4 CITY OF PASCO INVENTORY

Section 4 provides an inventory of the existing shoreline areas. The review includes information on existing land use, zoning, shoreline designations, geology, climate, water resources, geologic hazards, and historical and cultural resources.

The summary of acreages provided in the Tables 6 through 12 are meant to illustrate the general distribution of ownership, land cover, and land use types within the City and its shoreline jurisdiction. The acre values are based on a variety of data sources and do not reflect the exact total acreage of land within the City or its shoreline jurisdiction. Data mismatched between the total acreages provided in Tables 6 through 12 are due to the data sources and the lack of zoning designations for UGAs.

4.1 Ownership and Land Cover

Ownership within the City is dominated by private lands. Public lands are dominated by City-owned parcels. The U.S. Army Corps of Engineers owns lands at various locations along the shoreline of Columbia River. Sacajawea State Park is public space owned by Washington State Parks and Recreation at the confluence of the Columbia River and the Snake River. Table 6 summarizes the percentage of ownership types within the City limits and UGA.

Table 6
Ownership Types within the City of Pasco

Ownership Type		Owner	Acreage	Percentages
Public	Federal	United States	168	0.60%
		U.S. Army Corps of Engineers	220	1.0%
		U.S. Bureau of Reclamation	411	1.5%
	State	Department of Natural Resources	1,015	3.62%
		Washington State Parks and Recreation	286	1.0%
		Washington Department of Transportation	65	0.23%
		Other	7	0.03%
	Local	City of Pasco	584	2.1%
		Port of Pasco	2,764	9.8%
Private	All Private		22,540	80.3%
TOTAL			28,060	100%

Land ownership within shoreline jurisdiction includes upland lands (above the OHWM) and aquatic lands (below the OHWM). Upland shoreline jurisdiction lands are roughly 73% publically owned and 27% privately owned. Washington State Parks and Recreation is the largest public owner of shoreline lands at 31%, including Sacajawea State Park. The U.S. Army Corps of Engineers owns 21% of the upland area from Chiawana Park to State Route 397 bridge. Port of Pasco owns 11% in the industrial area between State Route 397 bridge and Sacajawea State Park. The remaining publically owned lands can be found at various locations in Reaches 1, 5, and 6. Aquatic shoreline jurisdiction lands are almost entirely publically owned among various federal and state agencies. See Table 7 for a summary of ownership for upland shoreline jurisdiction areas.

Table 7
Ownership Types within City of Pasco Shoreline Jurisdiction

Ownership Type		Owner	Acreage (above OHWM)	Percentages
Public	Federal	United States	43	7.4%
		U.S. Army Corps of Engineers	123	21.1%
	State	Washington State Parks and Recreation	179	30.7%
		Washington State Department of Transportation	8	1.4%
	Local	City of Pasco	7	1.2%
		Port of Pasco	66	11.3%
Private	All Private		157	26.9%
TOTAL			583	100%

Note:
OHWM = ordinary high watermark

Land cover is dominated by developed areas and shrub/scrub habitat (not including open water) within the City limits and within the shoreline jurisdiction. See Tables 8 and 9 for a summary of land cover types within the City limits and UGA within the City's shoreline jurisdiction.

Table 8

Land Cover Types within City Limits and Urban Growth Area

Land Cover Type	Acreage	Percentages
Agriculture	5,117	19.9%
Shrub/Scrubland	5,643	21.9%
Pasture/Grass	427	1.6%
Developed	14,528	56.4%
Wetlands	48	0.2%
TOTAL	25,763 [1]	100

Notes:
Source: U.S. Department of Agriculture-National Agricultural Statistics Service Cropland Data 2012
1 = Not including open water

Table 9

Land Cover Types within City of Pasco Shoreline Jurisdiction

Land Cover Type	Acreage	Percentages
Agriculture	43	7.7%
Shrub/Scrubland	220	39.2%
Pasture/Grass	5	0.9%
Developed	243	43.1%
Wetlands	51	9.1%
TOTAL	562 [1]	100%

Note:
Source: U.S. Department of Agriculture-National Agricultural Statistics Service Cropland Data 2012
1 = Not including open water

4.2 Land Use

4.2.1 Existing Land Use

The City is part of the Tri-Cities Metropolitan Area in southeast Washington and includes 25,247 acres in the current incorporated City limits and an additional 5,433 acres within its associated UGA. The City is located at the southern edge of Franklin County, bounded by the Columbia River to the south and the Snake River to the southeast. The City is the major urban area within Franklin County. The City and its associated UGA comprise about 72% of the 55 square miles of designated UGA in Franklin County (Franklin County 2008).

