

City of Pasco
Comprehensive Plan:
**Non-project Draft
Environmental
Impact Statement**

May 2020

Prepared for:
City of Pasco



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Integrated Non-project Draft Environmental Impact Statement

Factsheet

Project Title:

Integrated Non-Project Final Environmental Impact Statement for the City of Pasco 10-year Comprehensive Plan

Proposed Action and Alternatives:

The City is updating its Comprehensive Plan based on projected growth projections. Three alternatives were studied in the Draft Environmental Impact Statement (EIS), including a No Action Alternative and two Action Alternatives.

No Action Alternative

The No Action Alternative growth will occur based on the past trends. No land use change will occur to affect the growth pattern. The UGA boundary would remain as currently identified for the City.

Alternative 2: Recommended Growth Target

Alternative 2 proposes changes in the Comprehensive Plan land use designations to accommodate Pasco's 20-year population growth and capitalize on other development opportunities in a large UGA area expansion on the northern borders of the City.

Alternative 3: Recommended Growth Target High Density, Preferred Alternative

Alternative 3, the Preferred Alternative, proposes changes in the Comprehensive Plan land use designations with higher density land use designations proposed in a UGA area expansion on the northern borders of the City, and smaller in area than Alternative 2, and also through increased in-fill development and higher density development, including redevelopment, within the City.

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Related Plans and Documents

- City of Pasco Draft Comprehensive Plan 2020 (May 15, 2020) - Volume 1
- City of Pasco Draft Comprehensive Plan (May 15, 2020) - Volume 2

A limited number of CD and hard copy draft EIS documents are available at the City of Pasco Community & Economic Development Department at 525 N 3rd Avenue, Pasco, Washington 99301. The draft EIS is also available online at:

<http://www.pasco-wa.gov/1088/10763/Comprehensive-Plan-Update-2018-2038>

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Chapter 1. Overview

1.1. Introduction

The City of Pasco (City) is updating its Comprehensive Plan (Plan) consistent with the Growth Management Act (GMA; Revised Code of Washington [RCW] 36.70A). Every 10 years, the City is required to update its Plan. Pursuant to the GMA, the City is to complete the update by the target date of June 30, 2019; this plan is expected to be completed by Fall 2020.

The Plan consists of goals, policies, and analyses of the following elements: economic, land use, transportation, utilities, capital facilities, and housing. It also includes parks and recreation, schools, municipal facilities, fire and emergency services, police services, telecommunications, and Irrigation District Facilities. The Plan guides decisions about development and growth within the City limits and in the Urban Growth Area (UGA). It is designed to help the City meet its long-term vision for growth. The updated document contains visions, goals and policies, and analyses. The Plan is also required to be consistent with the County-wide Planning Policies established for Franklin County (Franklin County 2019).

The City has determined this proposal is likely to have significant adverse impact of the environment. An environmental impact statement (EIS) is required under RCW 43.21C.030(2)(c).

1.2. What is an Integrated SEPA/GMA document?

In 1995, the Department of Ecology (Ecology) adopted amendments to the Washington State Environmental Policy Act (SEPA; Washington Administrative Code [WAC] 197-11-210) to authorize cities and counties planning under GMA to integrate the requirements of SEPA and GMA. These new rules (WAC 197-11-210 through 235) allow the environmental analysis required under SEPA to occur concurrently with and as an integral part of the planning and decision making under GMA. The City has decided to follow this course and incorporate the EIS discussion of the impacts of the Plan by SEPA into the Plan itself.

The integration of SEPA and GMA results in improved planning and project decisions from the environmental perspective. Just as GMA goals cannot be addressed without consideration of environmental factors, the goals of SEPA are benefited by the examination of the "big picture" and identification of mitigation to address cumulative impacts of development that occurs during GMA planning.

1.3. What is an EIS

An EIS is a document required under the SEPA that evaluates the possible impacts of a proposed action. Several different ways of achieving the goal must be explored and contrasted before a final option/alternative is chosen. The EIS alternatives provide a framework for analyzing impacts and making comparisons among different land use options.

This document discusses the current state of the City, presents two action and one no-action alternative for the future of the City, and analyzes expected changes under each alternative. No alternative should be considered definitive. This will allow decision makers, with input from residents, the opportunity to incorporate the better features of each alternative (if appropriate) into a recommended Plan.

1.4. What is this Process

First, the Responsible Official of the City determined an EIS was required. Once that occurred, the City issued a Scoping Notice to request public input on the scope of the document, including issues to be addressed, alternatives to be evaluated, and the level of detail to be provided. Several public comments were received during scoping, as provided in Appendix A. These comments were considered in both scoping the draft EIS and the alternatives and in analysis of specific topics addressed in the draft EIS. Once a final scope of work had been determined, then the draft comprehensive plan was prepared, and this draft EIS was also prepared to more fully consider effects and also to solicit comments during the public review process.

1.5. Background information on GMA

In 1990, the Washington State Legislature recognized that uncoordinated and unplanned growth was reducing the quality of the environment and of life in many areas of the State, and so adopted the GMA. The overall goal of this legislation is to provide a managed framework for growth and development throughout Washington State. There are 14 goals in GMA as follows:

- Urban growth: Encourage development in urban areas where adequate public facilities exist or can be provided.
- Reduce Sprawl: Reduce inappropriate conversion of undeveloped land into sprawling, low-density development.
- Transportation: Encourage efficient multimodal transportation systems based on regional priorities.
- Housing: Encourage the availability of affordable housing to all economic segments of the population.
- Economic Development: Encourage economic development consistent with adopted Plans, promote economic opportunity for all citizens, especially for the unemployed and the disadvantaged, and encourage growth in areas experiencing insufficient economic growth, all within the capacity of the state's natural resources, public services and public facilities.
- Property Rights: Protect property rights from arbitrary or discriminatory actions.
- Permits: Process permits in a timely and predictable manner.
- Natural Resource Industries: Conserve timber, agricultural, and mineral resource lands.
- Open Space and Recreation: Retain open space and enhance recreational opportunities.
- Environment: Protect the environment and enhance air quality and availability of water.
- Citizen Participation and Coordination: Foster early and continuous public participation in the planning process.
- Public Facilities and Services: Provide adequate public facilities and services to serve new growth.
- Historic Preservation: Encourage historic preservation.

Shoreline Management: Incorporate the goals and policies of the Shoreline Master Program (SMP) into the Plan.

In order to attain these goals, cities and counties planning under GMA are required to develop Plans addressing land use, transportation, housing, utilities, and capital facilities for the next 20 years. Plans are required to be updated every 10 years.

1.6. Location

The proposal includes the City limits and UGA boundary. The City of Pasco, Washington, is in Franklin County bordered by the Columbia and Snake rivers, in the geographic region known as the Mid-Columbia Basin. Pasco and the nearby communities of Richland and Kennewick are commonly called the Tri-Cities.

The Tri-Cities area is the largest metropolitan area between Spokane, 145 miles to the northeast, and Seattle, 220 miles to the northwest. Boise, Idaho, is situated 300 miles southeast of Tri-Cities. Because of its location, the Tri-Cities metro has become a major transportation and commercial hub for travelers, and commodities in the Pacific Northwest. Figure 1-1 shows the City regional context.

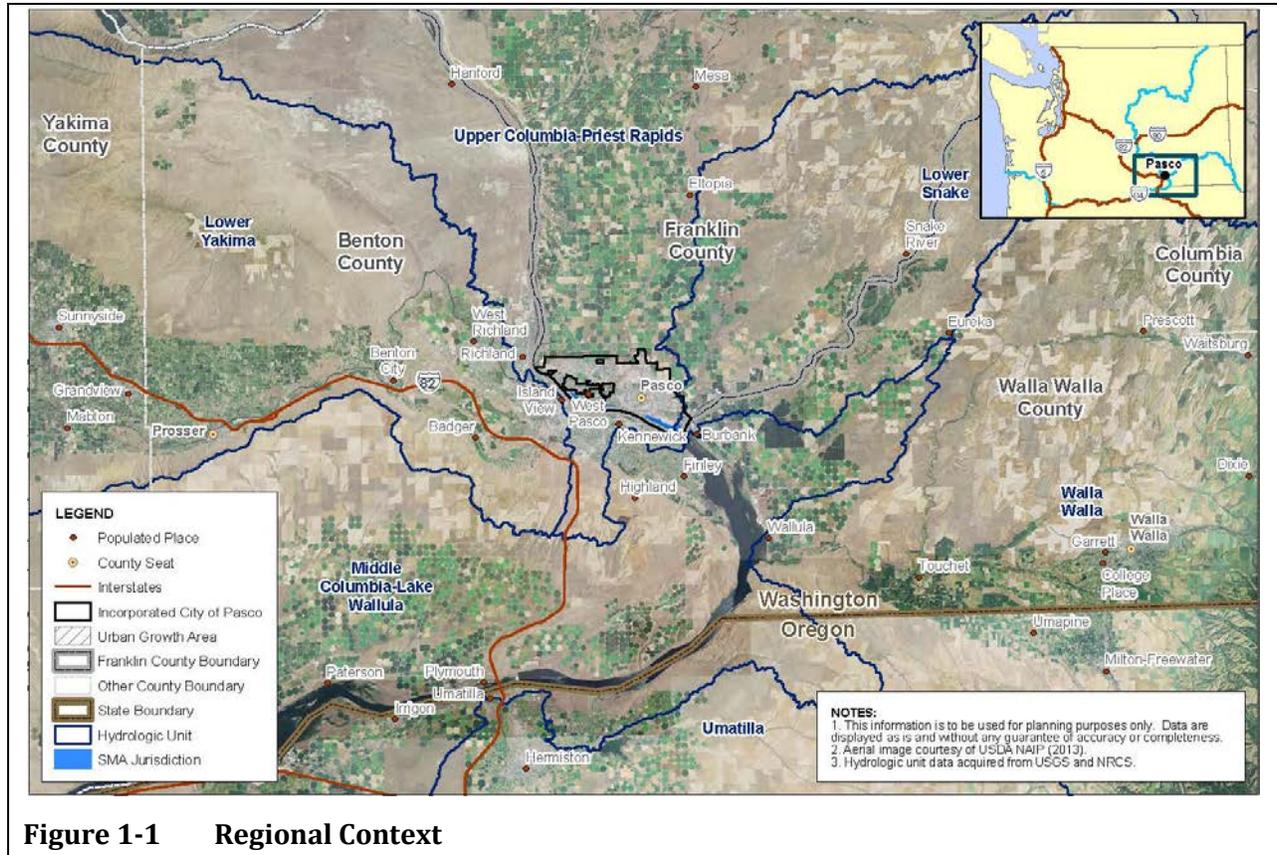


Figure 1-1 Regional Context

1.7. Summary of the Proposal

A Public Participation Plan was adopted by the City. The City provided multiple opportunities for public involvement in the form of public workshops with the Planning Commission and City Council (also broadcast on cable television), open houses, and through a Plan update webpage. The City reached out to agencies such as Pasco School District, Columbia Basin College, Benton Franklin Council of Government, Washington State Departments of Commerce and Transportation and other agencies. The Plan’s goals, policies, and elements reflect the input received from the public.

The City of Pasco is updating its Comprehensive Plan (Plan) consistent with the Growth Management Act (GMA; RCW 36.70A). The updated Plan consists of goals, policies and analyses of the following elements and sub-elements: land use, housing, capital facilities, transportation, economic development, utilities, open space, public services, resources lands, and critical areas and shorelines.

The updated Plan guides decisions about development and growth within the City limits and the Urban Growth Area (UGA). It is designed to help the City meet its long-term growth target as allocated by the Office of Financial Management (OFM). The updated plan contains vision, goals and policies, analyses of future growth and potential UGA expansion, and updated elements to comply with the GMA. The Plan is also required to be consistent with the Countywide Planning Policies established for Franklin County.

The current OFM population estimate for Pasco is 73,590 (OFM 2018). Population of the City is expected to reach 121,828 by 2038, an increase of 48,238 persons over the current population (Table 1).

Table 1
Population Estimates

	Population in Franklin County	Population in Pasco ¹
2018	93,541	73,590
2028	121,792	97,434
2038	152,285	121,828
10 year increase	30,493	23,844
20 year increase	58,744	48,238
Residential units needed in Pasco in 10 years ²		7,522
Residential units needed in Pasco in 20 years ²		15,217

1. OFM Medium Series. Historically, Pasco’s share has been 80 percent of the County population.

2. Based on OFM - household size: 3.17

The land capacity analysis indicates that the City and the existing UGA has the capacity to accommodate 30,372 persons in the vacant, and under-utilized land and in the current UGA. See Table 2 for details.

Table 2
Existing Residential Capacity

	Acres	Capacity for additional residential units	Population to be accommodated
Developable land in the City limits	428.20	1,490	4,723
Developable land in existing UGA	199.70	1,091	3,459
Broadmoor area ¹		7,000	22,190
Current capacity including Broadmoor.			30,372

1. Capacity anticipated in the Broadmoor area in the draft master plan

1.8. Scope of Review

This Integrated EIS analyzes, at a programmatic level, the potential impacts on the following elements of the environment identified through the scoping process:

- Earth
- Water
- Plants and Animals
- Land Use
- Environmental health
- Shoreline Use
- Population, Housing, and Employment
- Parks and Recreation
- Transportation
- Public Services and Utilities
- Heritage Conservation

Chapter 2. Alternatives

2.1. Description of EIS Alternatives

The City is proposing three alternatives based on projected future growth patterns. Alternative 1, No Action, calls for keeping the City’s existing Plan without modifications. Alternative 2, Recommended Growth Target, allows for changes in the Plan to accommodate the 20-year population growth projection for Pasco allocated by the Office of Financial Management (OFM). Alternative 3, Recommended Growth Target High Density also accommodates the 20-year growth projection but through a growth pattern of higher density.

2.2. How the Alternatives Were Developed

For the Draft EIS, the City conducted multiple visioning workshops with the public, Planning Commission, and City Council to develop the alternatives. An online survey was also available to offer input on multiple issues. Public input was gathered in accordance with the adopted Public Participation Plan. Multiple ways of outreach include:

- Online, television, and mail
- Public meetings
- Council and Commission workshops
- Online survey
- Topic group discussion
- Other agency coordination

Key topics to address in the Plan were gathered during the outreach process. These include:

- Include a higher density alternative
- Transportation system (roads/airport) and other infrastructure impacts
- Characterize impacts to agriculture lands and critical areas/shrub steppe
- Consider employment forecast and regional availability of industrial lands
- Conduct detailed land capacity and densities analysis
- Characterize impacts on existing water rights and needs/deficiencies
- Evaluate affordable housing effects
- Characterize air quality effects

2.3. The Alternatives

The EIS is considering three alternatives for evaluation based on future growth expectations. Alternative 1, No Action, Alternative 2, Traditional Growth Target, and Alternative 3, Compact Growth Target. Description of each alternative with maps are summarized below.

2.3.1. Alternative 1: No Action

SEPA requires an EIS study to contain a “no action” alternative. This alternative would maintain the City’s existing Comprehensive Plan without modifications. This means growth would be expected consistent with past trends but no land use changes would occur to accommodate this growth. The Urban Growth Area would remain the same. Limited policy changes may be needed to maintain consistency with the GMA and the Countywide Planning Policies.

The land capacity analysis indicates that the City and the existing UGA has the capacity to accommodate 29,629 persons. This alternative will have a deficit of land to accommodate 18,625 (48,238 - 29,613) persons.

The existing land use distribution in the City is shown in Figure 2-1 and described in Table 3. Draft EIS Chapter 2 includes a more detailed description of Alternative 1.

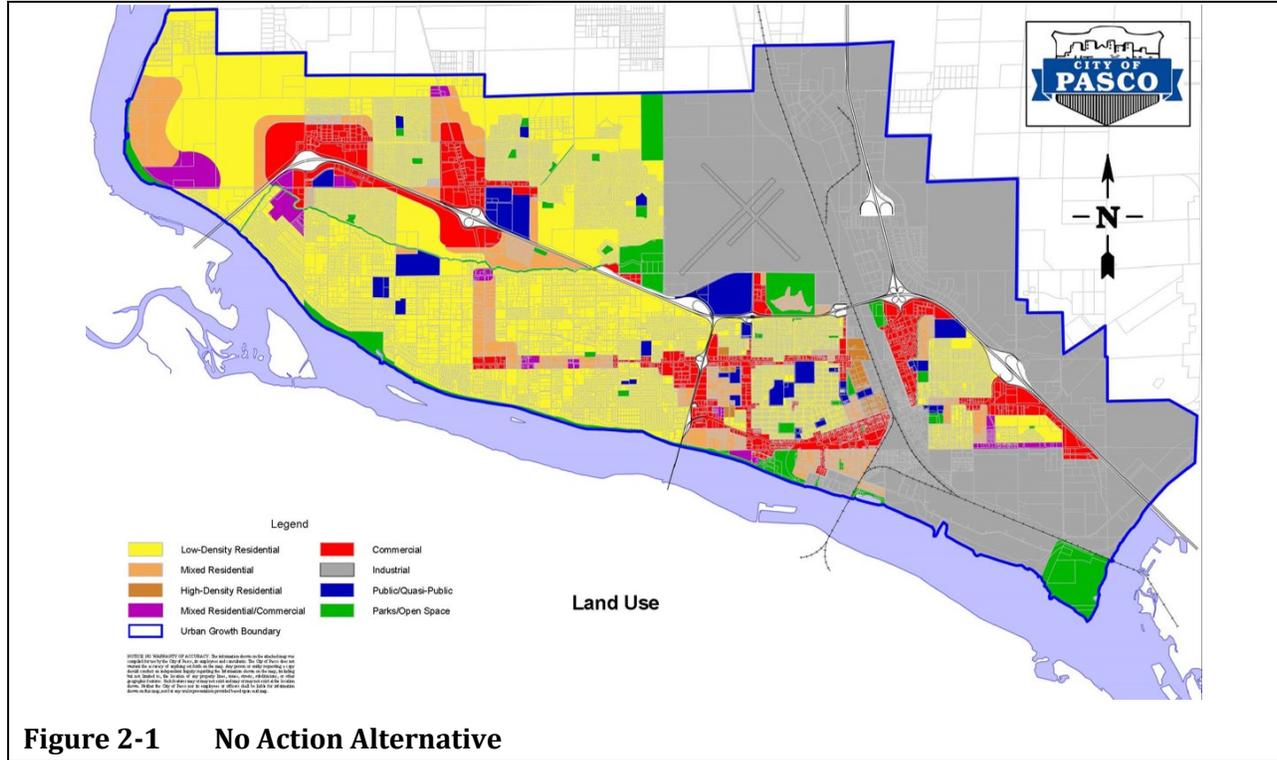


Figure 2-1 No Action Alternative

**Table 3
Existing Land Use Acreage**

Land Use Designations	City Limits	UGA	Total
Residential Lands			
Low Density	7,624.78	1,675.85	9,300.63
Mixed Density	1,252.65	425.18	1,677.83
High Density	188.59	—	188.59
Subtotal	9,066.02	2,101.03	11,167.05
Commercial Lands			
Mixed Residential / Commercial	564.28	17.42	581.69
Commercial	2,050.20	34.42	2,084.62
Subtotal	2,614.48	51.83	2,666.31
Industrial Lands			
Industrial	5,118.44	849.35	5,967.79
Subtotal	5,118.44	849.35	5,967.79

Land Use Designations	City Limits	UGA	Total
Public / Quasi-Public Lands			
Gov't Public / Quasi-Public	837.71	87.53	925.23
Subtotal	837.71	87.53	925.23
Open Space / Park Lands			
Open Space / Park	950.24	61.37	1,011.61
Subtotal	950.24	61.37	1,011.61
Airport Reserve Lands			
Airport Reserve	1,884.94	350.75	2,235.68
Subtotal	1,884.94	350.75	2,235.68
DNR Reserve Lands			
DNR Reserve	765.05	469.03	1,234.08
Subtotal	765.05	469.03	1,234.08
Total Land Area	21,236.87	3,970.89	25,207.76¹

Notes:

1. Total land area includes approximately 4,300 acres of street right of way

Source: City of Pasco Comprehensive Plan

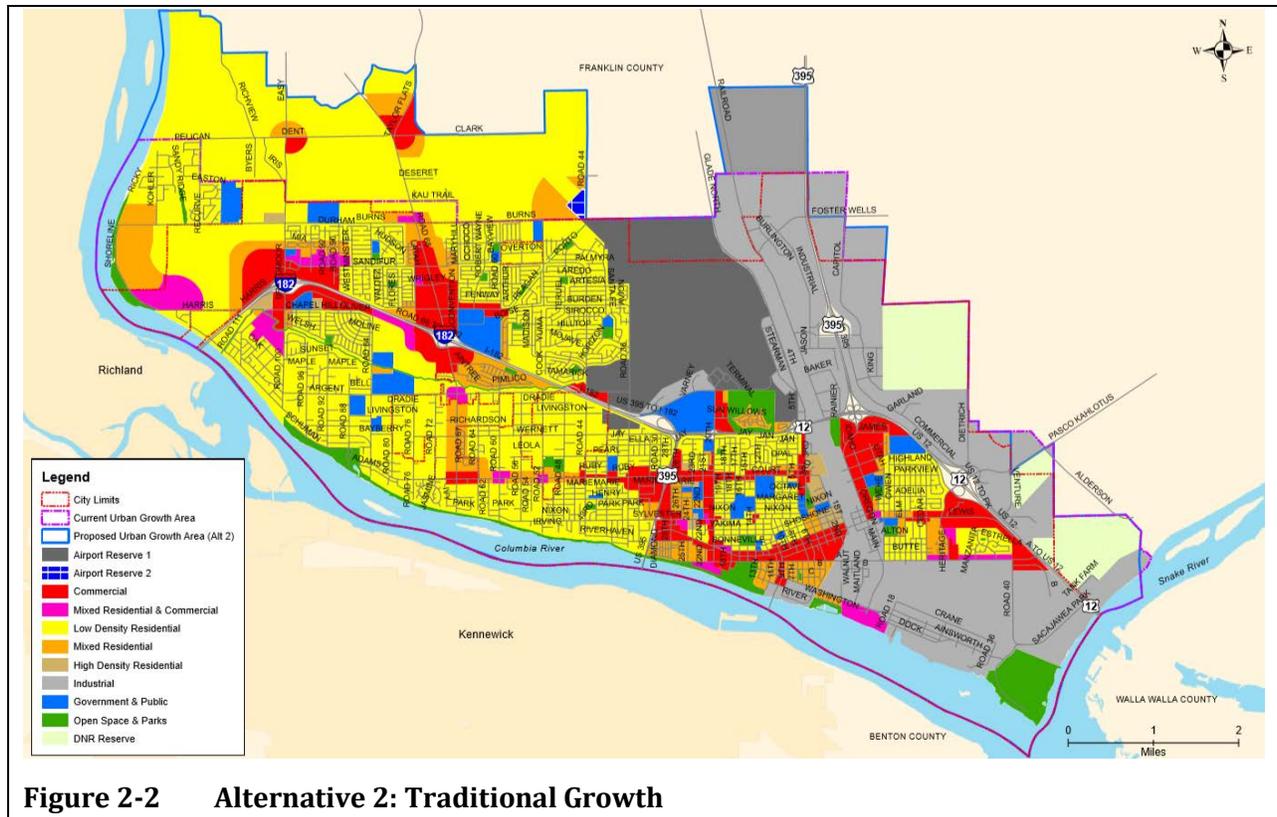
2.3.2. Alternative 2: Traditional Growth Target

This alternative allows for changes in the Plan to accommodate the 20-year population growth projection for Pasco allocated by the Office of Financial Management (OFM). In this alternative, growth would occur based on the past trends, which could include some development within the undeveloped and infill areas of the City along with an expansion of the Urban Growth Area north of the City to accommodate future growth. This alternative considers land use and policy changes in order to maintain consistency with the GMA and the Countywide Planning Policies, and to accommodate growth.

This alternative will add approximately 5000 acres in the area north of the City as shown in Figure 2-2 and Table 4.

Table 4
UGA Alternative #2

Land Use	Area (Acres)
Low Density Residential	3,622.00
High Density Residential	—
Mixed Residential (Mixed Density)	278.00
Mixed Residential & Commercial	3.00
Commercial	119.00
Industrial	725.00
Government & Public	—
Open Space & Parks	—
Airport Reserve	33.00
DNR Reserve	—
Total	4,738.86



2.3.3. Alternative 3: Compact Growth Target, Preferred Alternative

This alternative allows for changes in the Plan to accommodate the 20-year population growth projection for Pasco allocated by the Office of Financial Management (OFM), and to capitalize on other development opportunities. In addition, alternative 3 will consider a growth pattern of higher density. It includes considering land use and policy changes to gain an increase in development capacity within the undeveloped and infill areas of the City. Under this alternative, the Urban Growth Area would be modified to the north of the City at a higher density/smaller area compared to Alternative 2 to accommodate future growth. It will consider land use and policy changes in order to maintain consistency with the GMA and the Countywide Planning Policies, and to accommodate growth.

This alternative will add approximately 3600 acres in the area north of the City as shown in Figure 2-3, and Table 5. Table 6 summarizes land use under Alternative 3.

