not cause changes in population, economics, or other indicators of social well being. The preferred alternative, Alternative 3, would not result in a disproportionately high or adverse effect on minority populations or low-income populations.

8.11 PRIME AND UNIQUE FARMLANDS

No impacts to prime and unique farmlands would occur from the proposed action because no prime or unique farmlands are present in the proposed project area.

9 CONCLUSION

The No Action Alternative and two build alternatives have been analyzed for their potential to affect the environment. While there are no impacts associated with the No Action Alternative, it does not achieve the proposed purpose and need. The results of these analyses have been discussed in the earlier chapters of this document and are summarized by alternative in Table 6. Alternative 3, the Setback Option, is the preferred alternative which has been determined to have the least environmental impact and can accomplish the project purpose and need. Alternative 3 has, as a result, been elected as the agency preferred alternative. Several best management practices were identified in the environmental assessment which would be employed to further reduce impacts should Alternative 2 or 3 be selected at the conclusion of the NEPA process.

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Appendix A: Standard Lease to Non-State Governmental Agencies for Public Park and Recreation Purposes