The City includes a variety of land uses from residential and commercial/industrial to Open Space. The City's land use designations and acreages are identified in the 2008 Comprehensive Plan. Residential land is the predominant use in the City, containing over 45% of the City's total land. Residential land use is followed by industrial land use, which consists of more than 36% of the total land use within the City. Commercial lands are mostly located near the City Center and along the Interstate-182. Open space land use is distributed throughout the City in the form of parks and natural open spaces. The shoreline areas consist of several parks, trails, and natural open space. See Table 10 for a summary of land use types in the City.

Table 10
Existing Land Use in the City

Land Use Designations	Acreage [1]	% of Total
Residential Lands	11,505	45.6%
Low Density	9,791	
Mixed Density	1,577	
High Density	137	
Commercial Lands	2,546	10.1%
Mixed Residential/Commercial	374	
Commercial	2,172	
Industrial Lands	9,229	36.6%
Public/Quasi-Public Lands	732	2.9%
Open Space Lands	1,235	4.9%
TOTAL	25,247	100%

Note:
1 = Includes shoreline jurisdiction

Unlike the Citywide land use pattern, the City's shoreline is dominated by Open Space land use consisting of 60% of the total shoreline area. Industrial land use consists of over 25% of the shoreline. Much of the Open Space area is owned by the U.S. Army Corp of Engineers. Washington State Parks and Recreation Department also owns Open Space (Sacajawea State Park) within the shoreline. Other major public landowners include Port of Pasco and Washington State Department of Transportation. Industrial land along the shoreline is

mostly owned by the Port of Pasco on the south and southeast sides of the City. Residential uses are mostly concentrated on the south side of I-182. See Table 11 for a summary of land use within the shoreline jurisdiction.

Table 11
Existing Land Use within the City's Shoreline Jurisdiction

Land Use Category	Acres in Shoreline	% of Land Use
Open Space	307.30	60.2%
Low Density Residential	68.24	13.3%
Mixed Residential	2.53	0.5%
Mixed Residential Commercial	2.38	0.5%
Industrial	130.21	25.5%
Commercial	0.02	0.0%
TOTAL	510.68	100%

The City's Comprehensive Plan land use categories and their purposes are discussed below.

- **Open Space/Nature** – This land use designation applies to areas where development will be severely restricted. Park lands, trails, and critical areas are examples of different types of open spaces.
- **Low Density Residential** – This land use allows residential development at a density of two to five dwelling units per acre. The land use designation criteria includes, sewer availability or approval from the Benton-Franklin Health District when sewer is not available, suitability for home sites, and market demand.
- **Mixed Residential** – This land use designation includes single-family dwellings, patio homes, townhouses, apartments, and condominiums at a density of 5 to 20 dwelling units per acre. This is designated to areas where the location is convenient to major circulation routes and it provides transition between more intense uses and low density uses. Availability of sewer services and market demand are also key criteria for this land use designation.
- **Mixed Residential Commercial** – This land use designation is a mix of residential and commercial uses. Residential uses include single-family dwellings, patio homes, townhouses, apartments, and condominiums at a density of 5 to 20 dwelling units per acre. Commercial uses include neighborhood shopping and specialty centers, business

parks, service, and office uses. This is designated to areas where the location is convenient to major circulation routes and land is suitable for heavy building sites.

- **Commercial** – This land use is designated for neighborhood, community and regional shopping and specialty centers, business parks, service, and office uses. This is designated to areas where the location is convenient to major circulation routes and land is suitable for heavy building sites.
- **Industrial** – This land use is designated for manufacturing, food processing, storage, and wholesale distribution of equipment and products, hazardous material storage, and transportation-related facilities.