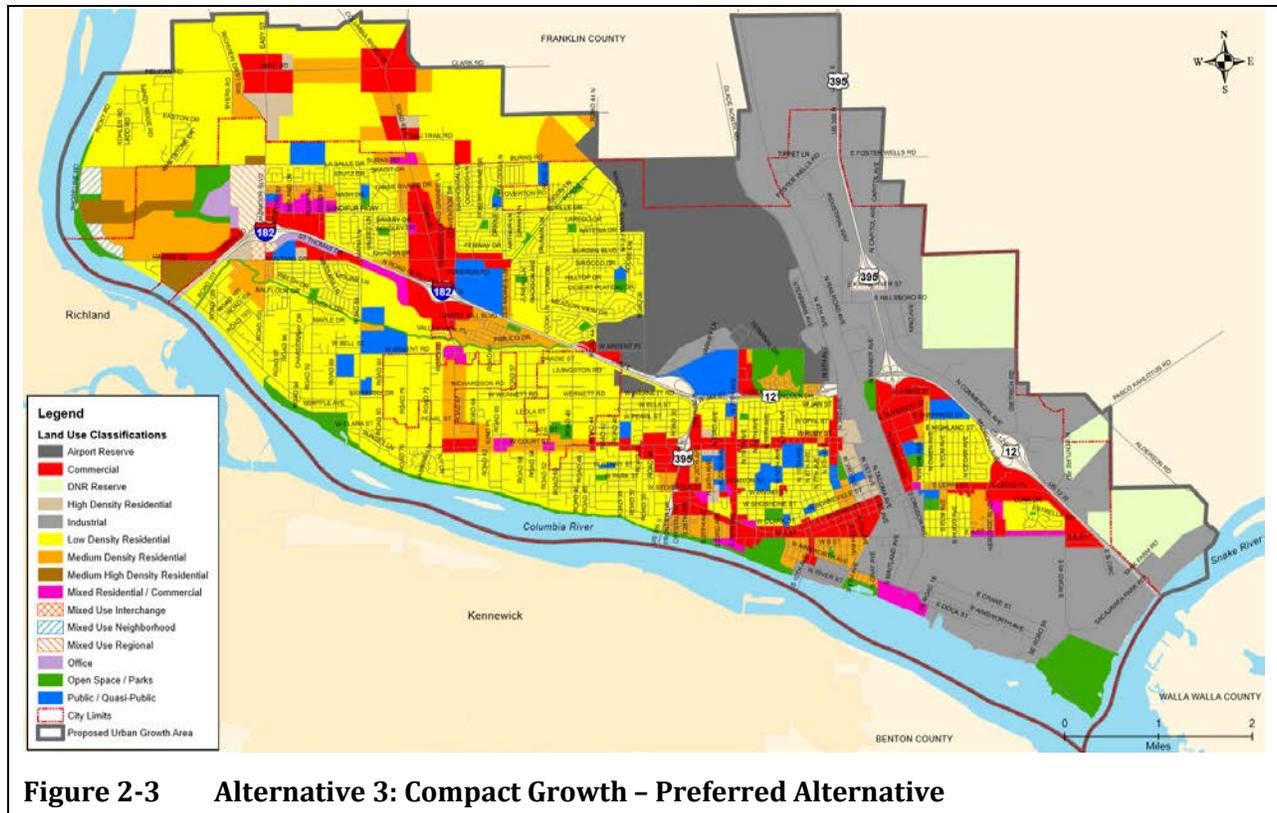


Figure 2-3 Alternative 3: Compact Growth – Preferred Alternative

**Table 5
Proposed Land Use in the UGA Expansion Area**

Land Use	Land (acres)
Low Density Residential ¹	1,830
Mixed/Medium Density Residential	429
High Density Residential	122
Commercial	393 ²
Airport Reserve	33
Industrial	726
Total	3,533

1. About 40 acres of parks, 160 acres of land for school facilities and additional public lands are included in the Low Density Residential land use acres. Locations to be identified at a later phase with the land use changes.
2. Additional commercial lands is assumed to be available through redevelopment on existing corridors over time

Table 6
Land Use in Alternative 3

Land Use Designations	City Limits	UGA (Existing and Proposed)	Total
Residential Lands			
Low Density	7,136.50	3,581.52	10,718.02
Medium Density	1,648.63	690.34	2,338.97
Medium-High Density	60.77	162.96	223.73
High Density	171.25	122.40	293.65
Subtotal	9,017.15	4,557.22	13,574.37
Commercial Lands			
Mixed Residential / Commercial	345.31	12.31	357.62
Commercial	1,872.27	427.70	2,299.97
Mixed Use Interchange	26.35	—	26.35
Mixed Use Neighborhood	20.60	56.82	77.42
Mixed Use Regional	147.96	—	147.96
Office	104.01	—	104.01
Subtotal	2,516.50	496.84	3,013.33
Industrial Lands			
Industrial	5,128.11	1,564.56	6,692.67
Subtotal	5,128.11	1,564.56	6,692.67
Public / Quasi-Public Lands			
Gov't Public / Quasi-Public	850.96	—	850.96
Subtotal	850.96	—	850.96
Open Space / Park Lands			
Open Space / Park	1,040.18	70.39	1,110.57
Subtotal	1,040.18	70.39	1,110.57
Airport Reserve Lands			
Airport Reserve	1,919.64	382.39	2,302.03
Subtotal	1,919.64	382.39	2,302.03
DNR Reserve Lands			
DNR Reserve	764.04	468.85	1,232.89
Subtotal	764.04	468.85	1,232.89
Area Total	21,236.57	7,540.25	28,776.82

Chapter 3. Major Issues and Summary of Environmental Impacts

3.1. Major Issues and Areas

3.1.1. Increased Density and Development

Densities will be increased under the preferred alternatives, which may significantly impact the character of the City, especially in the Broadmoor area and the area to the north proposed for future UGA expansion. Some areas in existing single-family neighborhoods may have increased densities and infill developments in both action alternatives 2 and 3.

Some of the areas in the existing UGA, especially the Riverview area would most likely retain similar densities for a longer timeframe. The creation of odd shaped lots and the placement of buildings in locations where future streets need to be extended, and the lack of sewer service all create challenges for future development. In addition, the Department of Archaeology and Historic Preservation is recommending cultural surveys be conducted for development proposals in this area that will add to development costs and time. City of Pasco Ordinance 4221 (June 2015) established that the RS-20 Zoning designation would remain in place for a period of five years. As a result, low density in this area will change to a higher density at a much slower pace than other areas within the City limits and UGA.

Future development under both action alternatives will change the character of the primarily undeveloped areas of the City and the unincorporated areas in the County currently proposed for UGA expansion. Alternative 3 will have a variety of housing styles, including cluster and multi-family housing, and will impact less area in the unincorporated part of the County.

In the responses to the scoping notice and in meetings, the Pasco community has largely expressed support for higher density development and a variety of housing choices.

3.1.2. Traffic

The additional traffic generated by the increased housing densities, and commercial, and public facilities land uses could impact existing traffic pattern. Both action alternatives would result in a substantial increase in traffic volume, although proposed mitigation could reduce transportation impacts sufficiently under Alternative 3 to meet the City's current Level-of-Service requirements. Additionally, the Broadmoor area in both alternatives will retain more traffic internally due to the increase of mix land uses.

Traffic within the Broadmoor area and in the proposed expanded UGA area is anticipated to significantly increase in Alternative 3. However, a portion of this traffic is expected to be contained internally due to the combination of businesses and housing opportunities planned in the same area. Alternative 2 will have an increased vehicular movement due to the UGA area consisting mostly of residential land uses, with residential traffic travelling to the work areas both within and outside of Pasco in the greater Tri-Cities area, along with travel to commercial areas throughout the City.

The major facilities that will be affected by the forecasted growth in the City of Pasco under all alternatives are I-182 as well as Road 68 and Road 100/Broadmoor Blvd, both of which provide the only access at interchanges with I-182 in the western portion of the City where much of the growth is forecast to occur.

3.1.3. Open Space and Natural Areas

Open space and natural areas are located along the extensive shoreline areas of the City, industrial areas on the eastern side of the town, around the Pasco airport and near the Broadmoor area. Habitats in these areas include wetlands, sand dunes, shrub-steppe habitat and riparian areas, in varying levels of function. Many open space areas are also disturbed with non-native vegetation on them. The City’s existing environmental protection regulations, including Pasco Municipal Code (PMC) Titles 28 (Critical Areas) and 29 (Shoreline Master Program) designed to protect wetlands, fish and wildlife habitats, and other critical area functions and values. Additionally, state and federal regulations also guide the preservation of cultural resources in this area.

3.1.4. Healthy Community

As the growth occurs in the City, there has been concern about the planning for a walkable, bike-friendly and a more active community that promotes a healthy lifestyle. The City’s zoning code currently allows mixed uses in certain zones with Mixed-Residential/ Commercial land use. Both alternatives would promote mixed-use developments as future development is anticipated in the Broadmoor area. Both alternatives’ goals and policies include streetscape and traffic improvement, along with pedestrian- and bike-friendly options. Land use in the proposed UGA area in the Preferred Alternative 3 includes a mix of residential, commercial, park, and public facilities land uses that would promote live and work environments, increase physical activities and encourage multi-modal travel options. The UGA area in Alternative 2 will include a minimal mix of uses. With predominantly low-density residential land use in the UGA area, Alternative 2 will mostly remain as an auto-oriented community.

3.2. Comparison of Alternatives to GMA Goals

Table 7
Summary of Alternatives Compared to GMA Goals

Goals	Alternative 1: No Action	Alternative 2	Alternative 3
Urban Growth: Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.	<ul style="list-style-type: none"> Least future growth in the City. Dispersed future growth throughout the city and low rise pattern. 	<ul style="list-style-type: none"> Focused growth within the UGA. 	<ul style="list-style-type: none"> Focused growth within the UGA with higher density and infill.
Reduce Sprawl: Reduce inappropriate conversion of undeveloped land into sprawling, low-density development.	<ul style="list-style-type: none"> Dispersed and low-rise development pattern, would exceed the UGA to accommodate growth increasing sprawl. 	<ul style="list-style-type: none"> Growth within the UGA, but suburban nature of development will result in sprawl. 	<ul style="list-style-type: none"> Growth within the UGA, planned areas would reduce sprawl.

Goals	Alternative 1: No Action	Alternative 2	Alternative 3
<p>Transportation: Encourage efficient multi-modal transportation systems based on regional priorities and coordinated with the City Plan.</p>	<ul style="list-style-type: none"> Retains current Transportation plans with limited improvements. 	<ul style="list-style-type: none"> Adds new transportation improvements to improve connectivity and street design that supports urban environment. 	<ul style="list-style-type: none"> Adds new transportation improvements to improve connectivity and street design that supports urban environment. Adds multi-modal travel options.
<p>Housing: Encourage the availability of affordable housing to all economic segments of the population, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock.</p>	<ul style="list-style-type: none"> Housing not adequate to meet the 20-year demand. Disbursed and low rise pattern of housing development. 	<ul style="list-style-type: none"> Housing meets the 20-year demand with limited housing types. 	<ul style="list-style-type: none"> Housing meets the 20-year demand with a variety of housing types and residential densities.
<p>Economic Development: Encourage economic development consistent with adopted Plans, promote economic opportunity for all citizens, especially for the unemployed and the disadvantaged, and encourage growth in areas experiencing insufficient economic growth, all within the capacity of the state’s natural resources, public services and public facilities.</p>	<ul style="list-style-type: none"> Current economic development trends continue. Employment to occur in the existing commercial and industrial areas. 	<ul style="list-style-type: none"> Economic opportunities are identified in the plan. Some employment will occur in the limited commercial areas. 	<ul style="list-style-type: none"> Economic opportunities are identified in the plan. Additional commercial and mixed-use areas will accommodate more employment.

Goals	Alternative 1: No Action	Alternative 2	Alternative 3
Open Space and Recreation: Encourage the retention of open space and development of recreation opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks.	<ul style="list-style-type: none"> Maintains existing parks and Natural Open Space. Recreation opportunities will be provided based on the Parks and Recreation’s adopted Level of Service. 	<ul style="list-style-type: none"> Maintains existing parks and natural open space and adds additional park land to serve future growth. 	<ul style="list-style-type: none"> Maintains existing parks and natural open space and adds additional park land to serve future growth.
Environment: Protect the environment and enhance the City’s high quality of life, including air and water quality, and the availability of water.	<ul style="list-style-type: none"> Environmental qualities are protected based on the current regulations and development pattern. A sprawl type growth will involve more land for development, resulting in higher vehicular traffic that could negatively impact the air quality. 	<ul style="list-style-type: none"> Environmental qualities are protected based on the current regulations and development pattern. A low density growth pattern will involve more land for development, resulting in higher vehicular traffic that could negatively impact the air quality. 	<ul style="list-style-type: none"> Environmental qualities are protected based on the current regulations and development pattern. A higher density development will involve less land, reduce vehicular traffic, and will reduce impact to air quality and ozone.
Public Facilities and Service. Adequate public facilities to serve the development.	<ul style="list-style-type: none"> Public facilities continue to serve the current development pattern. 	<ul style="list-style-type: none"> Additional public facilities will be required in certain areas for urban development. 	<ul style="list-style-type: none"> Additional public facilities will be required in certain areas for urban development. Public facilities will be more efficient due to the more densely planned development pattern.

Goals	Alternative 1: No Action	Alternative 2	Alternative 3
<p>Historic Preservation. Identify and encourage the preservation of lands, sites and structures that have historical or archaeological significance.</p>	<ul style="list-style-type: none"> Historical or archaeologically significant sites or structures are protected under the current regulations during construction phase. 	<ul style="list-style-type: none"> Historical or archaeologically significant sites or structures are protected in the planning phase, and also under the current regulations during construction phase. 	<ul style="list-style-type: none"> Historical or archaeologically significant sites or structures are protected in the planning phase, and also under the current regulations during construction phase.

Chapter 4. Affected Environment, Impacts, and Mitigation Measures

4.1. Earth

4.1.1. Affected Environment

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 rivers, outburst flood deposits of gravel occur as well. Figure 4-1 shows the geologic formations that occur near the City.

Geologically hazardous areas are defined as those lands susceptible to erosion, landslides, seismic, or mine hazard events. Surficial geology is shown on Figure 4-1 and summarized in Table 8.

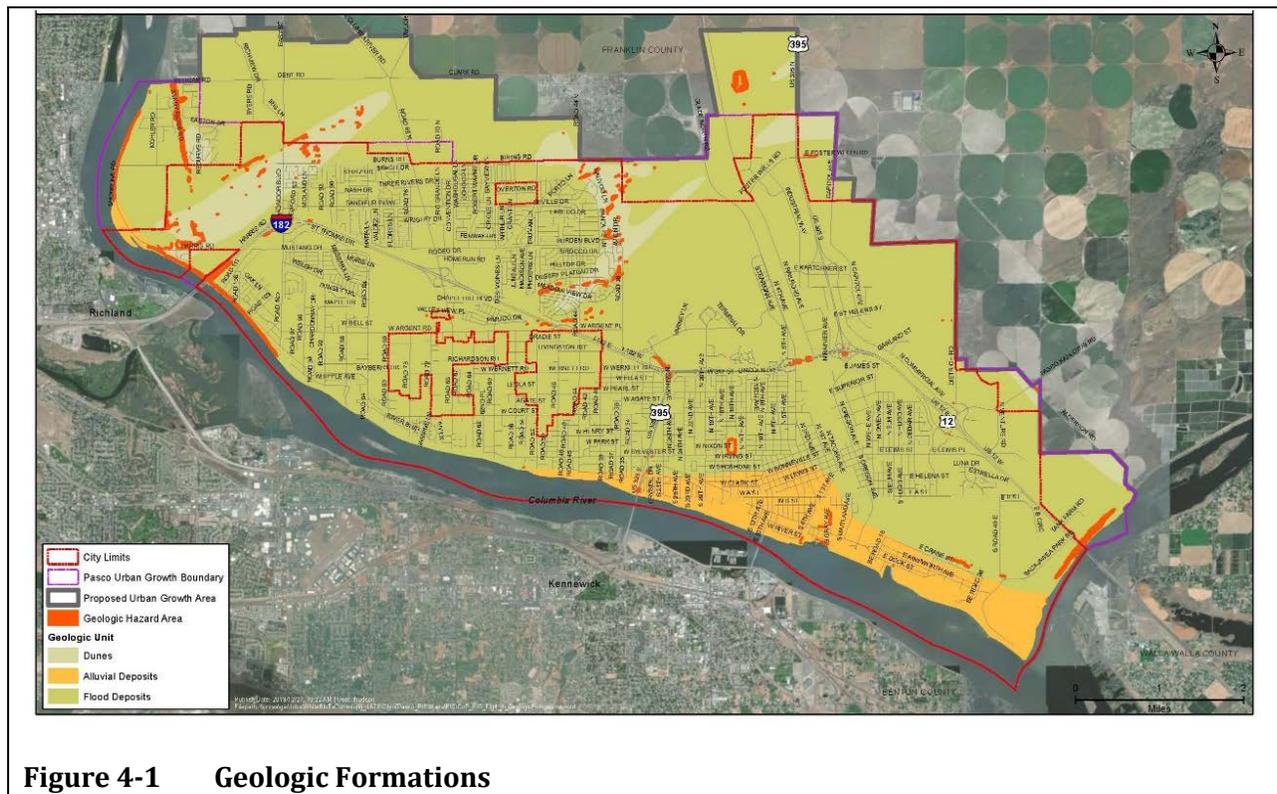


Figure 4-1 Geologic Formations

Geologically hazardous areas are defined as those lands susceptible to erosion, landslides, seismic, or mine hazard events.

Table 8
Geologic Hazards of the City

Hazard	Description	Summary	Source
Erosion	Soil units susceptible to erosion by wind, water, and unstable slopes	Some water erosion hazard areas exist along the Columbia River along with wind erosion hazard areas where sandy soils and dunes exist.	Soils – Water Erosion Hazards GIS Data (Franklin County)
Landslides	Steep Slopes underlain by weak, fine, and unstable geology	There are three areas in the City that have 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	One mine site is 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
Liquefaction Susceptibility zone	Liquefaction Susceptibility zone under alluvium deposit	One liquefaction susceptibility zone is identified along the Columbia River.	City critical areas data

Note:
WDNR = Washington Department of Natural Resources

4.1.2. Impacts

Earth-related impacts would occur during development activities and operation that may cause any of the following disturbance mechanisms: clearing, grading, erosion and sedimentation, impervious area expansion, increased chemical contamination, or other site-disturbing activities. Such activities have the potential to increase erosion, compaction, or contamination of earth resources. Infill and new developments near the steep slope areas in all alternatives would impact the earth surface.

Alternative 1: No Action Alternative

The No Action Alternative would result in continued use of land under the existing Plan land use designations. Earth-related impacts under the No Action Alternative would scale with the intensity of future activities occurring within the City’s infill areas, which are expected to be less intensive compared to future uses proposed under the two action alternatives. Future population growth would not be fully accommodated under the No Action Alternative and could potentially result in

increased and more diffuse impacts to earth resources from future sprawl-type development in other parts of the City and neighboring rural areas in the County.

Alternative 2: Traditional Growth Target

Alternative 2 proposes to allow development to occur within currently undeveloped and infill areas of the City and in the UGA. Compared to the No Action Alternative, disturbance mechanisms associated with more intensive development under Alternatives 2 and 3 would result in increased erosion, compaction, or contamination of earth resources within the planning areas.

Due to the maximum acreages occupied under this alternative, the extent of impacts to earth resources within the undeveloped or infill areas would be more in Alternative 2 than other two alternatives. A limited potential for earth slides or slope sloughing exists within the steeper sloped areas on the north side of the City within the Broadmoor area. Because of the fine sandy soils in most part of the planning area including the Broadmoor area and the northern part of the planning area, a potential does exist for siltation, particularly during construction. The Loess soils are windblown and extremely fine. Thus, these soils compact well but may be subject to some erosion. Because of the low rainfall in the Tri-Cities area, siltation from runoff after construction is not typically an issue. However, windblown siltation can impact surrounding areas if not watered during construction.

Alternative 2 proposes lower density land use designations than Alternative 3. Alternative 2 would accommodate more land and less density, potentially resulting in increased impacts to earth resources from future development in the planning area.

Alternative 3: Compact Growth Target, Preferred Alternative

Alternative 3 proposes to allow development to occur within currently undeveloped or infill areas of the City and in the UGA area. Compared to Alternative 2, Alternative 3 proposes denser residential development to occur in the northern portion of the City and in the Broadmoor area. In Alternative 3, the denser development would result in higher population density per acre and reduce the need for sprawl-type development in the City and nearby rural areas to accommodate future population growth. This would concentrate development to planning areas and potentially reduce impacts to earth resources in other areas compared to Alternatives 1 and 2. Compared to Alternative 2, this could reduce impacts from development to earth resources, including steep slopes.

4.1.3. Mitigation Measures

For Alternatives 2 and 3, the following mitigation measures should be employed to reduce siltation and slides:

- Maintain compliance with local air-quality agency requirements by watering exposed areas during construction.
- Avoid disturbing the steep slope area.
- Compact soils at densities appropriate for planned land uses.
- Provide vegetative cover or soil cement on exposed surfaces.
- Maintain Open Space land use and environment designations along the shoreline to protect shoreline functions.
- Construction should be staged so that the maximum amount of existing vegetation is left in place.
- Catch basins should be installed near storm drains

Other Mitigation Measures

The City has updated its Critical Areas Ordinance (CAO) and will reflect updates to the GMA and SMP at a state and local level. PMC Title 28 addresses geologic hazard areas that occur in the County and provides parameters for development in and near geologic hazard areas through regulatory, review, and permitting processes. It also provides the designation and classification of geologic hazard areas (PMC 28.32.020 and 28.32.030), determination (PMC 28.32.050), and detailed study requirements (PMC 28.32.060 and 28.32.070) for activities that occur in or near geologic hazard areas. Development that is consistent with the CAO would avoid, minimize, or mitigate potential impacts to earth resources under the three alternatives.

The current draft *City of Pasco Draft Comprehensive Plan* (City of Pasco 2018) encourages consistency with the CAO and provides goals and policies related to natural resources, including protection goals for property and people near geologic hazard areas. The following goals and policies should be considered for future development:

- LU-7Goal: Safeguard and protect shorelands and critical lands within the urban area.

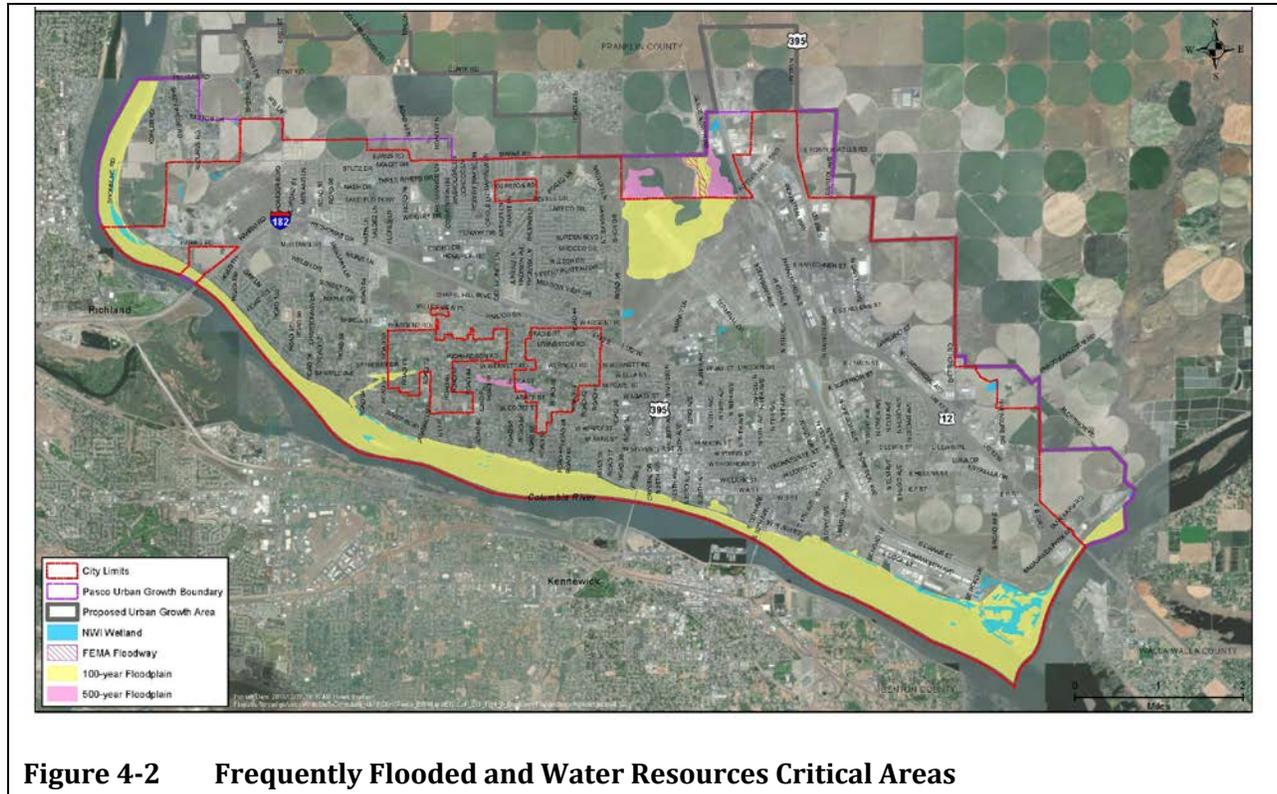
For consistency with the Plan, future urban design under Alternatives 2 and 3 should be sensitive to existing topography and landscaping and utilize design strategies and building techniques that minimize environmental impact, particularly near sensitive areas.