The zoning regulates different uses and development within the City. See Table 12 for a summary of zoning within the City's shoreline jurisdiction.

Table 12
Existing Zoning within the City's Shoreline Jurisdiction

Zoning	Acres	% of Total
Low Density Residential (R-1)	0.15	0.04%
Medium Density Residential (R-2)	1.24	0.29%
Medium Density Residential (R-3)	0.35	0.08%
Residential Park (RP)	0.34	0.08%
Suburban (RS-1)	0.03	0.01%
Suburban (RS-12)	0.89	0.21%
Suburban (RS-20)	161.02	37.84%
Residential Transition (RT)	16.28	3.83%
Light Industrial (I-1)	61.27	14.40%
Medium Industrial (I-2)	119.20	28.01%
Heavy Industrial (I-30)	64.75	15.22%
TOTAL	425.52	100.0%

Notes:
Source: City of Pasco
Data mismatch between the total acreages provided in Table 11 and 12 is due to the lack of zoning designations for urban growth areas.

4.2.2 Water-dependent Uses

Water-dependent use means a use or portion of a use, which cannot exist in a location that is not adjacent to the water and is dependent on the water by reason of the intrinsic nature of its operations (WAC 173-26-020(36)).

Water-dependent uses in the City include boat launches, docks, and piers on Chiawana, Wade, and Sacajawea parks. The marina is located near the Schlagel Park. Private docks are also located adjoining residential properties on Columbia River. Port facilities include a barge dock on the Columbia River. Tidewater, a private transportation and terminal company, owns a barge dock along the Snake River.

4.2.3 Water-related and Water-enjoyment Uses

Water-related use means a use or portion of a use, which is not intrinsically dependent on a waterfront location but whose economic viability is dependent upon a waterfront location because: a) the use has a functional requirement for a waterfront location such as the arrival or shipment of materials by water or the need for large quantities of water; or b) the use provides a necessary service supportive of the water-dependent uses and the proximity of the use to its customers makes its services less expensive and/or more convenient (WAC 173-26-020 (40)).

Water-enjoyment use means a recreational use or other use that facilitates public access to the shoreline as a primary characteristic of the use. It can also be defined as a use that provides for recreational use or aesthetic enjoyment of the shoreline for a substantial number of people as a general characteristic of the use and which through location, design, and operation ensures the public's ability to enjoy the physical and aesthetic qualities of the shoreline. In order to qualify as a water-enjoyment use, the use must be open to the general public and the shoreline-oriented space within the project must be devoted to the specific aspects of the use that fosters shoreline enjoyment (WAC 173-26-020 (37)).

The City's shoreline consists of water-related uses such as industrial and barge facilities along the Snake River and the Port of Pasco's industrial facilities along the Columbia River. Water-enjoyment uses include much of the park and open space areas along the shoreline that provides for recreational use, including beach and shoreline access, as well as aesthetic

enjoyment of the shoreline on trail systems. The shoreline also contains fishing and passive recreation (e.g., bird watching) opportunities on multiple shoreline locations.

4.2.4 Non-water-related Uses

Non-water-related uses directly adjacent to the water are largely limited to a small area of single family use along the Columbia River in the vicinity of I-182 and the northern part of the UGA. There are also some agricultural uses within the UGA.

4.3 Current Shoreline Master Program Environment Designation

The City uses the current Franklin County SMP to regulate developments within its shoreline. The 1974 Franklin County SMP includes four shoreline environment designations:

1. Natural
2. Conservancy
3. Rural
4. Urban

4.3.1 Natural

The purpose of assigning an area to the Natural environment is to preserve and restore those natural resource systems existing relatively free of human influence. Local policies to achieve this objective should aim to regulate all potential developments degrading or changing the natural characteristics, which make these areas unique and valuable.

The primary determination for designating an area as a Natural environment is the actual presence of some unique natural or cultural features considered valuable in their natural and original condition, which are relatively intolerant of intensive human use.

4.3.2 Conservancy

The purpose of assigning an area to the Conservancy is to protect, conserve, and manage existing natural resources and valuable historic and cultural areas to ensure a continuous flow of recreational benefits to the public and to achieve sustained resource utilization.