4.2. Surface Water

4.2.1. Affected Environment

The City of Pasco is located at the confluence of the Columbia and Snake rivers in southeastern Washington within Franklin County. The Columbia River is to the south of the City, and the Snake River is to the east. The study area includes relevant discussion of the contributing watersheds.

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 Figure 4-2. The flood stage for the Snake River is 20.0 feet and is measured at USGS gage #13334300 (Snake River near Anatone, Washington).



The planning area is mostly located in the Esquatzel Coulee basin (Water Resource Inventory Area 36). 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.

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.

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.

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).

The City's water system is supplied from surface water withdrawals from the McNary Pool of the Columbia River. A portion of the Columbia River within the City is part of the upstream portion of Lake Wallula. Lake Wallula was created from the impoundment of the Columbia River by McNary Dam. Because the City is largely within the Lake Wallula portion of the Columbia River, water levels are generally stable within an operating elevation range as controlled at McNary Dam. Columbia River floodplain levels are also confined due to river regulation.

An irrigation system was originally established to serve farmlands in Pasco by the Franklin County Irrigation District No.1 (FCID). With the expansion of urban growth in West Pasco, the mission of the district has changed to that of an urban service provider as it provides irrigation water to more and more residential properties. The FCID pumps irrigation water from the Columbia River. Its main pumping station is located on the Columbia River near the intersection of Court Street and Road 111. The FCID maintains 36 miles of pipeline and 3.35 miles of canal.

The City currently holds surface water rights for 13,269.25 acre-feet of annual withdrawal and 20,149 gallons per minute (gpm) (29 mgd) of instantaneous withdrawal. As defined in the CWSP, the City is currently in compliance with water right quantities by borrowing the surplus from the Quad Cities water right, at a current consumption of 14,424 acre-feet by volume and 18,456 gpm instantaneous. The City also holds individual groundwater rights sourced by various wells for separate irrigation purposes.

4.2.2. Impacts

Impacts to surface water resources could occur from development activities that may cause erosion or increase impervious surfaces that could discharge contaminated or sediment-laden water to nearby surface waters. This point-source and non-point source pollution is a major sources of water quality impacts resulting from changes in development. Point-source and non-point source pollution can be exacerbated by development if not properly managed or mitigated (U.S. Environmental Protection Agency [USEPA] 2012). Additionally, increased impervious surface and erosion from construction and development could impact infiltration and increase the amount of impacted stormwater runoff into nearby surface waters and groundwater. Petroleum products from construction equipment could accidentally spill and contaminate the shallow aquifer. Stormwater is generally collected by storm drains and discharged to stormwater handling facilities.

Current state and City regulations require the inclusion of stormwater treatment facilities for projects that create significant new impervious surface area.

Developing currently undeveloped or infill areas that are irrigated could also change the stormwater recharge dynamics from new impervious surfaces, soil compaction, or other soil-disturbing activities. In the undeveloped condition, groundwater recharge would either return to streams as baseflow or recharge deeper portions of the underlying aquifer. Reducing groundwater recharge can result in lower water tables and reduced baseflow to streams, lakes, and wetlands.

The same factors that impact groundwater and surface water quality and availability can also affect water supply. As described previously, changes in land use that reduce groundwater recharge have the potential to prevent precipitation from recharging groundwater aquifers. Additionally, changes in population can increase demand for water for public water supplies, domestic use, irrigation, industrial processing, energy production, or other needs. This can limit the availability of water supplies in various parts of the City, particularly during drought conditions.

Alternative 1: No Action Alternative

The No Action Alternative would result in continued use of land under the existing Plan land use designations. Surface water-related impacts under the No Action Alternative would scale with the intensity of future activities and population growth occurring within the planning areas as infill developments, which is expected to be less intensive compared to future uses proposed under the two action alternatives due to the limited land area in this alternative. Since the additional and projected future growth won't be occurring within the City limits, sprawled development will take place in the areas surrounding the City. These developments would most likely to occur on large lots in the County impacting surface waters outside the planning areas.

The rate of water supply demand would generally be proportionate to the rate of growth anticipated for each alternative. The impacts of Alternative 1 on water supply demand could be less with lower expected population growth and associated development, compared to the other alternatives.

Alternative 2: Traditional Growth Target

Alternatives 2 and 3 would provide the capacity to develop existing undeveloped or infill lands to accommodate future population growth. Recent studies indicate that land use intensity, land cover composition, landscape configuration (i.e., patterns or distributions), and the connectivity of impervious surface areas have complex but direct influences on the ecology and water quality of the surface waters within a watershed (Alberti et al. 2004). Consequently, these alternatives could indirectly affect surface water resources, scaled to the intensity of development.

The change in development patterns to the north under Alternatives 2 and 3 from irrigated and vacant to developed lands would also change groundwater and stormwater recharge dynamics from new impervious surfaces, soil compaction, or other soil-disturbing activities. This change would concentrate where stormwater recharges compared to existing conditions where rain currently falls and dispersed across agricultural fields and seeps into groundwater aquifers. Alternative 2 could have more impervious surface per capita due to the lower density development planned for this alternative, compared to Alternative 3

Without mitigation, surface waters within the City would be at greatest risk of degradation because of the expected development.

As described above, the rate of water supply demand would generally be proportionate to the rate of growth anticipated for each alternative. The impacts of Alternatives 2 and 3 on water supply

demand could be greater than the No Action Alternative due to higher expected population growth being planned for.

Alternative 3: Compact Growth Target, Preferred Alternative

Alternative 3 proposes to allow development to occur within currently undeveloped or infill areas of the City and in a smaller UGA area compared to Alternative 2. Alternative 3 proposes denser residential development to occur in the Broadmoor and UGA areas. Due to increased density and land area covered by Alternative 3, this alternative would increase new impervious surface area and development-related impacts to surface water within the planning areas. However, Alternative 3 would focus development within the City and could potentially result in decreased impacts to surface water recharge to groundwater from future development within the city infill and redevelopment areas, and in the reduced and higher density UGA area compared to Alternative 2.

4.2.3. Mitigation Measures

For Alternatives 2 and 3, the mitigation measures described in Section 4.1.3. for reducing impacts to earth resources should also be employed to reduce potential impacts to nearby surface waters and the underlying groundwater from erosion and runoff, and surface water infiltration. The following mitigation measures should also be employed:

- Under both development alternatives, detention ponds will reduce peak runoff flows to natural state conditions. Detention ponds will also provide settlement for silt. Oil/water separators can reduce impacts from automobiles.
- Additional mitigation measures include bio-filtration, either before or after entry into the various detention ponds, and buffers around wetlands and around wetlands in accordance with the CAO.
- Stormwater improvements are planned to manage stormwater and protect water quality.

Other Mitigation Measures

The current draft *City of Pasco Draft Comprehensive Plan (2020)* goals and policies encourage the protection of critical areas, and management of storm water. Alternatives 2 and 3 should identify and regulate the use of wetlands, essential habitat areas, and other critical lands within and adjacent to the planning areas, in coordination with the appropriate agencies. The following goals and policies should be considered for future development:

- UT-3 Goal: Assure the provision of adequate and efficient storm water management.
- UT-3-A Policy: Require adequate provision of storm water facilities with all new land development
- UT-3-B Policy: Include adequate storm water management facilities to serve new or existing streets.

Proposed policies and regulations for the environmental protection of surface water and groundwater resources, and the protection of public health and safety from flood hazards, would apply, to minimize surface and groundwater quality impacts.

The City of Pasco 2020-2025 Capital Improvement Plan also identifies the priority projects. Improvements identified for the Water Treatment Plant, Process Water Reuse Facility, and Wastewater Treatment Plant. Water quality improvement features on the existing storm drainage and water main system are also planned to be constructed. Water-capacity improvements are also planned throughout the City.

Existing federal, state, and county policies regulate land use activities near, and within, surface waters such as the Columbia and Snake rivers and wetlands. The City CAO in PMC 28.16, addresses and provides protections for the wetlands and provides parameters for development in and near these resources through regulatory, review, and permitting processes. Similarly, CAO in PMC 28.24, protects groundwater resources from hazardous substance and hazardous waste pollution by controlling or abating future pollution from new land uses or activities. Development that is consistent with the CAO would avoid, minimize, or mitigate potential impacts to earth resources under the three alternatives.

The following regulations and commitments are relevant to protecting County surface water resources:

- Federal National Pollutant Discharge Elimination System (NPDES) regulations as well as City stormwater regulations require stormwater quantity and quality controls. The City has adopted the Ecology Stormwater Management Manual for Eastern Washington (Ecology 2004).
- The U.S. Army Corps of Engineers (USACE) promotes wetland avoidance and regulates the filling of wetlands via Section 404 of the Clean Water Act of 1972.
- The City uses its SEPA authority in PMC 23.05 to require mitigation for impacts on drainage, habitat, and water quality and ensure mitigation is appropriate and sufficient.

4.3. Plants and Animals

4.3.1. Affected Environment

This section reviews plant species and habitat, and fish and wildlife. Washington Department of Fish and Wildlife (WDFW) has identified fish and wildlife resources that are a priority for management and conservation and maps areas where these habitats are known to occur through the Priority Habitats and Species (PHS) program (WDFW 2008). WDFW designation of priority habitat types is advisory only and carries no legal protection; although, such designation may increase the significance of impacts as evaluated through the National Environmental Policy Act (NEPA) and the SEPA process. Figure 4-3 shows the extent of listed PHS occurrence within the City, including floodways, wetlands, and priority species and habitats, based on data and observations by the agency staff over the past several years. As can be seen with the underlying imagery, some of these lands have been developed for housing, agriculture or industrial uses since the species or habitats were identified. The maps provides a general guide for the environmental review process but site-specific permitting and studies should be conducted to verify and confirm what habitats and species exist at the time of the development. The City protects the habitats and associated plant and animal species through its Critical Areas code, PMC Title 28.

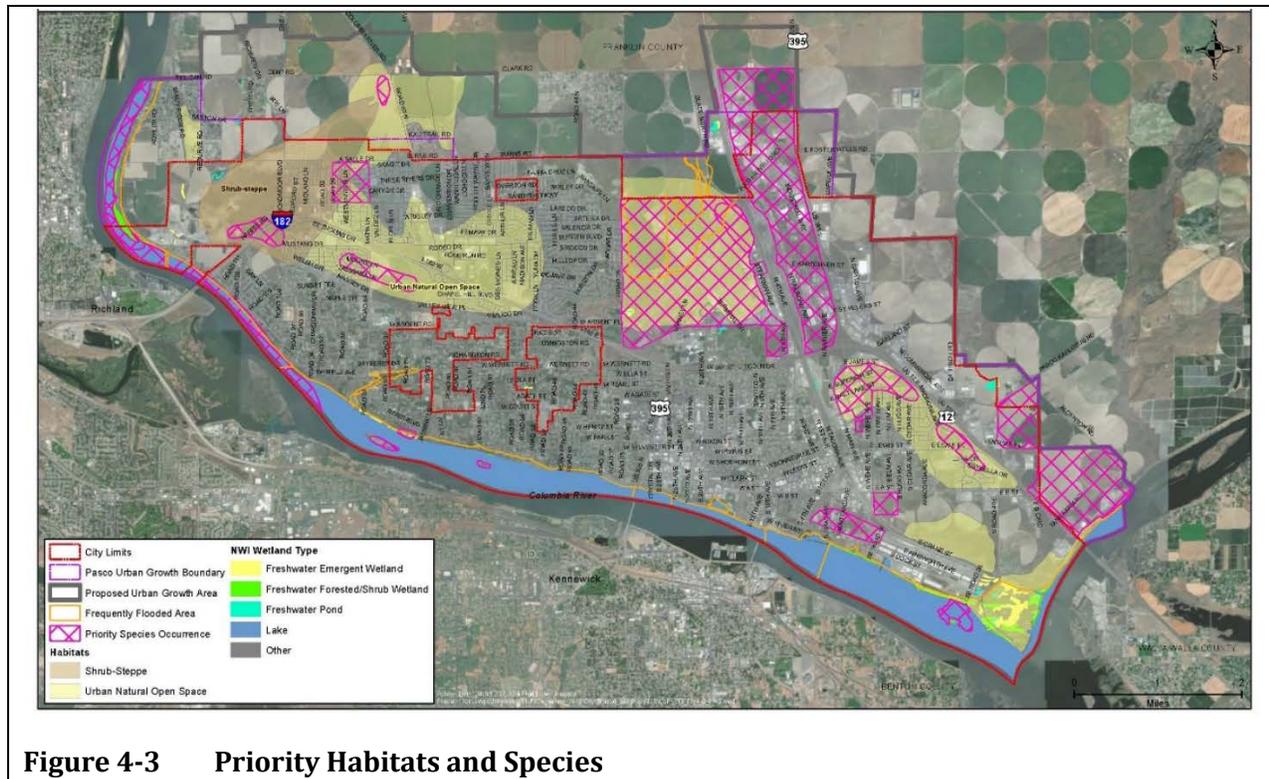


Figure 4-3 Priority Habitats and Species

Plants and Habitat

Shrub-steppe upland habitat is the largest native land cover type in Franklin County and is also found within the City as small remnant patches, primarily in the western and northern parts of the City and UGA areas. The shrub-steppe habitat in the city and UGA areas provides certain ecosystem services, including soil stabilization, wildfire moderation, and increased biodiversity in the few areas where native vegetation exists. Vegetation is primarily invasive species such as cheatgrass and Russian thistle, with pockets of sagebrush and native grasses. The displacement of shrub-steppe plant species by the invasive cheat-grass, Russian thistle, and other invasive species increases fire intensity and frequency, which, in addition to the hazards this creates for humans and wildlife, and also impacts shrub-steppe plant species such as big sagebrush, an important species for rare birds such as the sage grouse (Link et al. 2006).

In some areas, shrub-steppe habitat abuts or nearly abuts the shoreline, and there are small remnants of shrub-steppe habitat interspersed among the irrigated agricultural fields and industrial lands. Much of the remnant shrub-steppe habitat has been previously disturbed through grading, gravel mining, agriculture and off-road recreation vehicle activity, and the non-native grasses and weeds have taken over most of these areas. .

Riparian areas are located along the shorelines of the City, with varying levels of structural diversity and productivity in terms of organic material, with reductions in diversity and productivity due to levees and upland developed areas. Habitat characteristics of healthy riparian areas include a connected corridor for fish and wildlife travel, vegetation types adapted to wetter soils, occasional flooding, and natural disturbance regimes. Riparian areas also offer important functions for species that inhabit the shrub- steppe, as well as species more limited in range to the riparian zone. For shrub-steppe species, they provide a critical water source and often a more

productive environment for forage, escape, thermal cover, and nesting sites. For many species, they provide critical winter habitat. Riparian areas typically support larger flocks and a greater density of upland birds than shrub-steppe habitat due to the greater production of biomass and the more complex mosaic of vegetation (Stinson and Schroeder 2012).

The removal of native riparian vegetation in riparian and shrub-steppe habitat, the introduction and proliferation of invasive plant species, like Russian Olive (*Elaeagnus angustifolia*), and the filling or degradation of wetlands along shorelines impact the organic inputs that fuel production of the lower levels of the food chain and, therefore, can have impacts throughout the entire food web. Organic matter produced by these habitats supports terrestrial and aquatic insects and other organisms that are then eaten themselves by birds, juvenile salmonids, and various fish species.

Fish and Wildlife Species

The Snake and Columbia rivers make up the border of the southern and eastern areas of the City and provide the shoreline aquatic habitat within the City. The aquatic habitat supports numerous resident and anadromous fish, aquatic invertebrates, and numerous migratory bird species.

Many ESA-listed anadromous salmonid species are found within the two rivers, including bull trout, steelhead, sockeye, and spring and fall Chinook salmon. Coho salmon are rare but may occur through reintroduction programs underway in the Yakima River Basin and this population segment is not ESA-listed. Pacific lamprey are present but have experienced population decline in recent years. Resident fish include a mix of native and non-native species, such as smallmouth and largemouth bass, northern pikeminnow, sculpin, mountain whitefish, sturgeon, catfish, sucker and other species.

The aquatic nearshore and riparian shoreline areas of the Columbia and Snake rivers near the City support concentrations of wintering migratory waterfowl, and primarily serve as resting and feeding areas for Canada goose and ducks. Some waterfowl nesting likely occurs in areas with wider riparian buffers, potentially near the confluence of the Snake and Columbia rivers and along reaches of the Columbia River where development is less intensive, such as residential zones, parks, and open spaces. The Columbia River in the vicinity of the City also provides a breeding area for long billed curlew and a variety of gulls, as well as a resting area with limited nesting for great blue heron and egret (USFWS 2008, 2012).

Some common species for shrub steppe habitat include sparrows, magpie, robins and various types of hawk species. State species listed as threatened or candidate species that can be associated with this habitat include Ferruginous hawk, Townsend's Ground Squirrel and burrowing owls.

4.3.2. Impacts

Under all three alternatives, development would continue to occur throughout the City and neighboring rural areas for urban uses and activities of varying intensity. Construction activities can cause noise and activity that can disturb wildlife or cause avoidance behavior. The effects of construction on nesting birds and other wildlife would depend on project-specific factors, including the timing of construction, background noise levels, and the type and duration of construction activities. Impacts to surface waters from increased impervious surface and erosion from development, as described in Section 4.2, can also impact fish and wildlife habitat. Fish breeding and rearing areas are particularly sensitive to siltation caused by erosion.

Development activities could have direct and indirect impacts on vegetation and habitat for listed- and non-listed species in the County, with direct impacts primarily involving the physical removal of vegetation. This can lead to impacts on riparian, wetland, and shrub-steppe habitat. Development of currently vacant or underdeveloped parcels could lead to fragmentation of wildlife habitat,

potentially further altering habitat connectivity, and potentially causing some species to migrate into remaining undeveloped areas. Indirect effects common to all alternatives could include a reduction in wildlife habitat quality and function because of increased human disturbance and associated factors in areas adjacent to wildlife habitat. Additionally, operational impacts include light from buildings, streetlamps, and vehicles, traffic noise, and other urban activities, causing sensitive wildlife species to avoid the area. Traffic would also continue to cause mortality to wildlife crossing roadways. These impacts would increase with the intensity of development and population growth.

Alternative 1: No Action Alternative

The No Action Alternative would result in continued use of land under the existing Plan land use designations. Impacts to plants and animals under the No Action Alternative would scale with the intensity of future activities and population growth occurring within the planning areas as infill developments which are expected to be less-intensive compared to future uses proposed under the two action alternatives due to the limited land area in this alternative.

Under Alternative 1, the least amount of development would occur as it has the least projected population growth of all alternatives and would be expected to have the least impact on plants and animals. However, population growth would not be accommodated under the No Action Alternative and could potentially result in increased and more diffuse impacts to plants and animals from future development in other parts of the City and neighboring rural areas. For example, sprawl developments in the northwest side of the City could potentially affect disturbed shrub-steppe habitat around agricultural and industrial lands. Development under this alternative would have very limited impact on wetlands or wetland buffers in the City, as these largely exist along the shorelines.

Alternative 2: Traditional Growth Target

Alternative 2 proposes to change land use designations to allow development to occur within currently undeveloped or infill areas of the City, and in the expanded UGA area to the north. Alternative 2 proposes lower density land use designations than Alternative 3. Under the 20-year population growth projection for the City, Alternative 2 would increase the buildable areas and developments resulting in greater impacts to plants and animals in those areas compared to Alternative 3.

The change in development patterns under Alternatives 2 and 3 from undeveloped and irrigated to developed lands would alter the landscape, potentially reducing habitat provided by open tracts of land. Although agriculture practices impact historical habitats with a more intensely managed landscape, they can provide pockets of semi-natural habitat among the more intensively cultivated ground.

Development under Alternatives 2 and 3 would have a very limited impact on wetlands or wetland buffers in the City, as these largely exist along the shorelines and are designated open space and protected from development under the City's Shoreline Master Program update. Wetlands provide habitat for species such as waterfowl, which are concentrated at the confluence of the Columbia and Snake rivers, and also provide water filtration and storage that improve water quality and temperatures for salmonid species.

Alternative 3: Compact Growth Target, Preferred Alternative

Alternative 3 proposes to change land use designations to allow development to occur within currently undeveloped or infill areas of the City and in the less expansive UGA area to the north. Alternative 3 would focus development in these areas to a greater density than proposed in

Alternative 2. Similar to Alternative 2, vegetation and wildlife habitat would be impacted within the planning areas. However, by focusing most development in these areas, fewer impacts on terrestrial plants and animals would occur outside of the planning areas than under Alternatives 1 and 2. In the Broadmoor area, Natural Open Space along the core PHS areas would be preserved. Compared to Alternative 2, this could reduce potential impacts to habitats and species from future development.

4.3.3. Mitigation Measures

For Alternatives 2 and 3, the following mitigation measures should be employed to reduce impacts to plants and animals:

- Provide erosion and stormwater control measures during construction, particularly in areas adjacent to surface waters that provide fish and wildlife habitat such as Columbia Point South.
- Consider landscaping with native plants to provide vegetation of habitat significance in streetscapes, buffers for stormwater swales, rain gardens, and other habitat features.
- Avoided, minimize, or mitigate impacts to shrub steppes, priority habitats, wetlands or wetland buffers, in accordance with the CAO and SMP.

All alternatives will provide shoreline and critical areas buffer along the Columbia and Snake rivers shoreline, providing fish and wildlife habitat protections from future development. In Alternative 3, Broadmoor area, designates wildlife mitigation area and corridor and protects them as open space. Alternative 3 would have less impact on shrub steppes due to the limited area it covers. Compared to Alternative 2, this would provide additional fish and wildlife habitat protections from future development.

Other Mitigation Measures

The *City of Pasco Draft Comprehensive Plan (2018)* goals and policies encourage the protection of critical areas, including surface waters. Alternatives 2 and 3 should identify and regulate the use of essential habitat areas, and other critical lands within and adjacent to the planning areas, in coordination with the appropriate agencies. Public access opportunities to the shoreline and other natural features should be considered through integration with the City's trail system to the extent practicable. The following goals and policies should be considered for future development:

- LU-7 Goal: Safeguard and protect shorelands and critical lands within the urban area.
- LU-57-A Policy: Maintain regulatory processes to preserve wetlands, wildlife habitats, and other critical lands within the urban growth area.

The City CAO in PMC 28.20, addresses and provides protections for fish and wildlife habitat areas, including surface waters that provide habitat to native fish. Development that is consistent with the CAO would avoid, minimize, or mitigate potential impacts to earth resources under the three alternatives. The City uses its SEPA authority in PMC 23.05 to require mitigation for impacts on drainage, habitat, and water quality and ensure mitigation is appropriate and sufficient.

Mitigation measures may include:

- Reduce impervious surface area by adopting implementing applicable low-impact development (LID) requirements per the Stormwater Management Manual for Eastern Washington (Ecology 2004).
- Promote the preservation of on-site native vegetation, particularly riparian vegetation near surface waters and upland shrub-steppe communities.

- Publicize and encourage the preservation of native soils and protect the natural processes of soil maintenance and on-site hydrology. Leaving areas/tracts (“belts”) of native vegetation undisturbed in commercial and residential developments can be shown to provide long-term benefits regarding stormwater management, on-site “landscaping” maintenance, microclimate, and general aesthetics/sense of well-being in a developed landscape.
- Sponsor or encourage public education about the benefits of native vegetation.
- Promote LID, with emphasis on native plant retention in greenbelts between and within areas of proposed development to retain a portion of the wildlife habitat on the site and to preserve a measure of connectivity between areas of wildlife habitat.
- Encourage buffer enhancement. Where stream and/or wetland buffers to be left are in a degraded condition, encourage enhancement of the buffer through means such as establishment of native vegetation and control of non-native invasive plant species.

4.4. Land Use

4.4.1. Affected Environment

The City is part of the Tri-Cities Metropolitan Area in southeast Washington and includes 25,729 acres in the current incorporated City limits and 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, commercial, industrial to open space. The City’s land use designations and acreages are identified in the 2018 Comprehensive Plan. Residential land is the predominant use in the City, containing over 35% of the City’s total land. Residential land use is followed by industrial land use, which consists of 19% of the total land use within the City. Commercial lands are distributed along the major corridors, 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 9 for a summary of land use types in the City.

Table 9**Existing Land Use in the City Limits and UGA**

Land Use Designations	Acreage ¹	% of Total
Residential Lands	11,167	44%
Low Density		
Mixed Density		
High Density		
Commercial Lands	2,666	11%
Mixed Residential/Commercial		
Commercial		
Industrial Lands	5,968	24%
Public/Quasi-Public Lands	925	4%
Open Space / Park Lands	1,012	4%
Airport Reserve Lands	2,236	9%
DNR Reserve Lands	1,234	5%
Total	25,208	100%

Note:

1. The total includes 4,300 acres of street right of way, which is about 17% of the total land area

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 10 for a summary of land use within the shoreline jurisdiction.

Table 10**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	100.0%

Source: Pasco Shoreline Master Program 2015

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.
- **Medium Density Residential** – This land use designation includes single-family dwellings, patio homes, townhouses, apartments, and condominiums at a density of 6 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.
- **High Density Residential** – This land use designation includes multi-family dwellings, apartments, and condominiums at a density of 21 dwelling units or more per acre. This is designated to areas where the location is convenient to major circulation routes and employment areas. 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 29 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.
- **Public and Quasi Public** - This land use is designated for schools, civic buildings, fire stations and other public uses.
- **Airport Reserve** - This land use is designated for lands owned or occupier by the Tri-Cities Airport.
- **DNR Reserve** - This land use is designated for lands owned by DNR.

4.4.2. Impacts

Future development resulting from adoption of the Plan update could convert undeveloped and infill areas to more intensive uses. Impacts associated with land use conversions could include construction-related and operational impacts. General land use impacts are likely to be associated with future population growth, increased development densities and aesthetic impacts associated with changed land use. Associated development activities would include increased noise, light and glare, and traffic delays; changes in views or the aesthetic character of the area; and increased

pressure to develop or redevelop adjacent vacant or underutilized areas. Construction and operational noise is regulated by the PMC 9.130.030 – Public Disturbance Noise – Prohibited.

In all alternatives, infill lands would continue to be redeveloped under the existing land use designations. All alternatives would change the build environment as well as the aesthetics of the current conditions.

Alternative 1: No Action Alternative

The No Action Alternative would result in continued use of the properties as currently zoned by the City. Current land uses would continue to predominate, including residential and industrial uses. Future population growth would not be accommodated in the planning areas under the No Action Alternative and could potentially result in increased and more diffuse impacts to land use from future sprawl type development surrounding the City in the neighboring rural areas. The No Action Alternative will not result any short-term impacts to the aesthetic and visual quality of the planning area. But in the long-term, when developments are permitted in the vacant and infill areas under the current land use and zoning, this will result in significant aesthetic and visual quality impacts.

Alternative 2: Traditional Growth Target

Under Alternatives 2 the land use from underutilized and vacant land in the UGA would change to a mix of Low, and Medium Density Residential, Commercial, industrial and Public Facility. Compared to the No Action Alternative, land use patterns would increase in intensity from the current land uses. Agricultural and other land uses will be transformed by future roadways, residential and commercial development, and light industrial activities with some green spaces. Also, under Alternatives 2 and 3, some of the limited current shrub-steppe topography will be removed to some extent to accommodate housing development and roadways, noting that for Alternative 3 in the Broadmoor area Natural Open Space along the core Priority Habitat Species (PHS) areas would be preserved, reducing potential impacts to habitats and species from future development.

New development and redevelopment would involve demolition of some existing structures, site preparation, infrastructure installation, and construction of new buildings. Such development and construction activities would affect surrounding land uses in terms of dust, construction traffic, and noise throughout the duration of the construction. Throughout the full buildout timeframe, these impacts would shift from one development location to another within the planning areas. Construction of infrastructure, housing, and business facilities is usually accompanied by temporary increases in noise and vibration due to the use of heavy equipment and hauling of construction materials. Noise impacts depend on the background sound levels, the type of construction equipment being used, and the amount of time it is in use. Operational noise (including construction-related noise) in the City is regulated by PMC 9.130.030, addressing public disturbance noise.

Alternative 3: Compact Growth Target, Preferred Alternative

Compared to Alternative 2, Alternative 3 proposes denser residential development to occur in the northern portion of the City and in the Broadmoor area. Under Alternative 3, land use to the north would transform from underutilized, low intensity current uses to a mix of Low, Medium, and High Density Residential, Commercial, Public Facility, and Open Space. Alternative 3 includes the highest density residential land use allocation.

Alternative 3 will have higher density and more concentrated development and less need for development in low-density land use designated areas compared to Alternative 2. The higher density will help the City to meet the 20-year population growth target. Both alternatives will reduce potential future impacts from development in the shoreline area.

4.4.3. Mitigation Measures

For Alternatives 2 and 3, the following mitigation measures should be employed to reduce impacts to land uses in and adjacent to the planning areas:

- Meet population growth targets and housing demand through developing planned areas, and infill developments.
- Improve the built environment through designing new structures and development per PMC.
- Reduce local traffic volumes by creating a live-work environment in Alternative 3
- Protect shoreline areas according to the City's shoreline regulations under Title 29
- Allow adequate parks, open space and public facilities
- Implement design standards for Broadmoor area (under development).
- Implement City's land use and zoning regulations to maintain the physical and aesthetic qualities of future developments.

Other Mitigation Measures

The current draft *City of Pasco Draft Comprehensive Plan (2018)* goals and policies are intended to plan for future population growth within the UGA while promoting compatible land uses and community objectives. The following goals and policies should be considered for future development under the three alternatives:

- LU-2. GOAL: Plan for a variety of compatible land uses within the urban growth area
- LU-2-A Policy: Maintain sufficient land designated to accommodate residential, commercial, industrial, educational and public facility uses proximate to appropriate transportation and utility infrastructure.
- LU-2-B Policy: Facilitate planned growth within the City limits and UGA, and also promote infill developments in the City limits.
- LU-2-C Policy: Ensure that adequate public services are provided in a reasonable time frame for new developments.
- LU-2-D Policy: Encourage the use of buffers or transition zones between non-compatible land uses.
- LU-2-E Policy: Discourage the siting of incompatible uses adjacent to Pasco airport.
- LU-3 Goal: Maintain established neighborhoods and ensure new neighborhoods are safe and enjoyable places to live.

The City of Pasco Zoning Regulations in PMC Title 25 regulate development in various zoning districts, and a zoning change could be made to further restrict the type and density of development in the planning area. Similarly, the City CAO in PMC Title 28, and Shoreline Regulations in Title 29 address and provide protections for critical areas and shorelines. Subdivision Regulations in Title 21 regulate and ensure appropriate land sub-divisions for developments to occur. Development that is consistent with these regulations would avoid, minimize, or mitigate potential impacts to land use under the three alternatives.

Another mitigation measure to consider is implementing rural land protection measures and incentives to make UGAs and planning areas more attractive (e.g., density incentives and infrastructure investment), which could be applied to direct growth to urban areas under all alternatives.

4.5. Environmental Health

Environmental health addresses all the physical, chemical, and biological factors external to a person and related factors impacting behaviors.

4.5.1: Affected Environment

The City includes a variety of land uses from residential and commercial/industrial to open space. While the residential land is the predominant use in the City, it is followed by industrial land use. Commercial lands are distributed along the major corridors.

Future developments of infill and undeveloped commercial and industrial lands could impact environmental health. During construction of some industrial developments, chemicals may be stored that could potentially create a risk of fire, explosion or spills.

4.5.2. Impacts

Alternative 1: No Action Alternative

The No Action Alternative would result in continued use of the properties as currently zoned by the City. Current land uses would continue to predominate, including residential and industrial uses. Future population and employment growth would not be accommodated in the planning areas under the No Action Alternative and could potentially result in increased and intense use of industrial lands, as well as more diffuse impacts to land use from future sprawl type development surrounding the City in the neighboring rural areas. In the long-term, when developments are permitted in the vacant and infill areas under the current land use and zoning, this will result in continued risks to environmental health as seen by current development patterns.

Alternative 2: Traditional Growth Target

Compared to the No Action Alternative, land use patterns would increase significantly in intensity from the current land uses. Vacant open land will be transformed by future roadways, residential and commercial development, and light industrial activities with some green spaces. Under Alternatives 2 and 3, existing County under-utilized industrial lands will be added to the UGA. Also, limited areas of agricultural land will be added in the industrial land use inventory.

New industrial developments could increase the exposure to chemicals or risk of fire. Hazardous waste could occur depending on the types of uses. However, most of these uses would have happened within the County's industrial uses. In both alternatives 2 and 3, the industrial lands will be served with better utilities and safety system.

Alternative 3: Compact Growth Target, Preferred Alternative

Alternative 3 will have higher density and more concentrated development. Development impacts in the industrial areas will remain the similar in both Alternatives 2 with slightly less in 3.

4.5.3. Mitigation Measures

For Alternatives 2 and 3, the following mitigation measures should be employed to reduce impacts to environmental health in and adjacent to the planning areas:

- Improve the built environment through designing new structures with safety and hazard maintenance per PMC.
- Maintain and employ emergency management plans for all industrial developments

- Listed hazardous sites should be subject to ongoing monitoring by Ecology's Hazardous Waste and Toxic Reduction Program.

Other Mitigation Measures

The current draft *City of Pasco Draft Comprehensive Plan (2018)* goals and policies are intended to plan for future population growth within the UGA while maintain the environment. The following goals and policies should be considered for future development under the three alternatives:

- CF-8-B Policy: Ensure all potential environmental impacts are considered for each essential public facility including the cumulative impacts of multiple facilities.
- ED-1-C Policy: Support the promotion of Pasco's urban area as a good business environment by enhancing the infrastructure of the community.

4.6. Shoreline Use

4.6.1. Affected Environment

The City of Pasco is located along the confluence of the Columbia and Snake rivers in southeastern Washington within Franklin County. The Columbia River is to the south of the City, and the Snake River is to the east. The affected area for this section includes all land currently within the shoreline jurisdiction for incorporated City and the City's unincorporated Urban Growth Area (UGA). The City's shoreline consists of various water-related and water-oriented uses.

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. Sacagawea State Park is located at the confluence of the Columbia and Snake Rivers and includes a bike and pedestrian trail that connects to the Sacagawea Heritage Trail providing public access to the shoreline area throughout most part of the City.

4.6.2. Impacts

Increased population growth in the City, including growth in rural areas, has the potential to change shoreline uses. Shoreline areas often attract development due to the scenic values that they provide. Increased development in or adjacent to these areas may change the existing character or degrade the shoreline environment. Additionally, development could potentially alter surrounding land use patterns sufficiently to reduce the value of shoreline areas as recreational opportunities or wildlife habitat. The City's Shoreline Master Program (PMC Title 29) sets requirements for land uses, densities, setbacks, and open space.

Alternative 1: No Action Alternative

Under the No Action Alternative, impacts to the shoreline are anticipated to be similar to current development patterns. Future population growth would not be fully accommodated under the No Action Alternative and could potentially result in increased and more diffuse impacts to shoreline areas from future sprawl-type development surrounding the City in the neighboring rural areas. In these cases, development in shoreline areas would be required to comply with the SMP and other rules and regulations, and avoid or minimize potential impacts to the shoreline environment.

Alternative 2: Traditional Growth Target

Alternative 2 proposes to allow development to occur within currently undeveloped or infill areas of the City, primarily located outside of the shoreline. Directing development into these areas would minimize potential impacts sensitive shoreline environments in other parts of the City or nearby rural areas. Alternative 2 also expands development on the north side along the shoreline. Shoreline buffer within the planning area would alleviate pressure associated with shoreline development and maintain the existing public accesses. Both Alternatives 2 and 3 would protect the publicly owned open space along the Columbia River. Mixed use developments would occur in this alternative which will provide buffers and open space according to the shoreline regulations.

Alternative 3: Compact Growth Target, Preferred Alternative

Alternative 3 proposes to allow development to occur within currently undeveloped or infill areas of the City. Similar to Alternative 2, directing development into these areas would minimize potential impacts sensitive shoreline environments in other parts of the City or rural areas. Alternative 3, similar to Alternative 2, expands development on the north side along the shoreline. The land along the shoreline is less in this alternative compared to Alternative 2.

4.6.3. Mitigation Measures

For Alternatives 2 and 3, the following mitigation measures should be employed to reduce impacts to shoreline:

- Provide a development buffer along the Columbia and Snake rivers shoreline using Open Space land use designation.
- All shoreline goals and policies, and regulations should be applied for future developments.
- No net loss of shoreline ecological functions as a result of new development shall be allowed, consistent with the provisions of the SMP.

Other Mitigation Measures

The current draft *City of Pasco Draft Comprehensive Plan* considers Shoreline Master Program (SMP) goals and policies as part of the Comprehensive Plan goals and policies. These goals and policies encourage the protection, conservation, and restoration of natural areas, including the shoreline, as assets to the community. Alternatives 2 and 3 should identify and regulate the use of shorelines, in coordination with the appropriate agencies. The following goals and policies should be considered for future development:

- SMP Public Access Goal (1)(a): Promote, protect, and enhance physical and visual public access along the shoreline of the Columbia and Snake rivers. Increase the amount and diversity of public access along the shoreline consistent with private property rights, public safety, and the natural shoreline character.
- SMP Shoreline Uses and Modifications Goal (1)(a): Encourage shoreline development and uses that recognize the City's natural and cultural values and its unique aesthetic qualities offered by its variety of shoreline environments, including, but not limited to, reservoir-bounded river segments, flood protection levees, recreational and industrial developments, riverine wetlands, open views, and plentiful formal and informal public access.
- SMP Conservation Goal (1)(a): Protect the existing hydraulic, hydrologic, and habitat functions, as well as scenic and recreational values, of City's shorelines and the McNary Pool

The City of Pasco SMP establishes regulations to protect sensitive shoreline areas from the impacts associated with new development. Any development projects undertaken within the jurisdiction of the SMP would be required to undergo evaluation for consistency.

The City CAO and SMP addresses and provides protections for sensitive habitats, including the shoreline environment. Additionally, the City of Pasco Zoning Regulations in PMC Title 25 regulate development in various zoning districts, including the shoreline environment. Development that is consistent with these standards would avoid, minimize, or mitigate potential impacts to earth resources under the three alternatives.

4.7. Population, Housing, and Employment

4.7.1. Affected Environment

As discussed above, population estimates for the City in 2018 are 73,590 and in 2019 are 75,290. Based on 2018 numbers, it is estimated that 48,238 people will be added to the City's population in the next 20 years (Oneza & Associates). The 2017 American Community Survey (ACS) data indicate 21,653 housing units in Pasco. About 70 percent of the housing units are owner-occupied, and 30 percent renter-occupied. Per the *City of Pasco Draft Comprehensive Plan Volume IIs*, using the average household size of 3.17 persons per unit, added population from the 2018 base population will require 15,217 housing units. Existing vacant buildable land is estimated to provide 9,581 units in a variety of housing types (e.g., single-family, multi-family, townhome, condominium); therefore, an additional 5,636 housing units will be required to meet the demand of future housing (Oneza & Associates 2018).

Much of Pasco's (and Franklin County's) economy is tied to transportation and agriculture. The agricultural economy of Pasco is mostly mass production, tied to domestic and global trade, and connected to international conglomerates. As this industry in and around Franklin County matures, additional support facilities which process and handle production plants will continue to be needed. This has also led to more opportunities for year around employment, meaning that families are less likely to migrate during the winter months, and are settling in the area permanently. (Oneza & Associates 2018).

Pasco's economy is also tied to the economy of the Tri-Cities metro area. The Tri-Cities area is unique in that its employment base is dominated by a select number of large employers. Roughly one in five of estimated 116,000 jobs in the Benton and Franklin Counties are for large employment firms or agencies, with the top five ranging in type, including research and development, health services, engineering and construction, food processing, and education. The continued employment growth at the Department of Energy Hanford Nuclear Reservation, Pacific Northwest National Laboratory, Energy Northwest and the Office of River Protection will continue the growth of Pasco's population. This growth will not only attract new residents to Pasco, but also provide opportunities for our young population to remain in Pasco. Employment in the Tri-Cities region increased from 2006 to 2015 by more than 22,000 jobs, with an average annual growth rate of 2 percent. There are roughly 116,000 jobs in the region. All industries experienced positive employment growth by the end of the 10-year period. However, from 2011 to 2014 employment slightly declined as spending cuts at the Hanford Site impacted the entire regional economy. In Pasco, the expansion of its economy led to increasing industrial diversity, and although the economic downturn in 2008 did have an impact, food manufacturing, agriculture, private and public educational and healthcare services provided strong stability.

Additional information on population, housing, and employment can be found in the *City of Pasco Draft Comprehensive Plan Volume II* (Oneza & Associates 2018).

Industrial lands and associated jobs are mostly located on the east side of the City. Other business-related jobs are dispersed throughout the City with major clusters near the City Center, and Road 68 and I-182 intersection areas.

4.7.2. Impacts

According to current trends, population is expected to grow under all three alternatives. Housing and employment growth are also expected and would be accommodated under each alternative, but at varying levels. Impacts to population, housing, and employment would occur from inadequate existing facilities or insufficient future development opportunities to accommodate growth. An increase in population will require more intensified commercial, business, and other public facilities than would be possible under current development and population conditions. An intensification of urban uses and densities will increase traffic congestion, park requirements, police and fire requirements, and other public service demands and fiscal impacts. Additional urban development could further tax the City's fiscal and public service resources, potentially leading to a dilution of the service levels or capabilities provided current residents. Additionally, inadequately located or designed urban infrastructure, including roads, parking lots, and other improvements that are not properly sited, could create stormwater runoff, erosion, and other environmental hazards affecting neighboring properties and public services. These impacts should be mitigated through consistency with the Plan and other planning documents to ensure compatible development.

Alternative 1: No Action Alternative

The No Action Alternative would result in continued use of the properties as currently zoned by the City. Future population growth would not be accommodated in the planning areas. Similar to the action alternatives, the No Action Alternative would increase housing or employment opportunities in the City but would not meet the demand for housing and employment based on future population growth trends.

Alternative 2: Recommended Growth Target

Under Alternatives 2 and 3, the expanded land area will accommodate population growth, and provide housing and employment opportunities. Both alternatives would accommodate 15,217 housing units to meet the future needs. The addition of housing in these areas is expected to improve the City's economic vitality and support local businesses. Alternatives 2 and 3 would increase housing and employment opportunities in the City consistent with future population growth trends. The industrial area to the north along US-395 would provide the City with additional capacity for industrial developments to add more jobs. However, the uses that would increase population and employment levels, would include associated traffic, noise, air pollution, public service demands, and other issues related to increased development in urban environments. Alternative 2 would result in a traditional low-density growth predominant by single family homes.

Alternative 3: Recommended Growth Target High Density, Preferred Alternative

Alternative 3 includes the highest density residential land use allocation and would accommodate additional future population growth and housing in an area smaller than the area proposed in Alternative 2. Higher density and proximity between housing and jobs could attract more employers and businesses. Alternative 3 would allow for more affordable housing opportunities in terms of variety of housing types such as single-family, townhomes, condominiums, and apartments. It would also create job opportunities in certain centers in close proximity to housing, creating a more walkable community than the traditional growth in Alternative 2.

4.7.3. Mitigation Measures

For Alternatives 2 and 3, the *City of Pasco Draft Comprehensive Plan Volume II* (Oneza & Associates 2018) identifies the following mitigation measures should be employed to reduce impacts to population, housing, and employment:

- Implement SOMOS¹ Pasco economic development strategies.
- Development of agricultural industrial businesses
- Infrastructure development
- Train labor force
- Promote tourism
- Meet housing demand through developing existing planned areas, infill developments and development in the UGAs.

Other Mitigation Measures

The current draft *City of Pasco Draft Comprehensive Plan* (2018) provides goals and policies to accommodate population trends, housing, and employment. The following goals and policies should be considered for future development:

- H-1. GOAL: Encourage housing for all economic segments of the City's population consistent with the local and regional market.
- H-1-A Policy: Allow for a full range of housing including single family homes, townhouses, condominiums, apartments, and manufactured housing, accessory dwelling units, zero lot line, planned unit developments etc. in areas as appropriate.
- H-2. GOAL: Preserve and maintain the existing housing stock for present and future residents.
- ED-1 Goal: Maintain economic development as an important and ongoing City initiative.
- ED-1-F Policy: Recognize that infrastructure, including transportation and utility planning are vital to economic development and attracting businesses.
- ED-2 Goal: Assure appropriate location and design of commercial and industrial facilities.
- ED-2-B Policy: Encourage development of a wide range of commercial and industrial uses strategically located to support local and regional needs.
- ED-3 Goal: Maintain development standards and design guidelines to ensure that commercial and industrial developments are good neighbors.
- ED-3-A Policy: Enhance compatibility of commercial and industrial development with residential and mixed-use neighborhoods through the use of landscaping, screening, and superior building design standards and guidelines.

The GMA requires jurisdictions to allocate population growth to cities when feasible. Housing and employment are maintained and updated by the City as part of required Plan updates.

¹ Somos means "we are." Somos Pasco is a community wide effort to discuss the future of the Pasco community. It is a collaboration of the City, Port of Pasco, Franklin County, the Pasco School District, Columbia Basin College and the Hispanic and other groups.

To accommodate future population growth, the City should consider infill incentives and upzones. Other rural land protection measures and incentives make UGAs more attractive through infrastructure investment and infill incentives.

4.8. Parks and Recreation

4.8.1. Affected Environment

The City has approximately 656 acres of park and open space land within its corporate limits and UGA (Oneza & Associates 2018; Figure 4-4). The City’s park land inventory includes neighborhood, community, large urban, regional, linear, and special use parks. In general, the City has excellent waterfront shoreline access along most portions of the Columbia River and part of the Snake River, with boating facilities, trails, and active and passive recreation opportunities. There is a land trail component and water trail component that make up a corridor of various habitats ranging from shrub-steppe to wetlands.

Sacagawea State Park is located at the confluence of the Columbia and Snake Rivers and includes a bike and pedestrian trail that connects to the Sacagawea Heritage Trail. The rivers provide recreational watersport and fishing opportunities on multiple shoreline locations. On the north side, Shoreline Road currently provides shoreline access to the Columbia River on the northern part of the City with some open space abutting the river.

The City of Pasco typically devotes 5% of the City’s overall budget for parks and recreation. This funding supports the acquisition, development, and maintenance of facilities, and operation and management of recreational programs.

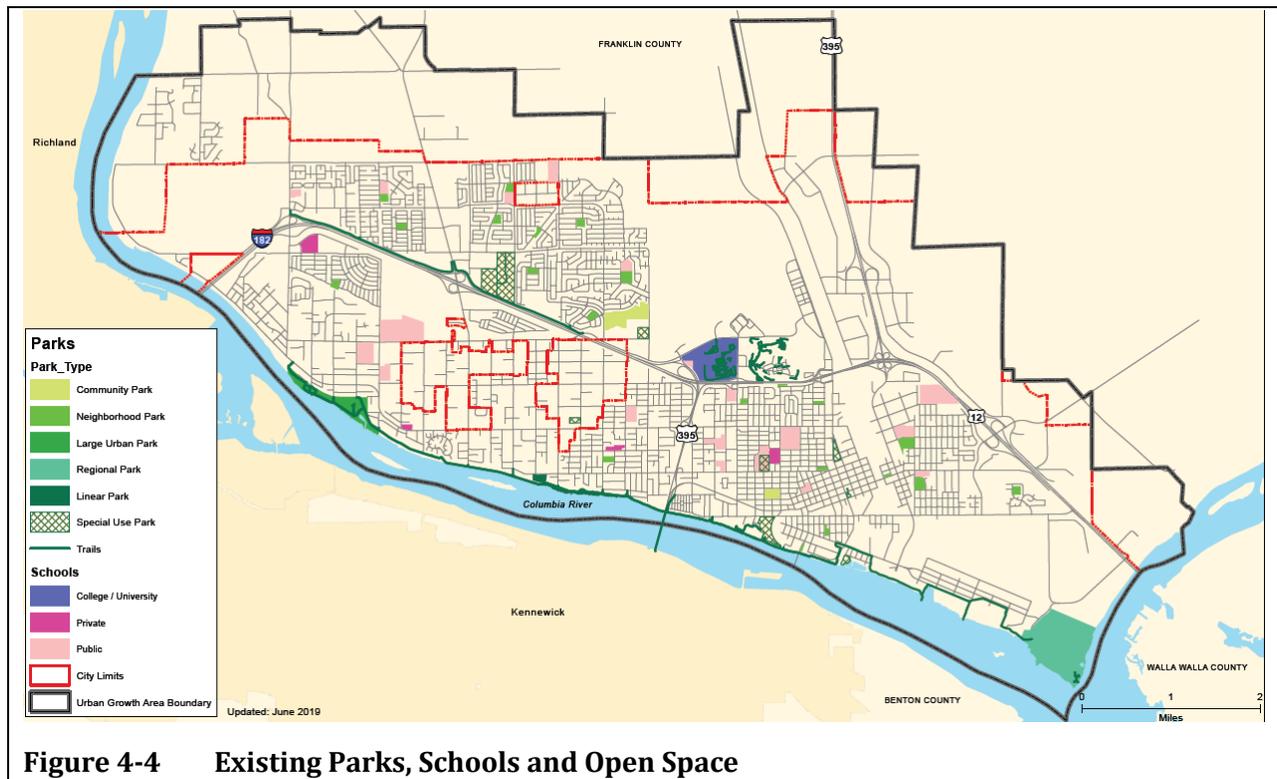


Figure 4-4 Existing Parks, Schools and Open Space

4.8.2. Impacts

Regional population growth will result in greater demand for parks and open space. Recreational opportunities will also be in higher demand, commensurate with population growth in the area.