The Conservancy environment is for those areas that are intended to maintain their existing character. Nonconsumptive use of the physical and biological resources of the area is preferred. Nonconsumptive uses utilize resources on a sustained basis, while minimally reducing opportunities for other future uses of the resources in the area. Activities and uses of a non-permanent nature, which do not substantially degrade the existing character of an area, are appropriate uses for a Conservancy environment. Examples of predominant uses include diffuse outdoor recreation activities and passive agricultural uses such as pasture and range lands.

4.3.3 Rural

The purpose of Rural environment is to protect agricultural land from urban expansion, restrict intensive development along undeveloped shorelines, function as a buffer between urban areas, and maintain open spaces and opportunities for recreational uses compatible with agricultural activities.

The Rural environment is intended for those areas characterized by intensive agricultural and recreational uses and those areas having a high compatibility to support active agricultural practices and intensive recreational development.

4.3.4 Urban

The purpose of assigning an area to Urban environment is to ensure optimum utilization of shorelines occurring within urbanized areas by providing for intensive public use and managing development, so it enhances and maintains shorelines for a multiplicity of urban uses.

The Urban environment is an area of high intensity land use, including residential, commercial, and industrial development. It is particularly suitable to those areas presently subject to extremely intensive use pressure, as well as areas planned to accommodate urban expansion.

4.4 Geology

The geology, soils, and topography of the City area are primarily dictated by glacial outburst flooding that occurred near the end of the last major glacial period, approximately 18,000 to 20,000 years ago. This event is referred to as the Missoula Floods. The geologic makeup is the result of erosion of pre-flood geologic units, deposition of sediments carried by the floodwaters, and the formation of the unique topographic features that influence present-day hydrology. Prior to the Missoula Floods, the geology of Franklin County consisted primarily of Miocene-aged Columbia River Basalt flows that were in some places (e.g., plateaus) capped with varying thicknesses of wind-blown fine sands and silt known as loess (Grolier and Bingham 1978). The segments of the Columbia and Snake rivers around the City are located in a wide valley primarily comprising alluvial soils with relatively high infiltration rates. Within upland areas, particularly areas farther from the confluence of the river, outburst flood deposits of gravel occur as well.

4.5 Climate

The City falls within the Central Basin region of Washington, which has the lowest precipitation rates within Washington. Annual precipitation in the City averages around 7.15 inches and precipitation is commonly associated with summer thunderstorms and winter rains and snowfall. Snowfall depths rarely exceed 2 to 3 inches and occur from November to March. High temperatures in January can range from 35 to 45 degrees Fahrenheit (1.6 to 7.2 degrees Celsius [°C]) with low temperatures between 20 to 30 degrees Fahrenheit (-6.7 to -1.1 °C). Summer high temperatures are usually in the high 80s to low 90s with low temperatures in the high 50s (WRCC 2013).

4.6 Water Resources

4.6.1 Surface Water Resources

The planning area is mostly located in the Esquatzel Coulee basin (Water Resource Inventory Area 37). A small area along the eastern boundary of the planning area is located in the lower Snake River basin (Water Resource Inventory Area 33). Major surface water resources are the Columbia River and Snake River.

Lake Wallula is the major surface water resource for the planning area. The portion of the Columbia and Snake rivers within the planning area is part of the upstream portion of Lake Wallula. The lake is created from the impoundment of the Columbia River by McNary Dam.

The Columbia River's active continuous USGS gage nearest to the planning area is gage #12514500 (Columbia River on Clover Island at Kennewick, Washington). The Columbia River at this gage drains 104,000 square miles. This gage is a water surface elevation gage and has records from Water Year 1988 to present. The water surface elevation at this gage ranges from 335 feet to 344 feet (NGVD 1929).

The closest Snake River historic USGS gage that measured streamflow near the City is gage #13353000 (Snake River below Ice Harbor Dam, Washington). The Snake River at this gage drains 108,500 square miles. It has records from Water Years 1913 to 2000.

Because the planning area is within the Lake Wallula portion of the Columbia and Snake rivers, water levels are generally stable. Floodplain levels are also confined due to river regulation.