Alternative 1: No Action Alternative

The No Action Alternative would provide additional parks and recreation within the City limits. Therefore, the parks and recreation opportunities would be insufficient to accommodate future population growth.

Alternative 2: Recommended Growth Target

Increased population growth and density projected for Alternatives 2 and 3 would place greater demand on parks and recreation facilities within and near the City. Alternatives 2 and 3 would preserve waterfront access to the Columbia River and trail along the river. Both alternatives would set aside lands to the north in the UGA to accommodate future parks demand.

Alternative 3: Recommended Growth Target High Density, Preferred Alternative

Alternative 3 includes the highest density residential land use allocation and would place a greater demand on parks and recreation facilities within the planning areas. Alternative 3 includes a similar amount of park and recreation space as Alternative 2. Alternative 3 would provide natural open space and wildlife mitigation areas in the Broadmoor area. Additionally, the Broadmoor area will provide streetscape and design standards to offer additional urban recreational opportunities.

4.8.3. Mitigation Measures

For Alternatives 2 and 3, the following mitigation measures should be employed to reduce impacts to parks and recreation:

- Provide for park or recreation opportunities near urban centers through land use designations (Figure 4-5).
- As development occurs, incorporating shoreline access may be appropriate to meet future demand for access created by the development.
- Public access opportunities to the shoreline and other natural features should be considered through integration with the City's trail system to the extent practicable.

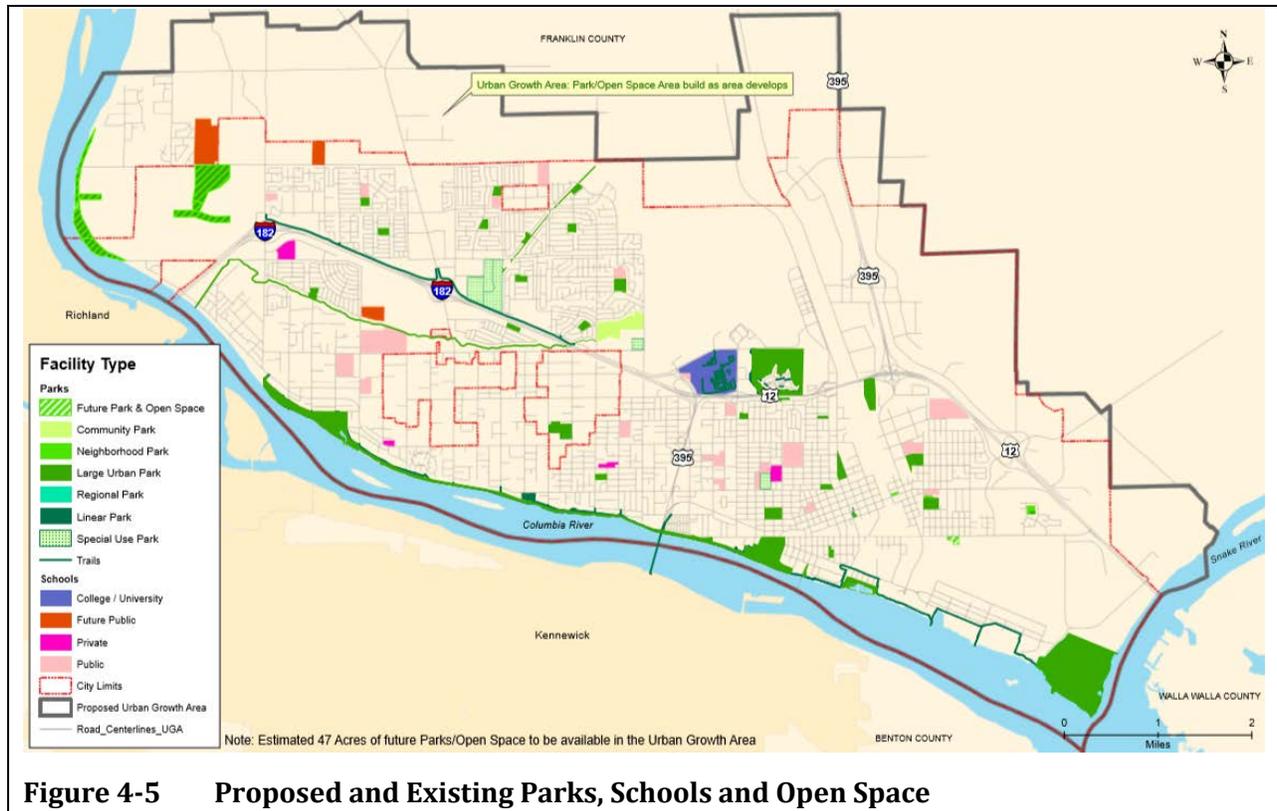


Figure 4-5 Proposed and Existing Parks, Schools and Open Space

Other Mitigation Measures

The current draft *City of Pasco Draft Comprehensive Plan (2018) Parks, Recreation, and Open Space* goals encourage providing an integrated system of parks, recreation facilities, trails, and open spaces. Alternatives 2 and 3 should maintain consistency with the policies under this goal by:

- CF-5. GOAL: In conjunction with the County, provide parks, greenways, trails, and recreation facilities throughout the urban growth area.
- CF-5-B Policy: Encourage use of existing natural features, open spaces and appropriate excess right-of-way as an integral part of the community-wide park system.

CF-5-C Policy: Maintain a cooperative agreement with the Pasco school district regarding the development, use, and operation of neighborhood parks. Also consider Goals from the *City of Pasco Parks, Recreation and Forestry Plan 2016* provides additional mitigation measures:

- Goal 1: Provide physical facilities that offer youth and adults a broad variety of passive, active and organized recreation opportunities
- Goal 2: Maintain and rehabilitate park and recreation facilities to provide the highest quality of service level to the community

The GMA provides 14 goals for comprehensive planning, including goals to encourage the retention of open space and development of recreation opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks. Development under Alternatives 2 and 3 should consider these goals to the extent practicable in providing parks and recreation opportunities.

The *City of Pasco Shoreline Master Program Update* includes policies to work with other jurisdictions, property owners, open space groups, and interested parties to develop and

implement regional and City parks, recreation, trails plans, and appropriate implementation strategies (Anchor QEA 2014).

4.9. Transportation

4.9.1. Affected Environment

The Tri-Cities area is the largest metropolitan area between Spokane to the northeast, Seattle to the northwest, Portland to the west, and Boise to the southeast. Because of its location, the Tri-Cities is a major transportation hub for travelers and commodities in the Pacific Northwest. As part of the Tri-Cities, Pasco has easy, direct access to all modes of commercial transportation services (Oneza & Associates 2018). Throughout the next 20 years, Pasco is projected to experience a 3 percent annual increase or a 66 percent of total increase in population. This growth will result in an increase in traffic volumes to, from, through, and within the City.

The Tri-Cities are connected to the interstate highway system. I-82 links the Tri-Cities metropolitan area to I-90 to the north and west, through Yakima, and to I-84 to the south, in northern Oregon. I-182, which passes through Pasco, links Pasco to these interstates and US 395. US 12 links the Tri-Cities to the interstates and to US 395 and provides access to Walla Walla and other southeastern Washington locales. The limited-access interstates serving the Tri-Cities carry between 40,000 and 60,000 vehicles per day. I-182 is a major 6-lane freeway that travels through the City of Pasco from the western edge at the Columbia River providing access to Richland and connects to US 395 which provides access to the City of Kennewick to the south. The only other access across the Columbia River is the Cable Bridge or SR 397 connecting to Kennewick from the downtown area of Pasco. The Washington State Department of Transportation is responsible for maintaining an adequate level of service on these highways. The City has developed future street classification system that re-emphasizes a grid network with arterial and collector roadways that serve the existing developed areas. Figure 4-6 shows the transportation network in the City.

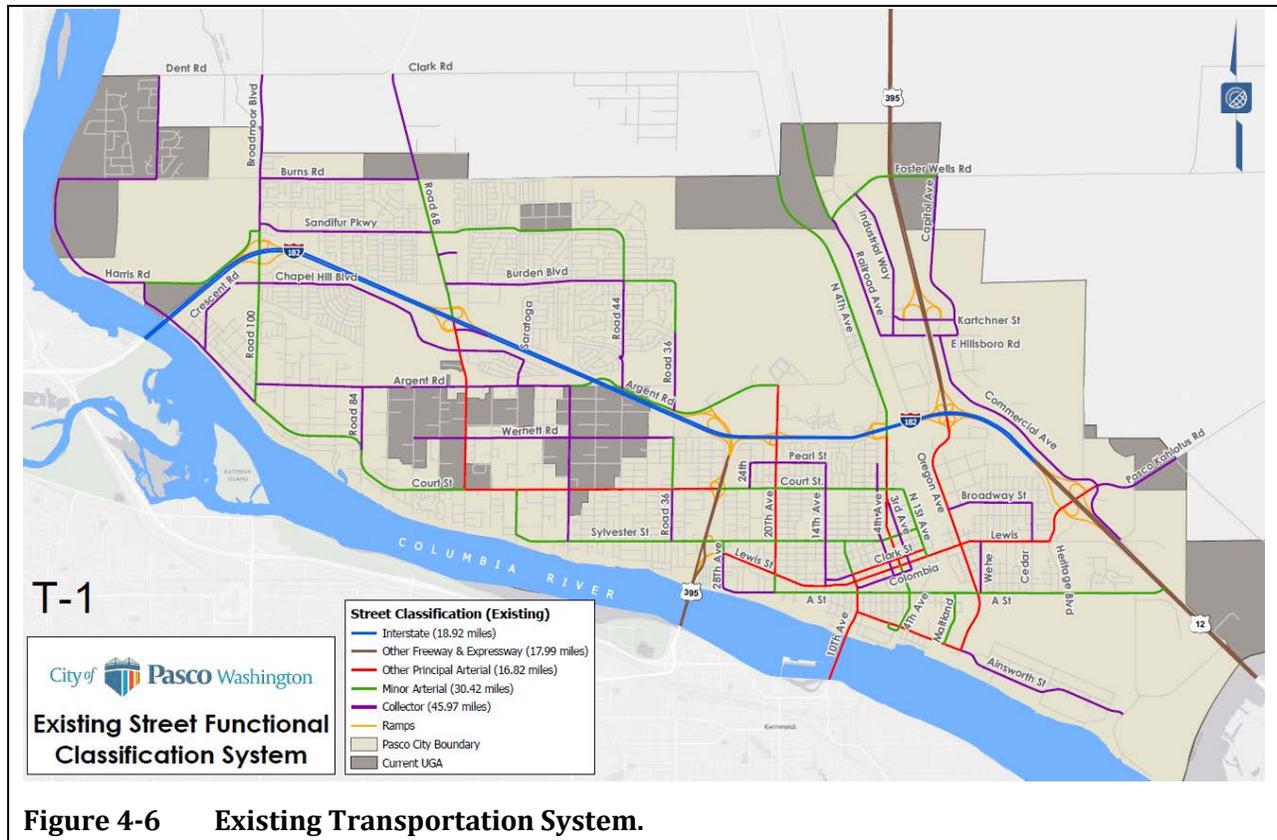


Figure 4-6 Existing Transportation System.

4.9.2. Impacts

Demands on transportation and transit facilities throughout the City would continue to increase due to future population and employment growth. Under all alternatives, continued maintenance of these facilities would occur on a regularly scheduled or as-needed basis. For transit operations, the increases could increase in hours of operations and some capital facilities such as park-and-ride lots. This includes projects under the regional *2020-2025 Transportation Improvement Program* developed by the Benton-Franklin Council of Governments for the Tri-Cities Metropolitan Planning Organization (MPO) and Benton-Franklin Regional Transportation Planning Organization (RTPO; 2019).

Increases in population and employment levels would also increase the demand for additional non-motorized facilities such as trails and bikeways. These bicycle and trail facilities may be located along roadways as bike lanes/sidewalks or as separated facilities and would provide opportunities for recreational and commuter users.

Under all alternatives, rail and airport use could also increase. In general, as employment and population increase, the use of these facilities also increases. Rail facilities would be affected by an increase in commerce associated with employment growth. Airport activity would also increase as recreational activities and employment increases.

The major facilities that will be affected by the forecasted growth in the City of Pasco under all alternatives are US 395, I-182 as well as Road 68 and Road 100/Broadmoor Blvd, both of which provide the only access at interchanges with I-182 in the western portion of the City where much of the growth is forecast to occur.

Alternative 1: No Action Alternative

The No Action Alternative would result in continued use of land under the existing Plan land use designations. Future population and employment growth would not be accommodated under the No Action Alternative and could potentially result in increased and more diffuse impacts to transportation facilities from future development in other parts of the City and nearby rural areas. In turn, maintenance of transportation facilities would also be greater and more widespread across the City rather than focused near infill and urban areas.

Alternative 2: Traditional Growth Target

Under Alternatives 2, the land use patterns would increase in intensity from the current agricultural land uses to low-density and predominantly residential uses. Increased population within the planning areas would in-turn increase demand on transportation facilities. Compared to Alternative 3, Alternative 2 would require additional roads to serve the larger area. Traffic analysis also indicates that Alternative 2 would likely need additional intersection improvements at several intersections due to longer trip lengths.

Development associated with Alternative 2 and Alternative 3 would result in potential impacts from construction activities, including increased traffic volumes, increased delays, detour routes, and road closures. During construction, vehicles would be necessary to bring equipment and materials to the planning areas. Large, oversized trucks could require pilot vehicles as they travel to and from the freeway with large loads. These trucks may also require flaggers to manually divert or control traffic as it enters or exits roadways (due to large turning radii). This traffic maintenance would cause delays for motorists.

Alternative 3: Compact Growth Target, Preferred Alternative

Alternative 3 also includes significant population growth, however with the population being accommodated within a smaller geographic area with higher residential densities. The additional commercial and employment included in the land use assumptions of Alternative 3 would potentially decrease the amount of trips and trip lengths resulting with less overall impacts to the transportation network than Alternative 2.

Increased density in urban areas would most efficiently support new or extended bus routes in addition to more frequent service provided by transit facilities. Similarly, non-motorized transit demand would also increase. This increased demand would be more localized than the diffuse impacts anticipated under the No Action Alternative.

4.9.3. Mitigation Measures

For Alternatives 2 and 3, the following mitigation measures should be employed to reduce impacts to the transportation network (Figure 4-7):

- The City will undertake joint efforts with the Washington State Department of Transportation to identify appropriate improvements at the I-182/Road 68 interchange as well as the I-182/Road 100/Broadmoor Blvd interchange along with appropriate local roadway improvements to protect and preserve those investments.
- The City will implement travel demand management methodologies identified in the City of Pasco Draft Comprehensive Plan to limit and manage the demand on and access to the major facilities of I-182 and US 395,
- During construction, the City will work with its development applicants to oversee that appropriate coordination with affected agencies and property owners occurs upon future

development. This includes providing appropriate public notification and detour routes upon development of its own projects.

- During construction, the City could require construction management plans at the time of development to reduce potential short-term impacts.
- To accommodate future population growth projections, the City has planned a roadway network to serve developing areas, and many of the improvements will be paid for by private development. Identified improvements to transportation networks are described further in the City of Pasco Draft Comprehensive Plan Volume 2 (Oneza & Associates 2020).
- The City will cooperate with the RTPO and Benton-Franklin Council of Governments for levels of service.
- The City should consider multi-modal needs in new corridors and in street standards for when new roadway facilities are constructed.

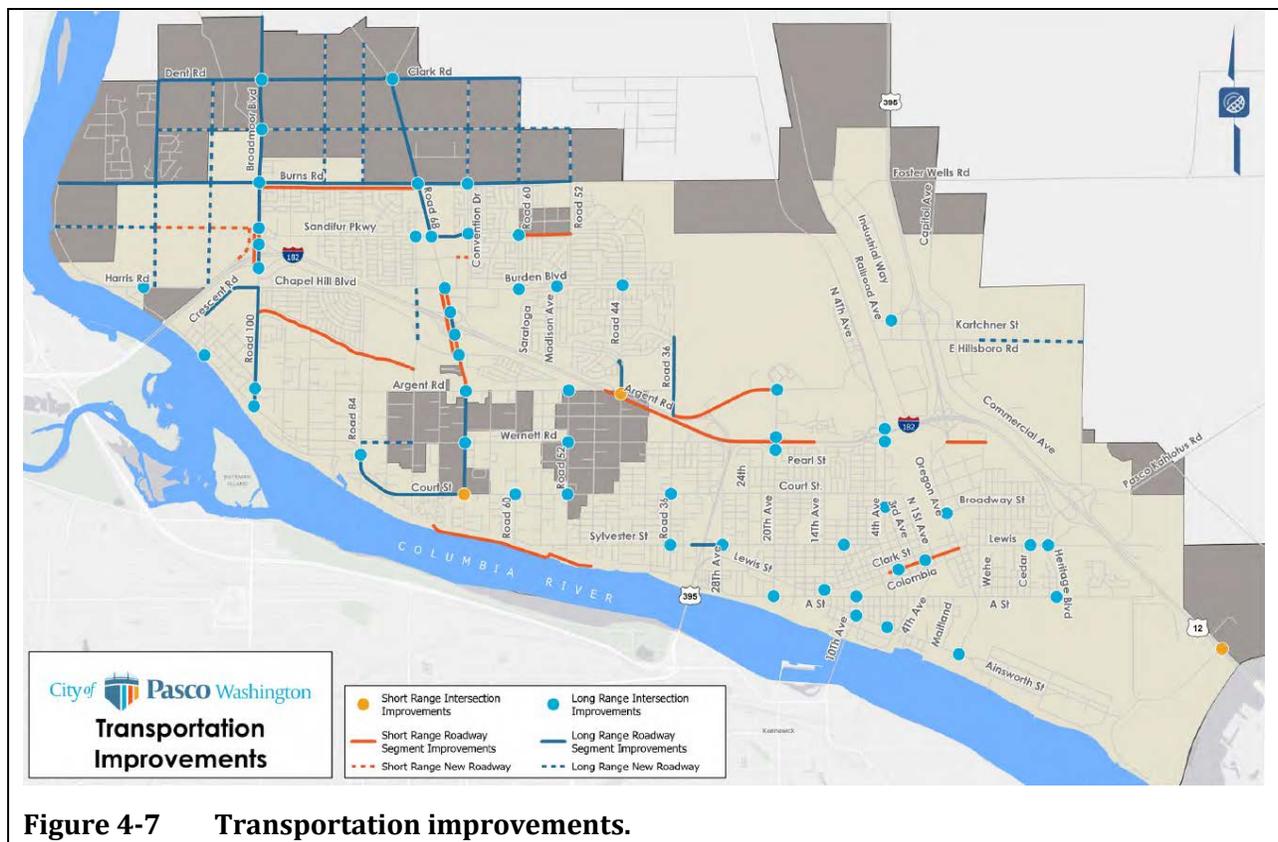


Figure 4-7 Transportation improvements.

Other Mitigation Measures

The current draft *City of Pasco Draft Comprehensive Plan (2017a)* transportation goals and policies encourage providing an efficient and multimodal transportation network to support the City’s land use vision and existing needs. The following goals and policies should be considered for future development:

- LU-1-A Policy: Maintain and apply current design standards for major public investments, particularly streets.

- LU-4-A Policy: Reduce the dependency of vehicle travel and encourage pedestrian and multi-modal options by providing compatible land-uses in and around residential neighborhoods.
- CF-2-A Policy: Encourage growth in geographic areas where services and utilities can be extended in an orderly, progressive and efficient manner.
- TR1-J Policy: encourage developments to meet the mission of the Pasco Complete Street Policy
- TR-4-A Policy: Incorporate design and streetscape into all major arterial and collector streets as they are constructed.

4.10. Public Services and Utilities

4.10.1. Affected Environment

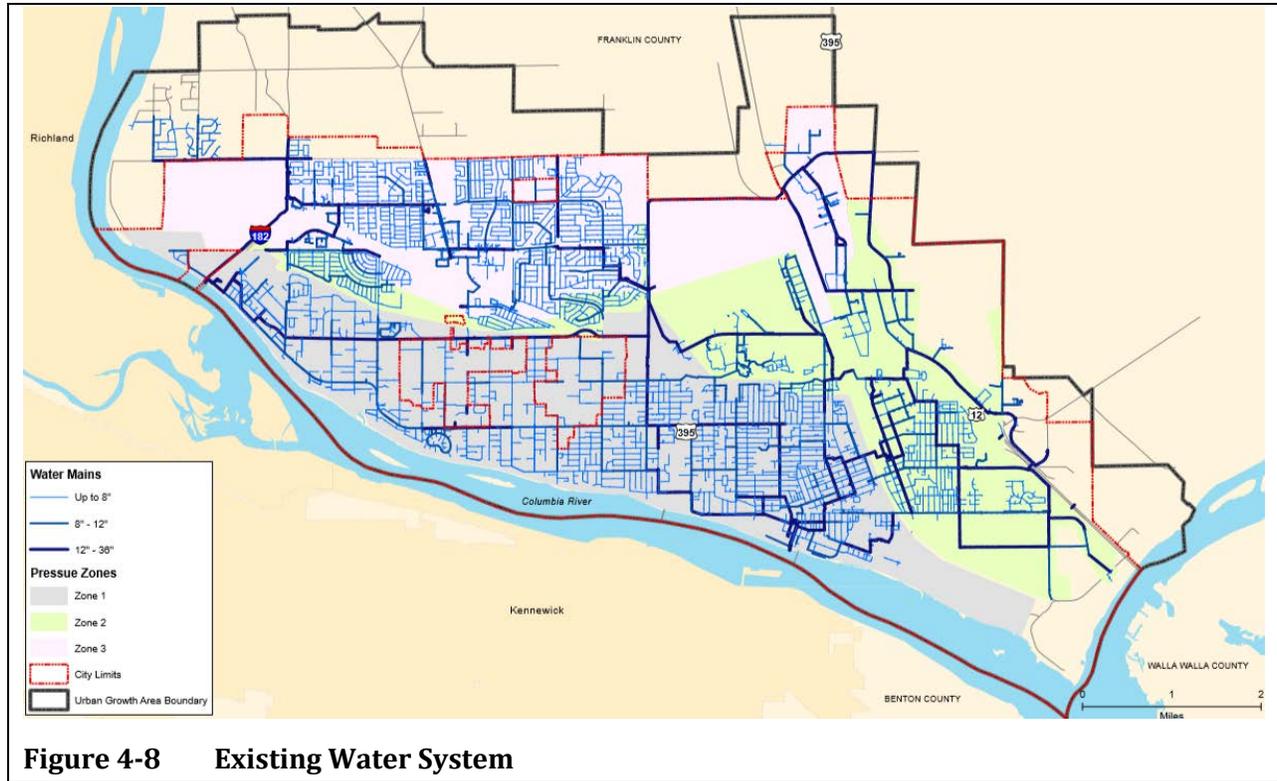
Water Supply System

The City's water system is supplied from surface water withdrawals from the McNary Pool of the Columbia River and includes two surface water treatment plants and three water reservoirs (Figure 4-8). The majority of the population within the incorporated limits of the City of Pasco is served by the City's Water Utility. The City has the following key water system facilities:

- Butterfield Water Treatment Plant: capacity of 26.8 million gallons per day
- West Pasco Water Treatment Plant: capacity of 6.0 million gallons per day
- Riverview Heights reservoir: 10 million gallons
- Rd 68 reservoir: 2.5 million gallons
- Broadmoor Boulevard reservoir: 1 million gallons

The City water distribution system has been arranged into three (3) service/pressure zones. Generally, these zones may be described as:

- Pressure Zone 1: South of I-182 and west of the railroad yard
- Pressure Zone 2: East of the railroad yard, the southern portion of the airport and a strip south of I-182 between Service Zone 1 and Service Zone 3
- Pressure Zone 3: Generally, north of I-182 and encompassing most of the northern part of the city



Sanitary Sewer and Wastewater Collection System

The City's collection system is a conventional collection system that mainly relies on gravity sewers to convey wastewater flow to two lift stations that discharge to the treatment facility (Figure 4-9). Additional pump stations and force mains are used to supplement the gravity system.

The City operates a wastewater collection and treatment system to manage the wastewater needs of the community. The City originally built a primary treatment facility in 1954 which has been upgraded over the years to increase design capacity and accommodate growth of the City's service area. This system operates under a National Pollutant Discharge Elimination System Waste Discharge Permit issued by Ecology. Currently, the system is served by one activated sludge wastewater treatment plant (WWTP) which oxidizes, nitrifies and disinfects wastewater flow prior to discharging to the Lake Wallula reach of the Columbia River.

The northern part of the City is currently not served by the system.

Industrial Wastewater Treatment Facilities

The City also owns, maintains and operates a separate industrial wastewater treatment plant (PWRP – Process Water Reuse Facility) that collects, stores and then applies food processor wastewater to farm circles north of the City as irrigation. The PWRP is an industrial facility that receives the discharge of process water from six food processors in the region. The PWRP is a public/private partnership. The PWRP and associated farm circle properties are located in an area of irrigated agriculture production fields on approximately 1,800 acres north of Pasco and east of Highway 395 in Franklin County. The City of Pasco has owned and operated the PWRP since 1995.