4.6.2 Surface Water Quality

The Columbia and Snake rivers are on the Ecology 303(d) list of impaired waters for temperature within the planning area. The Columbia River also has a total maximum daily load (TMDL) for total dissolved gas and is a 305(b) water of concern for pH. Additionally, the Snake River has TMDLs for dioxin and total dissolved gas, and it is a 305(b) water of concern for pH and dissolved oxygen.

Temperature and total dissolved gas are measured in the Columbia and Snake rivers at several gages as part of the Columbia River Data Access in Real Time (DART) program. The DART gage nearest to the planning area on the Columbia River is gage PAQW (Columbia River at Pasco, Washington). This gage has been in operation since 2000. The DART gage nearest to the planning area on the Snake River is gage IDSW (Ice Harbor Tailwater). This gage has been in operation since 2005.

4.6.3 Floodplain and Floodway

Damage from flooding along the Columbia River occurred in 1948 prior to the construction of the dam system. The flood stage for the Columbia River is 32.0 feet and is measured at the gage downstream of the Priest Rapids dam. During maintenance of the Priest Rapids Dam spillway in July of 2012, high outflows from the dam raised the river near flood stage in the Tri-Cities (KNDU 2012). The floodway boundary is shown in the Map Folio in Maps 2a and 2b. The flood stage for the Snake River is 20.0 feet and is measured at USGS gage #13334300 (Snake River near Anatone, Washington).

4.6.4 Channel Migration Zone

The Channel Migration Zone is the area along a river within which the channels can be reasonably predicted to migrate over time as a result of natural and normally occurring hydrological and related processes when considered with the characteristics of the river and its surroundings (WAC 173-26-020). These areas adjacent to a stream or river are susceptible to future erosion (Rapp and Abbe 2003).

The Columbia and Snake rivers are stable, confined, single-thread channels with low sinuosity and largely unvegetated depositional mid-channel islands and bars. The flooding risk is low in the Columbia and Snake rivers due to the levy and dam system maintained by the U.S. Army Corps of Engineers. Therefore, no Channel Migration Zone is present adjacent to the City.

4.6.5 Groundwater Resources

Groundwater in the planning area is within the Columbia Plateau aquifer system, which consists of the Columbia River Basalt Group overlain by quaternary flood deposits. Groundwater in the planning area is hydraulically connected to surface water, so the amount of groundwater pumping affects surface water stream flow, and groundwater resources are recharged by surface water interaction. The estimated mean annual groundwater recharge in the planning area is up 2 inches (USGS 2011).

4.7 Geologic Hazards

Geologically hazardous areas are defined as those lands susceptible to erosion, landslides, seismic, or mine hazard events. Surficial geology is shown on Map 4 in the map folio. The boundary of this area is based on a 200-foot buffer from either the OHWM of the Columbia and Snake rivers or from the floodway boundary as determined by FEMA flood insurance maps.

Table 13
Geologic Hazards of the City

Hazard	Description	Summary	Source
Erosion	Soil units susceptible to erosion by wind, water, and unstable slopes	About 0.62% (17.41 acres) of shoreline jurisdiction areas have been identified as being severe water erosion hazards (Riverwash).	Soils – Water Erosion Hazards GIS Data (Franklin County)
Landslides	Steep Slopes underlain by weak, fine, and unstable geology	About 0.003% (8.45 acres) of shoreline jurisdiction area has slopes greater than 15% underlain by alluvium or dune sand. No area in the City is mapped as an active landslide area.	Generalized Slope GIS Data (Franklin County), Surface Geology Polygon, 1: 100,000 Scale (WDNR) Active Landslide Area GIS Data (Franklin County)
Seismic Hazards	Active faults and earthquake locations	There is no known fault exist in the City.	Active fold and fault GIS data layers (WDNR)
Mine Sites	Active (permitted) mine sites	Two mine sites were identified; both mines were for sand or gravel. Underground mining practices are currently not taking place in Franklin County. There are no known inactive mines sites; however, if they exist, these areas may present slope hazards.	Mining and Energy Resources GIS data (WDNR) 2004, 2010, 2011, and 2012

Note:
WDNR = Washington Department of Natural Resources

4.8 Cultural Resources

The City is located at the confluence of the Columbia and Snake rivers. It is in the Southern Plateau, part of the larger Columbia Plateau culture area. The Southern Plateau stretches from southern Okanogan County in the north to the northern border of the Great Basin to

the south. The prehistory and history of the Southern Plateau is briefly summarized here. Known archaeological and historic sites are discussed, as well as potential for archaeological and historic sites.