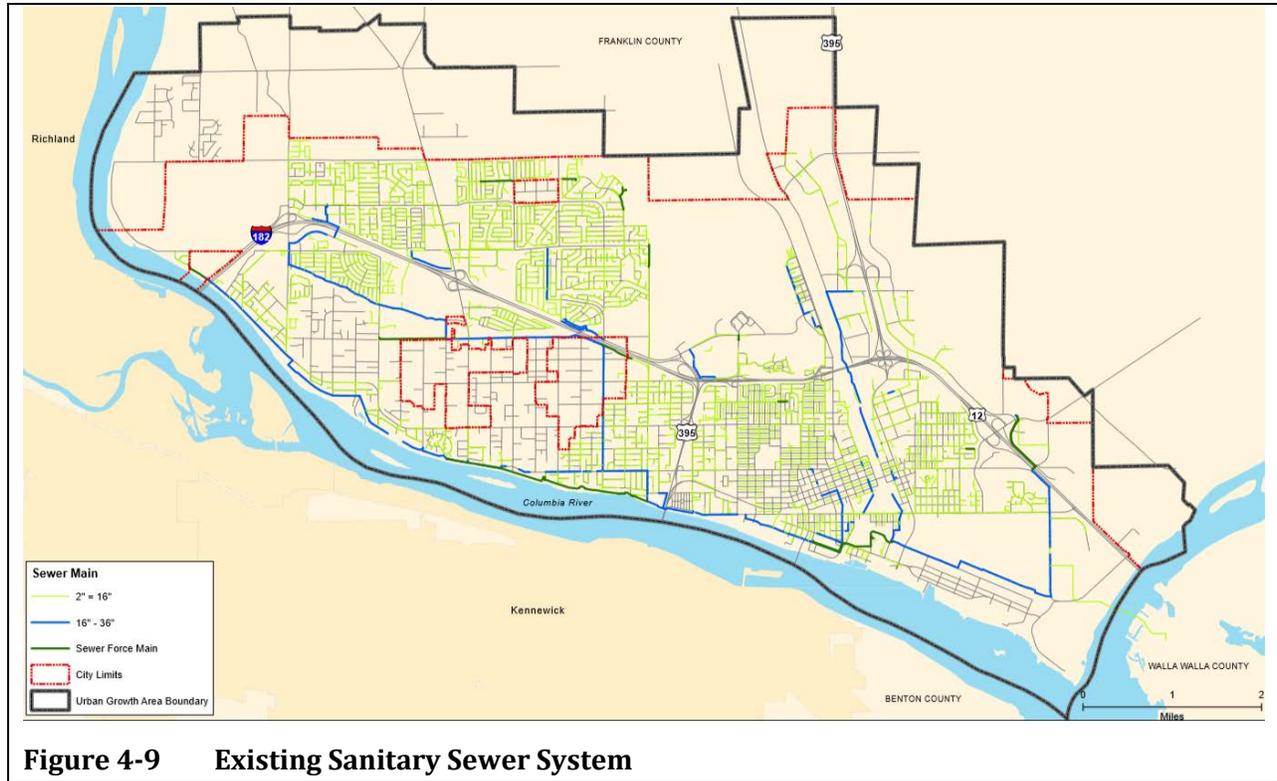


Figure 4-9 Existing Sanitary Sewer System

Stormwater System

Stormwater runoff is a major contributor of water quality pollution to waterways. Being located in a semi-arid climate, the streets in Pasco still collect sediments from construction sites, fertilizers and pesticides from yards, bacteria from animal waste, and gas, oil, and toxic metals from cars. Managing the stormwater system includes illicit discharge detection and elimination, runoff control, operation and maintenance, and monitoring of the system. The City continually updates its system through a combination of programs and facilities. Public involvement, education, and outreach are important components of the program.

Solid Waste Management

Solid waste collection services are provided in Pasco through a franchise agreement with Basin Disposal Inc. (BDI). BDI provides automated curbside services to all residential properties. Refuse is collected in the community and taken to the Transfer station on Dietrich Road. The transfer station tip-floor has a capacity of about 1,200 tons per day. BDI delivers approximately 646 tons per day of waste to transfer station each day. Any waste that is economically recyclable is diverted at this point and the remainder is placed in specially constructed trailers and transported to the regional landfill in Morrow County, Oregon.

Garbage service in the City is mandatory and is required for all businesses and residential structures. The residential service is often referred to as total service in that home owners may set additional bags, boxes or bundles beside their standard garbage can on collection day for pick-up at no additional charge. Garbage pick-up occurs weekly for all residential customers and may occur more than once a week for commercial customers. BDI also provides two coupons a year to residential customers that can be used for free dumping at the transfer station.

Energy

The primary supplier of electrical power to Pasco and the surrounding UGA is the Franklin County Public Utility District (Franklin PUD). The Franklin PUD purchases power from the regional power grid (Bonneville Power Administration) and then distributes through substations and distribution lines to the end users.

Utilities from Other Providers

Other utilities are provided by various service providers, including natural gas, telecommunications, and irrigation district facilities.

Additional details for all services described above are included in the *City of Pasco Draft Comprehensive Plan Supporting Analysis* (Oneza & Associates 2018).

4.10.2. Impacts

Under all alternatives, future population and employment growth will result in increased demand on public services and utilities. Increases in population density and employment under all alternatives could increase the number of calls for police and medical emergency services. Increases in traffic related to growth under both alternatives could affect the response time of emergency vehicles. Increases in vehicle and pedestrian traffic could result in the need for additional traffic enforcement. Increases in population and employment could occur and increase the use of existing schools and parks, as well as create a need for new educational and recreational facilities. The demand for other public services, including sanitary sewer, wastewater treatment, water, stormwater, solid waste management, energy, and other utilities, would also increase.

Construction impacts from population and employment growth would occur to accommodate the increased demand. Impacts include construction to expand capacity for water and sewer services; existing water and sanitary sewer lines would be abandoned in place or removed and replaced with new and larger lines. New and larger water and sewer mains would be installed in existing and/or future dedicated public rights-of-way or within dedicated utility easements to the City, and would connect with the existing distribution network. Existing utility lines would continue to service the area during construction, or temporary bypass service would be implemented until the distribution or collection system is complete and operational. Construction impacts on fire protection and emergency medical services could include increased calls for service related to inspection of construction sites and potential construction-related injuries.

Alternative 1: No Action Alternative

The No Action Alternative would result in continued growth under the existing Plan's land use designations. Future population growth would not be accommodated under the No Action Alternative. This could impact public services and utilities need for these facilities to areas surrounding the City and neighboring rural areas in the County. Additional growth would put pressure on the rural facilities providers.

Alternative 2: Recommended Growth Target

Under Alternatives 2 and 3, the land use patterns and the planning area would increase significantly in intensity from the current under-utilized land uses to mixed-use and predominantly residential uses. Increased residential density would increase demand on public services and utilities. Construction impacts in these areas would also increase to accommodate more intense land uses. These impacts would be more localized rather than the diffuse impacts in the nearby rural areas under the No Action Alternative. Public services and utilities in the north side are currently limited

and will require transportation improvements and utility connections to occur under future use scenarios.

Alternative 3: Recommended Growth Target High Density, Preferred Alternative

Alternative 3 includes a similar level of development as Alternative 2, with increased residential density expected to the north, and in an area smaller than the area in Alternative 2. This alternative would place the greatest demand on public services and utilities. However, these demands would be more localized rather than the diffuse impacts anticipated under the No Action Alternative or spread out impacts anticipated in Alternative 2.

4.10.3. Mitigation Measures

For Alternatives 2 and 3, the following mitigation measures should be employed to reduce impacts to public services and utilities (Figures 4-10 and 4-11):

- The City should continue to implement the improvements described in Comprehensive Water System Plan (CWSP), 2019 to address deficiencies resulting from growth for the planning period. Priority projects and financing are included in the 2019 Capital Improvement Program for water and stormwater systems (City of Pasco).
- The City should continue to implement the improvements described in the *City's Comprehensive Sewer Plan (CSP), 2014* to address deficiencies resulting from growth for the planning period.
- To accommodate future population growth, the City should maintain its services with Basin Disposal Inc.
- In 2019, the City conducted an Expanded UGA Infrastructure Evaluation, which evaluated the impact of the anticipated growth, UGA expansion, and land use changes. As a result, in order to accommodate future growth, the City will need to make additional improvements to the West Pasco WTP, Zone 3 Reservoir, and acquire additional water rights to meet the 2038 demands.
- In 2017 and 2019, the City re-evaluated the capacity and loading requirements of the Northwest Service Area as a result of potential development demands and growth projects changes as part of the 2019 Comprehensive Plan update and Urban Growth Area (UGA) expansion. A strategy to provide sewer service to the proposed UGA and other growth areas within the city (Broadmoor Area) was evaluated and alternatives were identified.

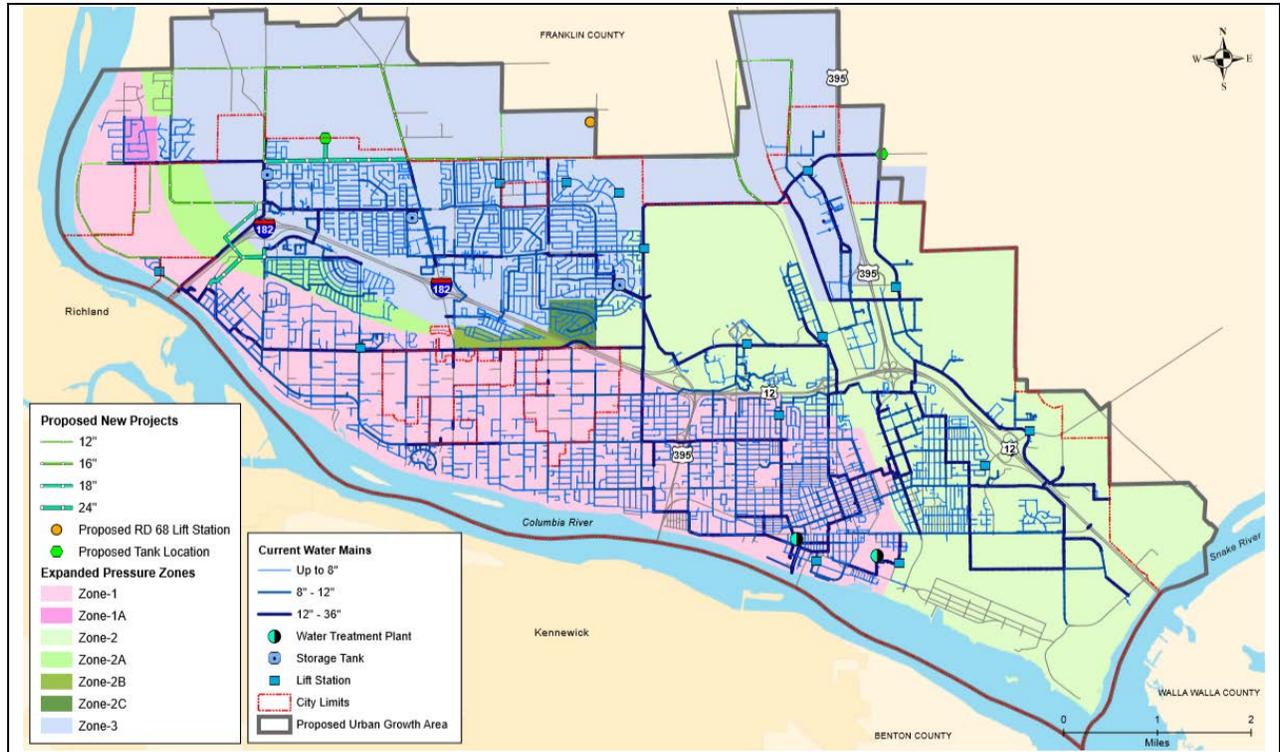


Figure 4-10 Water infrastructure improvements

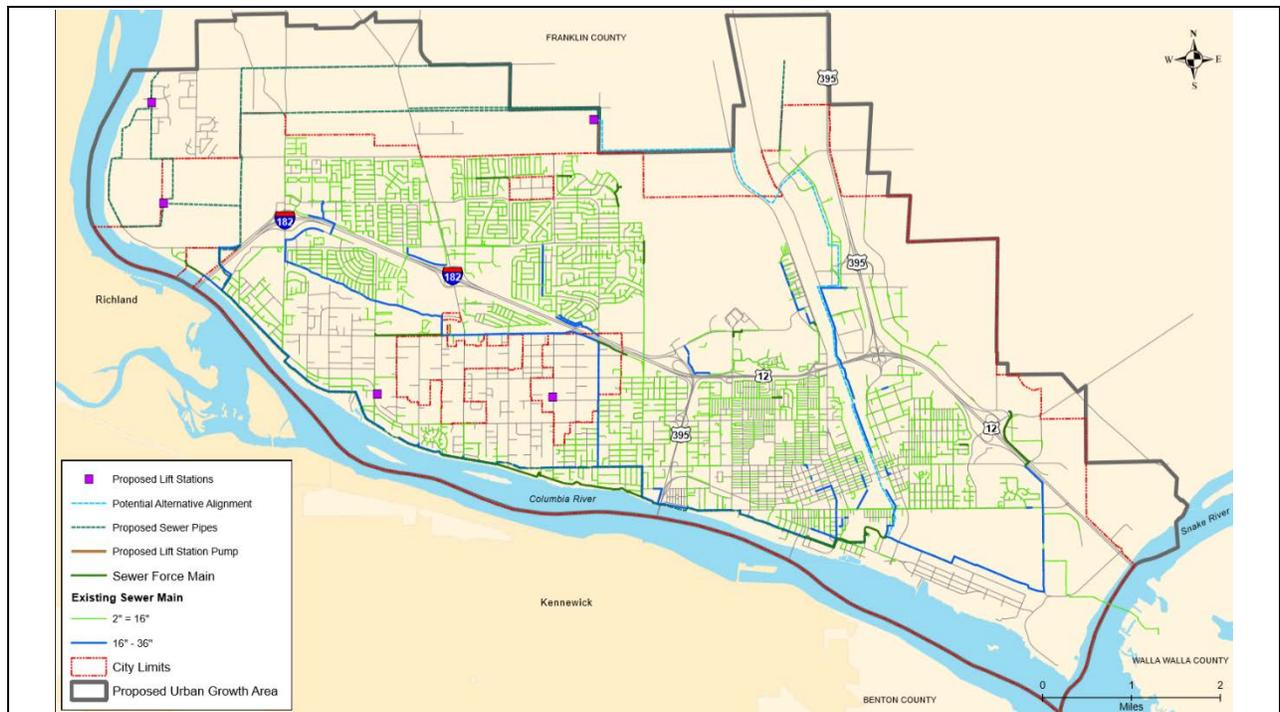


Figure 4-11 Sewer system improvements

Other Mitigation Measures

The current draft *City of Pasco Draft Comprehensive Plan (2018)* utilities element goals are intended to ensure public facilities and services necessary to support development are planned, sized, and constructed to serve new development. Alternatives 2 and 3 should be implemented consistent with the policies identified therein. This includes using a minimum 20-year planning horizon to plan for City-provided public utilities and identifying new facilities, expansions, and improvements that will be needed. The City will work with other purveyors of public services to provide facilities and services concurrent with development. The City will also minimize environmental impacts while providing safe and reliable services.

- CF-2. Goal: Ensure concurrency of utilities, services, and facilities consistent with land use designations and actions within realistic capital budget capabilities.
- CF-3. Goal: Maintain adequate lands for public facilities.
- CF-4. Goal: Acquire adequate water rights for future needs.
- CF-7. Goal: Maintain within the City a level of fire protection service that is efficient and cost effective. Encourage that same level of service in the unincorporated portion of the the Urban Growth Area.
- UT-1 Goal: Provide adequate utility services to the Urban Growth Area to assure that the anticipated 20-year growth is accommodated.
- UT-3 Goal: Assure the provision of adequate and efficient storm water management.

4.11. Heritage Conservation

4.11.1. Affected Environment

Pasco Cultural History

Pasco 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.

Beginning about 11,000 years ago, early mobile foragers were present in the Columbia Plateau. This was followed by a brief but widespread Clovis occupation, and a “broad-spectrum” hunter-gatherer culture developed in the Columbia Plateau region and persisted until the middle Holocene, around 5,300 years ago (Chatters and Pokotylo 1998).

A shift toward more permanent settlement began around 6,000 years ago, characterized by intensive salmon fishing and associated storage features, social inequality, large permanent winter villages, and diverse tool assemblages (Chatters and Pokotylo 1998; Ames et al. 1998).

Pasco is in the traditional territory of the Yakama Nation, a Sahaptin-speaking Plateau people (Walker 1998). Wanapum and Walla Walla people also used the area (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).

The spot where the Snake enters the Columbia had been a popular tribal rendezvous spot for centuries, sometimes called the Grand Rendezvous or the Great Forks. Tribes commonly camped, fished, and wintered from the Snake’s mouth upstream on the Columbia for eight miles toward the

spot where the Yakima River enters. The City of Pasco spreads out today over the eastern bank of this stretch of the Columbia (Brum & Associates, 2014).

Fishing activities revolved around an early salmon run in March, and a second, larger run in June (Schuster 1998). Gathering activities took place throughout the year. Although salmon were a key staple, plant foods also made up a significant portion of the diet (Hunn 1981).

By the time of the first sustained contact between the tribes of the Pasco area and Euro-American settlers in the mid-1800s, tribal life had already been significantly impacted. Introduced diseases decimated the population (Vibert 1997:50), and the introduction of the horse altered social and economic activities.

In 1853, Washington became a territory separate from Oregon and, by the next year, Governors of both the territories began pursuing treaties that relegated tribes to reservations (Wilma 2003). Fourteen tribes and bands signed the Yakama Nation Treaty of 1855 that established the Yakama Indian Reservation (Yakima Nation Museum [YNM] 2011). The same year, the Walla Walla tribe signed the Treaty of Walla Walla, which established the Umatilla Indian Reservation in Oregon, and many Walla Walla (and some Yakama) tribal members moved to there.

The Lewis and Clark expedition recorded the first description of the confluence area in 1805, and David Thompson passed through in 1811 (Nisbet 2005). The area was rarely visited, and several early attempts at settlement (a mission, a group of cattle ranchers) failed (Kershner 2008). However, by the 1890s, settlers had established an agricultural economy and built irrigation systems (Kershner 2008).

The general Tri-Cities region as a whole is within territory inhabited traditionally by Native people represented today by the Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, the Wanapum Band, and others. Large permanent villages were located in prominent locations, such as at the confluence of the Columbia River (Nch'i-Wana) and the Yakima River (Koots Koots A Min Ma). (Heather & Darby, 2018).

The original town site of Pasco was created in April of 1886 with the recording of the Pasco Town Plat. The original town site contained 8 blocks equally divided by the Pacific Northern Rail yards. From that modest beginning Pasco has grown to encompass more than 33 square miles of land. The original town site that was home to a handful of settlers. (Oneza & Associates, 2019)

The Yakima-Columbia confluence has a rich archaeological record, with sites in the area attributed to all of the Southern Plateau cultural phases. The area has been, “occupied more or less continuously for the last 10,000 years” (Western Heritage 1983). There are 32 recorded archaeological sites within 1 mile of the confluence.

Recorded Cultural Resources

Many archaeological sites and historical structures related to the area’s cultural history have been recorded in the City.

Previously conducted cultural resources review

A cultural resources survey for the Pasco Tri-Cities airport area indicates two National Register of Historic Properties (NRHP) in the city of Pasco south of the Tri-Cities Airport. The Franklin County Courthouse (Building #78002740, 1016 N. 4th St., Pasco) is approximately 1.4 miles south of the Tri-Cities Airport. The Pasco Carnegie Library (Building #82004212, 305 N. 4th St., Pasco) is located approximately 1.7 miles south of the Tri-Cities Airport. The pedestrian archaeological survey did not locate any prehistoric or historic sites.

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

All but one of the 13 sites within a mile of the Broadmoor Area are precontact (one is historic) — eight of the 13 are eligible to be listed on the National Register. There are no sites located directly within the Broadmoor Area. The 13 sites within the one-mile radius contain an array of litchis, shell, burials, irrigation pipes, and one was designated as a field camp. The singular historic site found within a mile of the Project Area indicates historic farming was also occurring nearby, which indicates there will have already been a great deal of ground-disturbing activity. The number of sites and their proximity to the river is unsurprising due to the nature of Native cultures in the Project Area subsisting largely on fish resources since time immemorial (Hansen and Darby, 2018).

Similarly, for the proposed Urban Growth areas identified in Alternatives 2 and 3, no recorded resources, including archaeological sites, historic structures or other resources are located directly within these boundaries. Some irrigation related structures are identified but have been determined not eligible to be counted as historic resources. It is important to note that there have been only limited surveys for these resources conducted in the proposed UGA areas. There are some resources just outside of the UGA areas, including facilities associated with the Esquatzel canal (Anchor QEA 2020).

4.11.2. Impacts

Generally, the potential for impacts to cultural resources is proportional to the intensity of development. The greater the horizontal and vertical extent of ground disturbance, the more likely that a development will impact archaeological materials, historic structures, or traditional cultural properties.

Several existing laws and regulations govern the identification and treatment cultural resources. These include:

- Section 106 of the National Historic Preservation Act and its implementing regulations at 36 Code of Federal Regulations 800, which apply to projects that are federally funded or approved.
- Governor’s Executive Order 05-05, which applies to projects that use State of Washington capital funds.
- RCW 27.53 (Archaeological Sites and Records), which prohibits the unpermitted removal of archaeological materials and establishes a permitting process.
- RCW 27.44 (Indian Graves and Records), which describes how human remains must be treated.

Also, PMC Historic Preservation Title 20 regulates historic sites for “identification, evaluation, designation, and protection of designated historic and prehistoric resources”.

Given these laws and regulations, it is likely that any impacts to significant cultural resources would have to be mitigated, in consultation with Native American tribes and the Department of Archaeology and Historic Preservation.

Alternative 1: No Action Alternative

Under the No Action Alternative, areas of proposed change would maintain the current zoning. Under existing conditions, most of City would be developed to its maximum capacity. Construction citywide could potentially impact cultural resources, including recorded and unrecorded archaeological sites.

Alternative 2: Traditional Growth Target

Under the Traditional Growth Target Alternative, various new residential, public use, and commercial developments could occur in the north side of the UGA. These developments would likely include disturbance of previously undisturbed soils for building foundations, utilities, roadways, and other infrastructure. Unrecorded archaeological sites could be affected in these areas.

Alternative 3: Compact Growth Target, Preferred Alternative

Under the Compact Growth Target Alternative, developments would be similar to the Traditional Growth Target Alternative, though with greater intensity of development in some parts of the planning areas. The greater magnitude could lead to potentially greater disturbance of undocumented archaeological resources.

4.11.3. Mitigation Measures

The City should comply with applicable laws and regulations regarding impacts to cultural resources. Section 106, Executive Order 05-05, and RCW 27.53, among others, require impacts to cultural resources be mitigated. Mitigation is developed on a project-by-project basis, in consultation with Native American tribes, the Department of Archaeology and Historic Preservation, and other interested parties.

The draft *City of Pasco Draft Comprehensive Plan* goals and policies encourage the preservation of structures, districts, and cultural resources unique to the City. The following goals and policies should be considered for future development:

- LU-8 Goal: Encourage the restoration and rehabilitation of historic buildings and sites.
- LU-8-A Policy: Allow adaptive re-uses in historic structures.
- Franklin County Countywide Planning Policies Historic Preservation: Identify and encourage the preservation of land sites and structures that have historical or archaeological significance.

4.12. Summary of Impacts by Alternative

Topics/Impacts Common to All Alternatives	Alternative 1: No Action Alternative	Alternative 2: Traditional Growth Target	Alternative 3: Compact Growth Target, Preferred Alternative
4.2.1. Earth			
<ul style="list-style-type: none"> Earth-related impacts Disturbance mechanisms (e.g., clearing, grading, erosion, impervious area expansion, and contamination) related to construction and operation would be scaled with the intensity of future development and operation. 	<ul style="list-style-type: none"> Disturbance mechanisms to earth resources would be less intensive than with Alternatives 2 and 3. Population growth would not be fully accommodated and could result in increased and more diffuse impacts to earth resources from sprawl-type development in other parts of the County and nearby rural areas. 	<ul style="list-style-type: none"> Increased impacts to earth resources compared to No Action Alternative associated disturbance mechanisms from more intensive development within the planning areas. Increased erosion potential, compaction, or contamination of earth resources from development within the planning areas. Due to lower density development compared to Alternative 3, and maximum acreages occupied under this alternative, the extent of impacts to earth resources within the undeveloped or infill areas would be more in Alternative 2 than other two alternatives 	<ul style="list-style-type: none"> Similar impacts as Alternative 2, but denser residential development proposed. This would result in higher population density per acre and reduce sprawl-type development in the City and nearby rural areas to accommodate future population growth. Concentrated development and associated impacts within the planning areas would reduce earth-related impacts in other areas.