4.8.1 Historical Background

At the end of the Pleistocene era, hunters of large mammals fanned out across North America. This period is known in the Columbia Plateau as Paleoindian (Ames and Maschner 1999), and in the southern Plateau as Period Ia (Ames et al. 1998). In the Columbia Plateau as a whole, Chatters and Pokotylo (1998) included these early mobile foragers in the Early Period from about 11,000 to 8,000 years ago. The earliest Paleoindian sites recorded in the Columbia Plateau are attributed to the Clovis culture, including the Ritchey-Roberts Clovis cache in East Wenatchee, which dates to 12,250 ago (Mehringer and Foit 1990).

After the brief but widespread Clovis occupation, a broad-spectrum, hunter-gatherer culture developed in the Columbia Plateau region and persisted until the middle Holocene, around 5,300 years ago. This culture spans the latter part of the Early Period and the Early Middle Period in the Columbia Plateau sequence (Chatters and Pokotylo 1998), and Period Ib in the Southern Plateau sequence (Ames et al. 1998).

A shift toward more permanent settlement began around 6,000 years ago. Known as the Late Middle Period in the Columbia Plateau, and Period II in the Southern Plateau, this period lasted until the beginning of the early Holocene around 3,000 years ago (Chatters and Pokotylo 1998; Ames et al. 1998). In general, Period II tool assemblages are characterized by the addition of groundstone and bone/antler tools to the existing flaked stone technology.

Late Holocene cultures in the Columbia Plateau region exhibit a, "shift in adaptations…to storage-dependent collector strategies" (Chatters and Pokotylo 1998), which are characterized by intensive salmon fishing and associated storage features, social inequality, large permanent winter villages, and diverse tool assemblages. Labeled the Late Period, this shift begins around 4,000 years ago and persists until historic contact (Chatters and Pokotylo 1998). In the southern Columbia Plateau, the contemporaneous Period III also

includes evidence of intensive camas processing and fiber and wood artifacts preserved in the relatively dry climate (Ames et al. 1998). The late Holocene archaeological cultures correlate with historical ethnographic descriptions.

The Columbia-Snake River confluence has a rich archaeological record, with sites in the area attributed to all of the Southern Plateau cultural phases. There are 22 recorded archaeological sites within a mile of the confluence. National Register of Historic Places (NRHP)-listed properties include the Lower Snake River Archaeological District and the historic Ainsworth town site.

The City is in the traditional territory of Sahaptin-speaking Plateau peoples (Walker 1998; Kershner 2008). Traditional Plateau cultures were based on a seasonal round that took advantage of fish runs, game, and root resources, as well as trade, kinship ties, and intermarriage among groups (Walker 1998). Prior to historic resettlement, permanent winter villages anchored the seasonal round (Boyd and Hajda 1987). Villages consisted of large mat lodges, each housing an extended family, and occasionally also smaller conical structures (Stern 1998; Schuster 1998). Villages were the basic political unit (Schuster 1998).

Fishing activities revolved around an early salmon run in March, and a second, larger run in June (Schuster 1998). Fishing technology included the portable (toggling harpoons, leisters, hook-and-line, and nets) and the non-portable (traps, weirs, and platforms at permanent fishing stations; Schuster 1998). Gathering activities took place throughout the year. Fish, roots, and berries were processed, dried, and stored. Although salmon were a key staple, plant foods also made up a significant portion of the diet (Hunn 1981). Religious life involved adherence to the Guardian-Spirit complex, which included the sweatlodge and curative sings and the Washat religion, which was based on ceremonies held in the longhouse and included first food feasts in the spring celebrating the return of the salmon and newly sprouting plants (Schuster 1998).