Topics/Impacts Common to All Alternatives	Alternative 1: No Action Alternative	Alternative 2: Traditional Growth Target	Alternative 3: Compact Growth Target, Preferred Alternative
4.2.2. Surface Water			
<ul style="list-style-type: none"> • Development activities may cause erosion or increase impervious surfaces that could discharge contaminated or sediment-laden water to nearby surface waters. • Point source and non-point source pollution can be exacerbated by development if not properly managed or mitigated. • Development of undeveloped areas could reduce groundwater recharge and potentially reduce baseflow to nearby surface waters. • Changes in population and increased development could limit the availability of water supplies. 	<ul style="list-style-type: none"> • Lower population growth and less intensive development within the planning areas would have less impact on surface waters compared to Alternatives 2 and 3. • Impacts to water supplies and water supply demand would also be less due to lower number of population accommodated compared to Alternatives 2 and 3. • Population growth would not be fully accommodated and could result in increased and more diffuse impacts to surface water from sprawl-type development in the nearby rural areas. 	<ul style="list-style-type: none"> • Changes in development patterns in the north UGA area from irrigated/ vacant to developed lands would change stormwater and groundwater recharge dynamics. • Without mitigation, higher intensity development within the planning areas could put surface waters at greater risk of degradation. • Water supply demand could be higher than the No Action Alternative due to higher population growth. 	<ul style="list-style-type: none"> • Similar impacts as Alternative 2, but denser residential development would increase impervious surfaces and other development-related impacts within the planning areas. • Development within the City could potentially result in decreased and less diffuse impacts to surface water resources from future development in other parts of the City and nearby rural areas compared to Alternatives 1 and 2.

Topics/Impacts Common to All Alternatives	Alternative 1: No Action Alternative	Alternative 2: Traditional Growth Target	Alternative 3: Compact Growth Target, Preferred Alternative
4.2.3. Plants and Animals			
<ul style="list-style-type: none"> • Impacts to plants and animals would generally be scaled with the level of development. • Construction causes noise and other activities that are known to cause short-term behavioral disturbance to wildlife. • Development activities can remove vegetation and result in fragmentation of wildlife habitat, reduce wildlife habitat quality and function, and result in long-term operational impacts. 	<ul style="list-style-type: none"> • Lower population growth and less-intensive development within the planning areas would have less impact on plants and animals compared to Alternatives 2 and 3. • Population growth would not be fully accommodated and could result in increased and more diffuse impacts to plants and animals from sprawl-type development in the nearby rural areas, potentially impacting shrub-steppe habitat, burrowing owl, and other wetlands or riparian vegetation designated in other communities. 	<ul style="list-style-type: none"> • Due to lower density residential designations compared to Alternative 3, increased development in other parts of the City and nearby rural areas could have greater and more diffuse impacts to plants and animals. • Changes in development patterns from irrigated/ vacant to developed lands would alter the landscape and potentially reduce habitat provided by the existing uses. 	<ul style="list-style-type: none"> • Similar impacts as Alternative 2, but denser residential development in would potentially reduce habitat provided by existing uses. • More area would be preserved in the Broadmoor area including the core PHS areas.

Topics/Impacts Common to All Alternatives	Alternative 1: No Action Alternative	Alternative 2: Traditional Growth Target	Alternative 3: Compact Growth Target, Preferred Alternative
4.2.4. Land Use			
<ul style="list-style-type: none"> • Future development could convert undeveloped and infill areas to more intensive uses. • Construction-related and operational impacts could affect immediate vicinity and nearby land uses from increased noise, light and glare, and traffic delays; changes in views or the aesthetic character of the area; and increased pressure to develop or redevelop adjacent vacant or underutilized areas. 	<ul style="list-style-type: none"> • The No Action Alternative would result in continued use of the properties as currently zoned by the City. • Population growth would not be fully accommodated and could result in increased and more diffuse impacts to land uses in the nearby rural areas. • in the long-term, when developments are permitted in the vacant and infill areas under the current land use and zoning, this will result in significant aesthetic and visual quality impacts. 	<ul style="list-style-type: none"> • Land use patterns would increase in intensity in the north UGA area as they change from irrigated/ vacant to predominantly residential uses. • Vacant open land will also be transformed by future roadways, commercial development, and light industrial activities with some green spaces. 	<ul style="list-style-type: none"> • Similar impacts as Alternative 2, but denser residential development in the planning area and would better accommodate future population growth. • Higher density and more concentrated development. Land use to the north would transform from underutilized, low intensity current uses to a mix of Low, Medium, and High Density Residential, Commercial, Public Facility, and Open Space.

Topics/Impacts Common to All Alternatives	Alternative 1: No Action Alternative	Alternative 2: Traditional Growth Target	Alternative 3: Compact Growth Target, Preferred Alternative
4.2.5. Environmental Health			
<ul style="list-style-type: none"> • Future developments of infill and undeveloped commercial and industrial lands could impact environmental health. • During construction of some industrial developments, chemicals may be stored that could potentially create a risk of fire, explosion or spills. 	<ul style="list-style-type: none"> • The No Action Alternative would result in increased and intense use of industrial lands. • Developments in vacant and infill areas under the current land use and zoning will result in continued risks to environmental health as seen by current development patterns 	<ul style="list-style-type: none"> • Under this alternatives, existing County under-utilized industrial lands will be added to the UGA and will be developed. • New industrial developments could increase the exposure to chemicals or risk of fire. Hazardous waste could occur depending on the types of uses. 	<ul style="list-style-type: none"> • Under this alternatives, existing County under-utilized industrial lands will be added to the UGA and will be developed. • New industrial developments could increase the exposure to chemicals or risk of fire. Hazardous waste could occur depending on the types of uses.
4.2.5. Shoreline Use			
<ul style="list-style-type: none"> • Increased population growth has the potential to change shoreline uses and increase development in or adjacent to these areas. • Changes in surrounding land use patterns could reduce the value of shoreline areas as recreational opportunities or wildlife habitat. 	<ul style="list-style-type: none"> • Population growth would not be fully accommodated and could result in increased and more diffuse impacts to shoreline areas in the nearby rural areas. • The current Public Facility and shoreline areas would allow for more intensive future development to occur adjacent to the shoreline compared to Alternatives 2 and 3. 	<ul style="list-style-type: none"> • Directing development to within the planning areas would minimize potential impacts sensitive shoreline environments in other parts of the City or nearby rural areas. • Future development would allow shoreline public access, recreational and water-oriented uses to occur. 	<ul style="list-style-type: none"> • Similar impacts as Alternative 2, but denser residential development would better accommodate future population growth, reducing shoreline impacts in other parts of the City or nearby rural areas. • Less shoreline area is involved in this alternative compared to Alternative 2.

Topics/Impacts Common to All Alternatives	Alternative 1: No Action Alternative	Alternative 2: Traditional Growth Target	Alternative 3: Compact Growth Target, Preferred Alternative
4.2.6. Population, Housing and Employment			
<ul style="list-style-type: none"> Population, housing, and employment growth are all expected, with more intensive growth occurring under Alternatives 2 and 3. Impacts to population, housing, and employment would occur from inadequate existing facilities or insufficient future development opportunities to accommodate growth. 	<ul style="list-style-type: none"> Population and employment growth would not be fully accommodated and would nominally increase housing or employment opportunities in the City. Housing demand would not be met based on future population growth trends. 	<ul style="list-style-type: none"> Land use would accommodate population growth and provide housing and employment opportunities. The industrial area to the north along US-395 would provide the City with additional capacity for industrial developments to add more jobs. 	<ul style="list-style-type: none"> Similar impacts as Alternative 2, but denser residential development would better accommodate future population growth and provide more opportunities for housing and employment. Higher intensity uses within the planning areas would increase issues related to increased development in urban environments such as traffic, noise, air pollution, public service demands, and other issues, but within a lesser geographic area compared to Alternative 2.
4.2.7. Parks and Recreation			
<ul style="list-style-type: none"> Regional population growth will result in greater demand for parks and open space. Recreational opportunities will be in higher demand, commensurate with population growth. 	<ul style="list-style-type: none"> No parks and recreation would be provided beyond the land already set aside for public purposes and would be insufficient to accommodate future population growth. 	<ul style="list-style-type: none"> Preserving Open Space land use in UGA area would meet the future demand for park land. 	<ul style="list-style-type: none"> Similar impacts as Alternative 2, but denser residential development proposed would place greater demand on parks and recreation in these areas. In the Broadmoor area, streetscape and design standards to offer additional urban recreational opportunities.

Topics/Impacts Common to All Alternatives	Alternative 1: No Action Alternative	Alternative 2: Traditional Growth Target	Alternative 3: Compact Growth Target, Preferred Alternative
4.2.8. Transportation			
<ul style="list-style-type: none"> • Demand on transportation and transit facilities would increase commensurate with population and employment growth. • Demand for additional non-motorized facilities such as trails and bikeways would also increase with population growth. • Rail and airport use would increase with population and employment growth. 	<ul style="list-style-type: none"> • Population and employment growth would not be fully accommodated and would result in increased and more diffuse impacts to transportation facilities in other parts of the City and nearby rural areas. • Maintenance of transportation facilities would also be greater and more widespread to accommodate growth in other parts of the City and nearby rural areas. 	<ul style="list-style-type: none"> • Increased density would increase demand on transportation and transit facilities, as well as non-motorized transportation opportunities. • Compared to Alternative 3, Alternative 2 would require additional roads to serve the larger area. Alternative 2 would likely need additional intersection improvements at several intersections due to longer trip lengths. • Construction impacts on transportation facilities would be increased near the planning areas from development. 	<ul style="list-style-type: none"> • Similar impacts as Alternative 2, but with the population being accommodated within a smaller geographic area with higher residential densities, this would place greater but more localized demand in these areas. • The additional commercial and employment included in the land use assumptions of Alternative 3 however mean that shorter trip lengths would result, with less overall impacts to the transportation network than Alternative 2. • Increased density in urban areas would most efficiently support new or extended bus routes in addition to more frequent service provided by transit facilities. Similarly, non-motorized transit demand would also increase. This increased demand would be more localized than the diffuse impacts anticipated under the No Action Alternative.

Topics/Impacts Common to All Alternatives	Alternative 1: No Action Alternative	Alternative 2: Traditional Growth Target	Alternative 3: Compact Growth Target, Preferred Alternative
4.2.9. Public Services and Utilities			
<ul style="list-style-type: none"> • Demand on public services and utilities would increase with population and employment growth. • Increases in traffic could result in the need for additional traffic enforcement and affect the response time of emergency response vehicles. • Public facility usage would also increase with population and employment growth. 	<ul style="list-style-type: none"> • Population and employment growth would not be fully accommodated and could impact public services and utilities by increasing the service area to other parts of the City and neighboring rural areas. • Increased and more diffuse demand for public services and utilities could result in added costs to the City and utility providers and delay service response times. 	<ul style="list-style-type: none"> • Increased growth would increase demand on public services and utilities. However, this demand would be more localized to urban areas compared to the No Action Alternative. • Increased residential growth would increase demand and construction impacts related to public services and utilities. 	<ul style="list-style-type: none"> • Similar impacts as Alternative 2, but denser residential development would place the greatest demand on public services and utilities. The increased demand would be more localized to urban areas under this alternative. • Due to the limited area in the UGA compared to Alternative 2, cost associated with pipeline expansions, roads and utilities will be less.

Topics/Impacts Common to All Alternatives	Alternative 1: No Action Alternative	Alternative 2: Traditional Growth Target	Alternative 3: Compact Growth Target, Preferred Alternative
4.2.10. Heritage Conservation			
<ul style="list-style-type: none"> The potential for impacts to cultural resources is generally proportional to the intensity of development. Impacts to significant cultural resources would have to be mitigated, in consultation with Native American tribes and the Department of Archaeology and Historic Preservation. 	<ul style="list-style-type: none"> The vacant area to the north would likely remain vacant and maintain current uses with limited potential for impacts to archaeological resources. Under the existing land use designation, vacant lands within the City could be developed and potentially impact cultural resources, including recorded and unrecorded archaeological sites. 	<ul style="list-style-type: none"> New development would likely disturb soils and have the potential to impact unrecorded archaeological sites in these areas. The area re-designated as Commercial, Residential etc. could potentially impact cultural resources, including recorded and unrecorded archaeological sites and the Columbia Point South Cultural Landscape. 	<ul style="list-style-type: none"> Similar impacts as Alternative 2, but with greater intensity of development in some parts of the planning areas. At Broadmoor area, more cultural resources land will be preserved.

4.13. Summary of Mitigation Measures by Topic

Topics
4.1. Earth
<p>For Action Alternatives 2 and 3:</p> <ul style="list-style-type: none"> Maintain compliance with local air-quality agency requirements by watering exposed areas during construction. Avoid disturbing the steep areas. Compact soils at densities appropriate for planned land uses. Provide vegetative cover or soil cement on exposed surfaces. Maintain Open Space land use and environment designations along the shoreline to protect shoreline functions.

Topics
<ul style="list-style-type: none"> • Construction should be staged so that the maximum amount of existing vegetation is left in place. • Catch basins should be installed near storm drains <p>Other mitigation measures include:</p> <ul style="list-style-type: none"> • Maintain compliance with the CAO. • Development should be consistent with the goals and policies of the Comprehensive Plan.
4.2 Surface Water
<p>For Action Alternatives 2 and 3:</p> <ul style="list-style-type: none"> • Implement mitigation measures described for reducing impacts to earth resources described in Section 4.1.3. • Under both development alternatives, detention ponds will reduce peak runoff flows to natural state conditions. Detention ponds will also provide settlement for silt. Oil/water separators can reduce impacts from automobiles. • Additional mitigation measures include bio-filtration, either before or after entry into the various detention ponds, and buffers around wetlands in accordance with the CAO. • Stormwater improvements are planned to manage stormwater and protect water quality <p>Other mitigation measures include:</p> <ul style="list-style-type: none"> • Development should be consistent with the goals and policies of the Comprehensive Plan. • Maintain compliance with existing federal, state, and local policies that regulate land use activities near, and within, surface waters such as the Yakima and Columbia rivers and wetlands, including: <ul style="list-style-type: none"> – NPDES regulations and City stormwater regulations – USACE wetland avoidance and mitigation requirements – The City SEPA and CAO requirements
4.3 Plants and Animals
<p>For Action Alternatives 2 and 3:</p> <ul style="list-style-type: none"> • Provide erosion and stormwater control measures during construction, particularly in areas adjacent to surface waters that provide fish and wildlife habitat such as Columbia Point South. • Consider landscaping with native plants to provide vegetation of habitat significance in streetscapes, buffers for stormwater swales, rain gardens, and other habitat features. • Avoided, minimize, or mitigate impacts to shrub steppes, priority habitats, wetlands or wetland buffers, in accordance with the CAO and SMP. <p>Other mitigation measures include:</p>

Topics
<ul style="list-style-type: none"> • Development should be consistent with the goals and policies of the Comprehensive Plan. • Maintain compliance with the CAO.
4.4. Land Use
<p>For Action Alternatives 2 and 3:</p> <ul style="list-style-type: none"> • Meet population growth targets and housing demand through developing planned areas, and infill developments,. • Improve the built environment through designing new structures and development per City code. • Reduce local traffic volumes by creating a live-work environment in Alternative 3. • Protect shoreline areas according to the City's shoreline regulations under Title 29 • Allow adequate parks, open space and public facilities • Implement design standards for Broadmoor area developments under the Broadmoor area master plan and design standards. • Implement City's land use and zoning regulations to maintain the physical and aesthetic qualities of future developments. <p>Other mitigation measures include:</p> <ul style="list-style-type: none"> • Development should be consistent with the goals and policies of the Comprehensive Plan. • Maintain compliance with City Zoning Regulations and CAO requirements. • Implement rural land protection measures and incentives to make UGAs and planning areas more attractive (e.g., density incentives and infrastructure investment).
4.5. Environmental Health
<p>For Action Alternatives 2 and 3:</p> <ul style="list-style-type: none"> • Improve the built environment through designing new structures with safety and hazard maintenance per PMC. • Maintain and employ emergency management plans for all industrial developments • Listed hazardous sites should be subject to ongoing monitoring by Ecology's Hazardous Waste and Toxic Reduction Program. <p>Other mitigation measures include:</p> <ul style="list-style-type: none"> • Development should be consistent with the goals and policies of the Comprehensive Plan.
4.6. Shoreline Use
<p>For Action Alternatives 2 and 3:</p> <ul style="list-style-type: none"> • Provide a development buffer at along the Columbia and Snake rivers shoreline using Open Space land use designation • All shoreline goals and policies, and regulations should be applied for future developments • No net loss of shoreline ecological functions as a result of new development shall be allowed, consistent with the provisions of the

Topics
<p>SMP.</p> <p>Other mitigation measures include:</p> <ul style="list-style-type: none"> • Development should be consistent with the goals and policies of the Comprehensive Plan. • Maintain compliance with the City SMP and CAO.
4.3.6. Population, Housing and Employment
<p>For Action Alternatives 2 and 3:</p> <ul style="list-style-type: none"> • Implement SOMOS Pasco economic development strategies. • Development of agricultural industrial businesses • Infrastructure development • Train labor force • Promote tourism • Meet housing demand through developing existing planned areas, infill developments, and Development of the UGA <p>Other mitigation measures include:</p> <ul style="list-style-type: none"> • Development should be consistent with the goals and policies of the Comprehensive Plan. • Maintain compliance with the Washington State GMA requirements. • The City should consider infill incentives and upzones.
4.3.7. Parks and Recreation
<p>For Action Alternatives 2 and 3:</p> <ul style="list-style-type: none"> • Consider ways to provide park or recreation opportunities near urban centers through land use designations. • As development occurs, incorporating shoreline access may be appropriate to meet future demand for access created by the development. • Public access opportunities to the shoreline and other natural features should be considered through integration with the City's trail system to the extent practicable. <p>Other mitigation measures include:</p> <ul style="list-style-type: none"> • Development should be consistent with the goals and policies of the Comprehensive Plan. • Maintain compliance with the Washington State GMA requirements. • Maintain compliance with the City SMP policies to work with other jurisdictions, property owners, open space groups and interested parties to develop and implement regional and City parks, recreation, and trails plans and appropriate implementation strategies.

Topics
4.3.8. Transportation
<p>For Action Alternatives 2 and 3:</p> <ul style="list-style-type: none"> • The City will undertake joint efforts with the Washington State Department of Transportation to identify appropriate improvements at the I-182/Road 68 interchange as well as the I-182/Road 100/Broadmoor Blvd interchange along with appropriate local roadway improvements to protect and preserve those investments. • The City will implement travel demand management methodologies identified in the City of Pasco Draft Comprehensive Plan to limit and manage the demand on and access to the major facilities of I-182 and US 395, • During construction, the City will work with its development applicants to oversee that appropriate coordination with affected agencies and property owners occurs upon future development. This includes providing appropriate public notification and detour routes upon development of its own projects. • During construction, the City could require construction management plans at the time of development to reduce potential short-term impacts. • To accommodate future population growth projections, the City has planned a roadway network to serve developing areas, and many of the improvements will be paid for by private development. Identified improvements to transportation networks are described further in the City of Pasco Draft Comprehensive Plan Supporting Analysis (Oneza & Associates 2017). • Cooperate with the Benton-Franklin Council of Governments for levels of service, • The City should consider multi-modal needs in new corridors and in street standards for when new roadway facilities are constructed. <p>Other mitigation measures include:</p> <ul style="list-style-type: none"> • Development should be consistent with the goals and policies of the Comprehensive Plan.
4.3.9. Public Services and Utilities
<p>For Action Alternatives 2 and 3:</p> <ul style="list-style-type: none"> • The City should continue to implement the improvements described in the Comprehensive Water System Plan (CWSP), 2019 to address deficiencies resulting from growth for the planning period. • The City should continue to implement the improvements described in the <i>City's Comprehensive Sewer Plan (CSP), 2014</i> Plan to address deficiencies resulting from growth for the planning period. • To accommodate future population growth, the City should, maintains its services with Basin Disposal Inc.. • In 2019, the City conducted an Expanded UGA Infrastructure Evaluation, which evaluated the impact of the anticipated growth, UGA expansion, and land use changes. As a result, in order to accommodate future growth the City will need to make additional improvements to the West Pasco WTP, Zone 3 Reservoir, and acquire additional water rights to meet the 2038 demands. • In 2017 and 2019, the City re-evaluated the capacity and loading requirements of the Northwest Service Area as a result of potential

Topics
<p>development demands and growth projects changes as part of the 2019 Comprehensive Plan update and Urban Growth Area (UGA) expansion. A strategy to provide sewer service to the proposed UGA and other growth areas within the city (Broadmoor Area) was evaluated and alternatives were identified.</p> <p>Other mitigation measures include:</p> <ul style="list-style-type: none"> • Development should be consistent with the goals and policies of the Comprehensive Plan. • The City should continue to provide and maintain collection services to all City residents consistent with adopted service levels and the City's <i>various public services and utilities plans</i>.
4.3.10. Heritage Conservation
<p>Mitigation measures include:</p> <p>Comply with applicable laws and regulations regarding impacts to cultural resources. Section 106, Executive Order 05-05, and RCW 27.53, among others, require that impacts to cultural resources be mitigated.</p> <ul style="list-style-type: none"> • Development should be consistent with the goals and policies of the Comprehensive Plan.

Chapter 5. Comments and Responses

5.1. Comments and Responses Part 1

Comment and Response Matrix

(to be inserted after comments are received)

References

- Ames, K.M., D.E. Dumond, J. Galm, and R. Minor, 1998. Prehistory of the Southern Plateau. In *Handbook of North American Indians*, Volume 12, Plateau, edited by D. E. Walker, pp. 103-119. Smithsonian Institution, Washington, D.C.
- Anchor QEA, 2020. Email communication from Barbara Bundy dated February 20, 2020 regarding cultural and historic resources in the proposed UGA boundaries.
- Anchor QEA (Anchor QEA, LLC), 2013. *City of Pasco Draft Shoreline Inventory, Analysis, and Characterization Report*. Pasco Shoreline Master Program Update. Prepared for the City of Pasco. June 2013.
- Anchor QEA, 2014. *City of Pasco SMP Update*. Prepared for the City of Pasco. February 2014.
- Franklin County, 2019. County-wide Planning Policies. Resolution dated October 22, 2019.
- Benton-Franklin County of Governments, 2016. *2016-2021 Transportation Improvement Program*. Prepared for the Tri-Cities MPO and Benton-Franklin RTPO.
- Booth, D.B., D. Hartley, and R. Jackson, 2002. Forest Cover, Impervious Surface Area, and the Mitigation of Stormwater Impacts. *Journal of the American Water Resources Association* 38:835-845.
- Boyd, R. and Y. Hajda, 1987. Seasonal population movement along the lower Columbia River: the social and ecological context. *American Ethnologist* 14(2):309-26.
- Brum and Associates, 2014. City of Pasco Historic Preservation Work Plan 2014- 2019.
- Chatters, J.C. and D.L. Pokotylo, 1998. Prehistory: Introduction. In *Handbook of North American Indians*, Volume 12, Plateau, edited by D. E. Walker, pp. 73-80. Smithsonian Institution, Washington, D.C.
- City of Pasco, 2018. *2015 Comprehensive Water System Plan*. Prepared by Murray Smith & Associates. Revised January 2019.
- City of Pasco, 2018. *Comprehensive Sewer System Plan*. Prepared by Murray Smith & Associates. Revised January 2019.
- City of Pasco, 2020 - 2025 *Capital Improvement Plan*. Prepared by Sandland, Buckley, Pashon, Robins, Serra, Andaya.
- City of Pasco, *City of Pasco Zoning GIS Map*. December 2019.
- Cooper, Jason B., 2003. Cultural Resources Study of the Proposed Hanford Reach National Monument Heritage & Visitors' Center. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

- Dickson, Catherine, 2011. Inventory of Unsurveyed Lands within the McNary Project Area, Umatilla County, Oregon, Benton, Franklin, and Walla Walla Counties, Washington. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.
- Ecology (Washington State Department of Ecology), 2004. *Stormwater Management Manual for Eastern Washington*. Publication Number 04-10-076. September 2004.
- Ecology, 2019. WRIA 36: Esquatzel Coulee Ecology Links. Accessed: November 21, 2019. Available at: <https://fortress.wa.gov/ecy/eap/riverwg/stationlistbywria.asp?wria=36>
- Ecology, 2016. Washington State Water Quality Assessment 303(d)/305(b) List Search Tool. Updated: July 22, 2016. Cited: March 25, 2017. Available at: <https://fortress.wa.gov/ecy/approvedwqa/ApprovedSearch.aspx>.
- Friedrichsen, G., 1998. *Eel River water quality monitoring project*. Final report. Submitted to State Water Quality Control Board, for 205(J) Contract #5-029-250-2. Humboldt County Resources Conservation District. Eureka, CA. 76 pp.
- Gerber, Michelle Stenehjem. 1992. *On the Home Front: The Cold War Legacy of the Hanford Nuclear Site*. University of Nebraska Press, Omaha.
- Gilpin, Jennifer, 2008. Archaeological Resource Survey and Evaluation for the Hanford Reach Interpretive Center Project Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.
- Grolier, M.J. and J.W. Bingham, 1978. Bulletin No. 71: Geology of Parts of Grant, Adams, and Franklin Counties, East-Central Washington. Washington State Division of Geology and Earth Resources.
- Hansen and Darby, 2018. Heather Hansen, MA and Darby Stapp, PhD. A Literature Review of the 1,600–2,000 Acre Area in the Northwest Portion of Pasco for the Broadmoor Area Non-Project Environmental Impact Statement.
- Hunn, E.S., 1981. On the relative contribution of men and women to subsistence among hunter-gatherers of the Columbia Plateau: A comparison with Ethnographic Atlas summaries. *Journal of Ethnobiology* 1(1):124-134.
- Kerschner, J., 2008. Pasco – a thumbnail history. HistoryLink.org essay 8450. Accessed November 2012. Available from: http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=8450.
- Landreau, Christopher and Joel Geffen, 2009. An Archaeological Review and Inventory of the Barker Ranch Canal Project Benton County, Washington Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.
- Link, S.O., W.H. Mast, and R.W. Hill, 2006. Shrub-steppe. *Restoring the Pacific Northwest*, D. Apostol and M. Sinclair, editors, pp. 216-240. Island Press, Washington D.C.