By the time of the first sustained contact between the tribes of the City area and Euro-American settlers in the mid-1800s, tribal life had already been significantly impacted. Introduced diseases decimated the population (Vibert 1997) while the introduction of the

horse altered social and economic activities. Still, the area is described in historical accounts as a busy gathering place for trade and resource procurement (Kershner 2008).

The earliest recorded Euro-American exploration of the Columbia River was in 1792 (Hayes 1999), but settlement of the region was slow until the 1840s when Americans were attempting to wrest control from the British (Mackie 1997). The Oregon Treaty of 1846 awarded the Oregon Territory to the United States. In 1853, Washington became a territory separate from Oregon, and by the next year, governors of both territories began pursuing treaties that relegated tribes to reservations (Wilma 2003). Fourteen tribes and bands signed the Treaty of 1855 that established the Yakama Indian Reservation (YNM 2011).

The Lewis and Clark expedition recorded the first description of the confluence of the Columbia and Snake rivers in October of 1805, and David Thompson passed through in 1811 (Nisbet 2005). The North Pacific Railroad through the area was built in the late 19th century (partially by Chinese laborers), bringing additional settlement. The town of Ainsworth was platted in 1879 as a railroad camp at what is now Sacajawea State Park, and became the county seat of Franklin County when it was created from Whitman County in 1883 (Kershner 2008). A rail bridge over the Columbia River from Pasco to Kennewick was built in 1887. Pasco was named the county seat in 1885 and incorporated in 1891. A roadway bridge across the Columbia River was constructed in 1922 (Gibson 2005). The economy was primarily agricultural until the 1940s, when the Pasco airfield became a Naval air station and plutonium production was established across the river at Hanford (Sanger 1995; Gibson 2005). Pasco maintained economic activities beyond supporting Hanford, including agricultural chemical storage and distribution, and those became more prominent as the military sector declined in the 1950s. Agriculture, transportation, and logistics remain important today (Kershner 2008). The Hanford plant was deactivated piecemeal in the 1990s, though many Pasco residents are still employed in maintenance and cleanup at the site (Gerber 1992).

4.8.2 Recorded Cultural and Historical Resources

The Department of Archaeology and Historic Preservation maintains an electronic database of archaeological sites, historic structures, and cemeteries. The database shows 13 recorded

sites within City limits, 12 of them along the shoreline. The Tri-Cities Archaeological District, an NRHP-eligible district, is partially within the City. Almost the entire Columbia River shoreline within City limits is within the boundaries of an archaeological site or district. Several of the sites include human remains. There are dozens of potentially historic structures in the City, at least seven of which are located within the shoreline jurisdiction, as is the NRHP-listed James Moore house (commonly known as the Moore Mansion).

4.8.3 Potential for Archaeological and Historic Resources

The City area has a dense concentration of archaeological and historic resources, many with exceptional significance and cultural value. The following archaeological and historical site types could be expected:

- Lithic scatters, quarries, and caches
- Precontact habitation sites (camps, villages, and cave sites)
- Burial sites and cemeteries
- Resource procurement sites (fish traps and camas ovens)
- Pictographs and petroglyphs
- Historic habitation sites (homesteads, farms, and cabins)
- Historic agricultural infrastructure
- Historic and precontact transportation corridors (trails, routes, railroad grades, and road grades)
- Historic public works infrastructure (dams and transmission corridors)

Some sites may be on or near the surface, and others may be deeply buried, depending on the localized geomorphology.

4.8.4 Cultural Resources and Shoreline Development

State and local cultural resources laws apply to shoreline development. State laws include RCW 27.53 (Archaeological Sites and Records), which prohibits the unpermitted removal of archaeological materials and establishes a permitting process, and RCW 27.44 (Indian Graves and Records), which describes how human remains must be treated.

Given the importance of shoreline locations throughout the human history of the area, the potential for cultural resources should be considered high for any shoreline development permit unless demonstrated otherwise. To comply with state and local law, applicants should be prepared to follow the provisions of RCW 27.53 and 27.44 if cultural resources are identified or encountered during the planning or construction process.