- May, C.W., R.R. Horner, J.R. Karr, B.W. Marr, and E.B. Welch, 1997. Effects of urbanization on small streams in the Puget Sound Lowland Ecoregion. *Watershed Protection Techniques* 2(4):483-494.
- Nisbet, J., 2005. *The Mapmakers Eye: David Thompson on the Columbia Plateau*. Washington State University Press, Pullman, WA.
- Oneza & Associates, 2019. *City of Pasco Draft Comprehensive Plan Supporting Analysis*, 2018.
- Prendergast, Ellen, 2002. National Register of Historic Places Nomination Form, Wanawish Horn Rapids Fishing Camp. Form on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.
- Sanger, S.L., 1995. *Working on the Bomb: An Oral History of World War II*. Portland State University, Portland, Oregon.
- Schuster, H.H., 1998. Yakima and neighboring groups. In *Handbook of North American Indians*, Volume 12, Plateau, edited by D. E. Walker, pp. 327-351. Smithsonian Institution, Washington, D.C.
- Sharley, Ann, 2007. Cultural Resources Survey for the Washington State Department of Transportation's SR 240, Beloit Road to Kingsgate Way Project, Benton County, Washington. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington. Report on file at the Department of Archaeology and Historic Preservation, Olympia, Washington.
- USBR, 2008. *Yakima River Basin Water Storage Feasibility Study Final Planning Report/Environmental Impact Statement*. December 19, 2008.
- USEPA (U.S. Environmental Protection Agency), 2012. *Green Communities: Land Use Impacts on Water*. Available at: <http://www.epa.gov/greenkit/toolwq.htm>. Last Updated: February 6, 2012.
- USFWS, 2017. USFWS National Wetlands Inventory – v2. Updated: March 14, 2017. Cited: April 2, 2017. Available at: <https://www.fws.gov/wetlands/>.
- Vibert, E., 1997. *Trader's Tales: Narratives of Cultural Encounters in the Columbia Plateau, 1807-1846*. University of Oklahoma Press, Norman, OK.
- Walker, D.E., 1998. Introduction. In *Handbook of North American Indians*, Volume 12, Plateau, edited by D. E. Walker, pp. 1-7. Smithsonian Institution, Washington, DC.
- WDFW (Washington Department of Fish and Wildlife), 2008. *Priority Habitat and Species List*. Olympia, Washington. 177 pp. August 2008.
- Weibull, A., Ö. Östman, and Å. Granqvist, 2003. Species richness in agroecosystems: The effect of landscape, habitat and farm management. *Biodiversity and Conservation* 12(7):1335-1355.

Western Heritage, Inc., 1983 National Register of Historic Places Nomination Form, Tri-Cities Archaeological District. On file at the Department of Archaeology and Historic Preservation, Olympia, WA.

Wilma, D., 2003. Stevens, Isaac Ingalls. HistoryLink.org Essay 5314. Available at:
http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=5314.

Appendix A – Scoping Comments

City of Pasco 2018 Comprehensive Plan Update – EIS Scoping Comment Response Matrix

Comment No.	Commenter	Comment	Response
EIS Alternatives			
1	Futurewise	<p>We support the City of Pasco Determination of Significance and the development of an environmental impact statement (EIS) to consider the impacts of the Comprehensive Plan and Urban Growth Area expansion on the built and natural environment. We support Alternative 3 in the City of Pasco Scoping Notice: “Compact Growth Target: This alternative would allow for changes in the Plan to accommodate the twenty-year population growth projection for Pasco allocated by the Office of Financial Management (OFM), and to capitalize on other development opportunities. In addition, alternative 3 will consider a growth pattern of higher density. It includes considering land use and policy changes to gain an increase in development capacity within the undeveloped and infill areas of the City. Under this alternative, the Urban Growth Area would be modified to the north of the City at a higher density/smaller area compared to Alternative 2 to accommodate future growth. It will consider land use and policy changes in order to maintain consistency with the GMA and the Countywide Planning Policies, and to accommodate growth.”</p>	<p>Comment noted and Alternative 3 includes an evaluation of higher density growth.</p>

Comment No.	Commenter	Comment	Response
		<p>We believe the Environmental Impact Statement (EIS) will show that this alternative will accommodate projected population growth and result in the least adverse impacts on the built and natural environment.</p>	
2	<p>Will Simpson, WA State Dept. of Commerce</p>	<p>The City of Pasco is growing at a relatively high rate compared to other municipalities in Washington. The alternatives the City considers as it updates its Comprehensive Plan will have significant environmental and fiscal impacts for Pasco and the larger metropolitan area in the immediate future and beyond the twenty-year planning horizon. We support the City's decision to complete an EIS based on State growth forecasts for Franklin County and the City's allocated growth target from the County.</p> <p>The City's EIS will include detailed analysis about the impacts associated with new growth and potential UGA expansion areas to support that growth. Many of the environmental considerations addressed in an EIS will support Pasco's planning requirements under the GMA. The City may have other GMA requirements, such as those related to specific financing provisions, which may not be included in the EIS but that we recommend you consider as you review the alternatives and update your Comprehensive Plan and development regulations. We have structured our comments to address the EIS scope, and to offer general observations</p>	<p>Comments are noted and to be addressed in the EIS</p>

Comment No.	Commenter	Comment	Response
		<p>regarding the GMA periodic update and statutory requirements. Based on the descriptions in the seeping notice, we believe that the "Compact Growth Target" alternative best meets the goals of the GMA and will allow the City to maximize the investments made in public infrastructure and the provision of public services.</p>	
3	Robert Carosino	<p>The range of alternatives is clearly inadequate as there clearly are other reasonable alternatives which merit full and complete analysis in this DEIS. The City of Pasco is already on notice from the State Dept. of Transportation and other commenters, the expansion within the current city limits that is already foreseeable will lead to traffic in excess of interchange capacities at Roads 68 and Road 100 interchanges. Unfortunately, there is simply no way to adequately mitigate the horrendous traffic jams and unsafe traffic conditions which would be created by the proposed expansion of the Urban Growth Boundary in the area North of the existing City Limits in West Pasco as currently proposed by the Pasco alternatives. The Freeway I-182 access points simply cannot handle the proposed 55,000 additional residents which would be added to that area by development of this area under the City's proposed Comprehensive Plan updates and UGM boundary expansions in the area to the North of the West Pasco city limits. Nor would the main city and county feeder routes to these over-congested interchanges be able to be adequately expanded to handle the additional traffic. This factor alone</p>	<p>Industrial lands are designated on the eastern side of the City and also in the County, and future industrial growth is also projected to occur in this area.</p> <p>Existing vacant and underutilized lands within the City limits will be considered in Alternative 3. The City believes the three alternatives to be evaluated provide a range of appropriate future growth choices for consideration.</p>

Comment No.	Commenter	Comment	Response
		<p>mandates that an adequate EIS will need to consider other alternatives that do not provide for expansion of the UGA in the area to the North of the West Pasco city limits.</p> <p>Three additional alternative actions (a, b and c below), that would provide appropriate and reasonable alternatives, are the following, and must be fully analyzed in any DEIS meeting the requirements of SEPA:</p> <p>a) Analyze in full detail an alternative providing for expansion of the city in a different area from west Pasco. This alternative would provide for expansion of the UGA and the city, to allow residential development in the area to the EAST of the current city limits. This area is less valuable farmland, it has potential to for access to main highways (Highway 395 to the West, and highway 14 running east to west, that are more amenable to access by thousands of more people, and therefore would not create as excessive an adverse traffic impact on the interchanges in West Pasco. It would also avoid the unreasonable intermixing of high- density growth with low density growth which the city's proposed expansion of the UGA in the area north of west Pasco would create.</p>	

Comment No.	Commenter	Comment	Response
		<p>The area to the East of the city of Pasco has substantial undeveloped land that could be easily used for residential development if the city provided utilities, (just as the city would need to provide utilities to the area North of west Pasco under its proposed alternatives). The East Pasco alternative would have much better access to transportation corridors and the transportation corridors in that area can be more easily the residential expanded if required, as the land around the major roads are primarily farmland and level ground. Expansion of development in that area east of Pasco would also provide housing that is more closely located to the employment hubs of the city of Pasco, thus reducing that transportation impacts that would be created by any additional residential population in the west Pasco area of the city, thereby also mitigating impacts on transportation corridors.</p> <p>b) The second full new alternative that should be considered in the DEIS is a change in the city comprehensive plan to allow re-development of the lands within the existing city limits of Pasco to allow for high density residential development within the existing city limits. Many areas within the central core of the city of Pasco are in need of redevelopment due to age and condition, and a greater population could be easily accommodated by redevelopment with increased density in the existing city limits of Pasco, particularly in the area of the city to the south of Road 68 and West of I-182 , to the Columbia River on the south, comprising the old central core of</p>	

Comment No.	Commenter	Comment	Response
		<p>Pasco. By channeling development within that area, it would allow better access to major transportation corridors by the 3 interchanges on I-182 to the east of Rd 68, as well as access to other major transportation corridors connecting Pasco its industrial center, highways 395, and to cities to the south of Pasco. There are two bridges from this area of Pasco to Kennewick that are available, and these provide access to the highway 240 freeway running on the south side of the Columbia River through Kennewick. This alternative would lead to much lower over-congestion on the Road 68 and Rd 100 interchanges at I-182. It would also create the necessary density in a compact which would allow greater use of mass transportation alternatives.</p> <p>Recall that the State Department of Transportation has already advised the city, that with the reasonably foreseeable development of current lands within the existing City limits in the west Pasco area, the two west Pasco I-182 interchanges will be burdened far beyond capacity. It is unconscionable to imposed upon the residents of west Pasco, and those of northwest Franklin County in the area north of the current city limits, a proposal to include in this area even more residents that would require access through these two already over-congested freeway access points. Due to the topography of west Pasco, and existing development of the areas around the existing interchanges, there is no reasonable way to mitigate the significant adverse transportation and quality of line impacts from</p>	

Comment No.	Commenter	Comment	Response
		<p>additional development in west Pasco. No reasonable person living in those areas or moving into those areas, would be in favor of allowing such additional excessive development in that area, except land owners and developers, who have no concern for the long-term future adverse traffic and socio-economic impacts that residents would have to endure. The catastrophic traffic jams and unsafe traveling conditions that the city's expansion proposals would create, are clearly unacceptable and significantly adverse. It is clearly inadequate for the city to only propose expansion in the west Pasco (and the county area to the north of west Pasco) and not consider expansion in other areas of Franklin county. To suggest, as city planners have done in previous public hearings, that other cities and areas such as Seattle and King County have worse traffic conditions, and traffic "really is not that bad by our numbers" is not an acceptable response, nor one which gives any solace to residents of west Pasco or the county lands to the north. It is not the desire of the residents of west Pasco or west Franklin County to have roadway traffic congestion become more and more like the horrible traffic faced in the Puget Sound area. But it appears to be acceptable to the city.</p> <p>Furthermore, it would be a catastrophe for the city of Pasco to effectively take over land planning in the area of west Franklin county covered by the city's proposed alternatives, as the residents would be effectively disenfranchised from having the ability to control their own destiny. Due to</p>	

Comment No.	Commenter	Comment	Response
		<p>a poorly written state law, the county residents would in effect have land use planned performed by the city, even though those residents remain residents of the county.</p> <p>c) The City's own proposed alternative growth target alternatives should be modified to stop the northern expansion of the UGA and limit the expansion of city limits under the city's current alternatives, to a northern city and UGA boundary line being established that is based upon the East to West leg of current Dent Road. This East to West line of Dent road would be used to create a northern boundary line that would run to the Columbia River on the west end, and Columbia River Road on the east end, using the same east to west line followed by Dent road. This smaller expansion of the UGA will minimize the area that can be developed for high density residential use. Providing city utilities to the county lands to the north of the proposed Dent road boundary line will only encourage excessive higher density development, creating unreasonable traffic impacts, and should not be allowed. High density development to the north of that boundary line would also create significant adverse impacts to the human environment and socio-economic impacts to current residents of the area of Franklin county north the current city limits, who have built suburban residences on large (acre size or more) lots, as part of a desire for suburban county living. The city plan would create a hop-scotch pattern of higher density development contiguous to and within areas of west Franklin</p>	

Comment No.	Commenter	Comment	Response
		<p>county that under County standards require large lots and would adversely impact current residents with all the detrimental environmental, socio-economic, and traffic impacts which that higher density development entails.</p> <p>This alternative should also provide for a reduction in planned density in the north one-half mile segment of the UGA expansion area running south from the north end boundary created by the Dent road UGA line, such that it would harmonize and blend into the acre+ lots sizes existing within the County lands to the north of that point.</p>	
4	Laurie Ness	<p>Thank you for considering my choice of Alternative 3. It supports less urban sprawl, less overall cost to the city and residents for services. Most importantly infill with smaller lots will conserve important farmland and preserve our important critical areas as required by the GMA.</p>	Comment noted and addressed.
5	Michael Brightman	<p>We think that alternative 3 (high density urban growth) makes the most sense for Pasco, the county and the State. Save prime agriculture land for future generations. Thanks for asking. I am an Architect and former planning commissioner</p>	Comment noted and addressed.
Agriculture			
6	Will Simpson,	The City should consider how land use and UGA-sizing decisions could	The preferred alternative proposes less acreage for UGA

Comment No.	Commenter	Comment	Response
	WA State Dept. of Commerce	affect any designated resource lands of long-term commercial significance, or lands currently farmed or irrigated. Agriculture is critical to the local, regional, and State economy. We encourage efforts to limit or minimize any impacts to productive agricultural lands, particularly those formally designated by Franklin County or where public investments in irrigation infrastructure exist.	expansion, which would protect more county/ Ag land, and promote compact development within the City limits and UGA.
7	Futurewise	The relationship to existing land use plans is an element of the environment. The area proposed to be included in the urban growth area includes designated agricultural lands of long-term commercial significance and rural lands. Converting these lands to urban development will be significant adverse impacts that should be analyzed in the EIS.	The preferred alternative avoids prime designated agricultural lands and is expected to have minimized impacts to these lands.
Critical Areas			
8	Will Simpson, WA State Dept. of Commerce	The City should consider how future growth and potential land use changes would affect critical areas. The City may choose to limit the inclusion of significant critical area ecosystems in potential UGA expansion areas because these sites are not able to support urban densities and provide important ecosystem functions in an undisturbed state. The Department of Ecology, Department of Fish and Wildlife, and the Department of Natural Resources each offer expert technical guidance on environmentally sensitive areas in your region.	The proposed expansion area has very limited critical area in existence.

Comment No.	Commenter	Comment	Response
9	Futurewise	<p>The Washington State Department of Fish and Wildlife lists priority species and habitats and provides technical assistance on the designation and protection of these habitats. Plants and animals, habitats for and numbers or diversity of species of plants, fish, or other wildlife, unique species, and fish or wildlife migration routes are all elements of the environment. The conversion of agricultural and rural land to urban development will adversely impact these habitats. The expansion of impervious surfaces will also harm aquatic habitats. These adverse impacts on these elements of the environment should be analyzed in the EIS.</p> <p>The designation and conservation of priority habitats and species are important to residents who hunt, fish, and view wildlife. Outdoor recreation is estimated to contribute \$81,959,000 to the Franklin County economy, generating 1,114 jobs and paying \$5,942,000 in state and local taxes. Protecting fish and wildlife habitats and rivers and streams will help maintain the economic benefits of outdoor recreation for Franklin County.</p>	<p>Comments are noted for the protection of priority species and habitats to be addressed in the EIS.</p>
10		<p>Native plants of the Columbia Basin have ecological, aesthetic, and historical value. The Benton-Franklin Conservation District Heritage Gardens of the Columbia Basin and Washington Native Plant Society educate the public on the value of native plants and help prevent the conversion and degradation of these local resources and wildlife habitat. "Unconverted areas are threatened by a negative feedback loop that</p>	<p>Will verify whether Natural Heritage Program identifies any plant listings for this area. If they exist, identify ways to protect resources/mitigate impacts.</p>

Comment No.	Commenter	Comment	Response
		<p>combines disturbance, invasion of noxious weeds and more frequent fires. When fragile soils are disturbed and cryptobiotic soil crusts are removed, annual invasive species such as cheatgrass become established.” The communities of native plants and wildlife that make up the iconic Columbia Basin shrub-steppe have been severely diminished. Today, less than 50% of Washington’s historic shrub-steppe remains, and much of it is degraded, fragmented, and/or isolated from other similar habitats. For these reasons, we support the protection of Fish and wildlife habitat conservation areas designated in the Department of Natural Resources Washington Natural Heritage Program for endangered, threatened, and sensitive plant species. Plants and habitats for and numbers or diversity of species of plants and unique species are all elements of the environment. The conversion of agricultural and rural land to urban development will adversely impact these habitats. These adverse impacts on these elements of the environment should be analyzed in the EIS.</p>	<p>Habitat preservation to be addressed in the EIS</p>
Growth			
11	<p>Will Simpson, WA State Dept. of Commerce</p>	<p>One of the first steps in the development of an EIS is describing the proposal. The proposal should be described in terms of an objective, or purpose and need. For an EIS such as this, we recommend describing purpose and need in terms of the amount of residential, commercial and industrial growth anticipated based on the adopted growth target. Differing alternatives should represent alternative strategies that accommodate the</p>	<p>Comment noted; this information will be accounted for.</p>

Comment No.	Commenter	Comment	Response
12		<p>same amount of growth.</p> <p>Franklin County has already coordinated with the municipalities in the County on the selection of an OFM population projection and allocations of population growth to cities, including Pasco. The process utilized OFM's medium series for Franklin County, which is the most likely population projection based on current demographics, and the allocations are supported in the County's record.⁵</p> <p>Our administrative rule recommends the County adopt a twenty-year countywide employment forecast for allocation between UGAs and the rural area. ⁶ The countywide forecast and resulting employment allocations to the Pasco UGA should establish the basis for projected commercial and industrial lands in the region? In regards to industrial needs, we recommend that the City and County consider industrial capacity in Benton County and Western Walla Walla County. The City of Kennewick recently completed an industrial lands analysis, which considered capacity in both Benton and Franklin County. This may represent a good starting point for evaluating industrial capacity in Pasco and the region. Ultimately, this approach ensures that UGAs are adequately sized, and that newly designated industrial land does not saturate the existing market and undercut public investments made in existing industrial areas.</p>	<p>This information will be considered along with existing industrial land use.</p> <p>A land capacity analysis to be performed.</p>

Comment No.	Commenter	Comment	Response
13		The GMA requires internal and external consistency for locally adopted plans and development regulations. The Comprehensive Plan must use the same growth figures and planning timelines in each element. Plans adopted reference, such as sewer or water system plans, that are necessary for meeting capital facilities element requirements must also be consistent.	Comment noted.
Transportation			
14	Will Simpson, WA State Dept. of Commerce	We encourage close coordination with staff at the South Central Region of WSDOT as you consider alternative growth scenarios and potential UGA amendments. Pasco's projected growth requires careful planning and potential improvements for both the local and State systems. The City must estimate traffic impacts to state-owned transportation facilities resulting from land use assumptions to assist WSDOT in monitoring performance, and plan improvements for State facilities. Adequate transportation systems are necessary for urban development. Impacts extend throughout the metropolitan area, so development patterns in one area can create traffic impacts several miles away. WAC 365-196-430 and RCW 36.70A.070(6) provide specific recommendations on meeting GMA requirements and developing a transportation element that is consistent with the land use element.	Comment noted and being followed up.
15		Proposed UGA changes may directly or indirectly affect operations or plans for the Tri-Cities Regional Airport. This airport is a critical component of the State and region's transportation infrastructure,	This information will be considered.

Comment No.	Commenter	Comment	Response
		<p>and significant for future economic growth in the region. According to WSDOT, the number of enplanements has increased by nearly 100,000 over the last five years. The growth projected for Pasco, and the larger metropolitan area, suggests increased demand is likely on this facility. Land and Shoreline use is an element of the environment evaluated in the SEPA analysis. This review should include land use compatibility with the tri-cities regional airport for any alternatives that would change the land use in the area surrounding the airport. We encourage the City and County to continue coordinating with the Washington State Department of Transportation Aviation Division. Proposed UGA changes may necessitate additional consultation required under RCW 36.70.547 prior to adopting plans or regulations that may affect property adjacent to public use airports.</p>	
16		<p>The projected growth will require significant investments in capital facilities and public services. Any UGA changes require developing a financially constrained capital facilities and transportation element showing how proposed areas will be provided with adequate public services. These amendments must address the required components of the capital facilities and transportation elements described in RCW 36.70A.070. The City should not merely rely on assurances of availability from other service providers if relying on plans adopted by reference or assurances from other service providers to meet</p>	<p>Capital Facilities and Transportation Elements, and an updated Capital Facilities Plan for the UGA will address this comment.</p>

Comment No.	Commenter	Comment	Response
		<p>capital facilities requirements.</p> <p>Our Capital Facilities and Transportation Guidebooks provides recommendations on developing a detailed capital facilities and transportation plans, along with a more general plan that extends to the full twenty-year planning horizon. Our guidebook on Urban Growth Areas also contains important information regarding the relationship between UGA sizing decisions and infrastructure investments.</p>	
17		<p>Transportation systems, vehicular traffic, the movement and circulation of people or goods, and traffic hazards are elements of the environment. Air traffic is also an element of the environment. The comprehensive plan and the urban growth area expansion has the potential to increase vehicle miles traveled and to increase traffic hazards. In addition, the urban growth area expansion will adversely impact the operations and expansion potential of the Tri-Cities Airport. The EIS should analyze the adverse impacts on the transportation system, including motor vehicles, air transportation, transit, walking, bicycling, and transportation safety. As required by RCW 36.70A.070(6)(iii), impacts on the state highway system should also be analyzed.</p>	

Comment No.	Commenter	Comment	Response
18	Paul Gonseth, WSDOT	<p data-bbox="409 511 1249 836">WSDOT previously commented to Franklin County regarding the City of Pasco proposal to expand approximately 4,800 acres to its UGA to accommodate future growth projections. It is our conclusion that buildout of the current vacant and re-developable lands within the existing Pasco urban growth area will cause the interchanges on interstate 182 (1-182) to fall below acceptable levels of service as the local connections to the state system are already suffering. The state highways are an integral part of the transportation network in the Pasco area.</p> <p data-bbox="409 933 1249 1406">The Determination of Significance and SEPA Notice identifies three alternatives and we conclude that all three alternatives will have negative impacts to the state transportation system which includes the Tri-Cities Airport. The Environmental Impact Statement will need to complete a land capacity and traffic analysis for both the current and future conditions for each alternative. The analysis needs to include the state transportation system as part of the study. Special attention should be focused on State Route (SR) 395 and 1-182. The EIS should show what the proposed land use changes are and where they are located. The current and future traffic analysis must not include any improvements to the state system without agreement from WSDOT.</p>	Comments noted and followed up.

Comment No.	Commenter	Comment	Response
UGA Expansion			
19	Will Simpson, WA State Dept. of Commerce	The City's EIS represents a non-project action and provides the basis for future project decisions. It should address the cumulative impacts of urban growth anticipated over the twenty-year planning horizon - 2018 to 2038.	Comment noted
20		The City is required to include areas and densities sufficient to permit projected urban growth. This includes residential growth associated with population projections, along with the broad range of needs that accompany the projected growth including (as appropriate) medical, governmental, institutional, commercial, service, retail, and other non-residential needs.3 RCW 36.70A.110(3) provides direction on how urban growth should be prioritized	Comment noted
21		<p>A land capacity analysis is critical step in determining whether Pasco is able to accommodate future urban growth and whether UGA amendments are necessary. One of the primary objectives of the periodic update is to ensure that sufficient capacity of land suitable for development is available over the twenty-year planning period to support necessary housing and employment growth, along with the other broad range of needs and uses that accompany urban growth.</p> <p>The City should reevaluate the preliminary land capacity analysis conducted</p>	County analysis had limitations, so City is conducting a separate analysis.

Comment No.	Commenter	Comment	Response
		<p>by Franklin County and determine how much capacity is available within the existing UGA. The final land capacity analysis should clearly identify assumptions about development, redevelopment, partially developed properties, lands needed for public purposes, and densities. After identifying projected needs for population and employment growth, the land capacity analysis will establish whether changes are needed to the UGA boundary. At this point other factors such as the cost of capital facilities or transportation infrastructure may require further consideration of different UGA configurations. It is critical that the growth projections and land capacity analysis establish the basis for any UGA amendments to ensure consistency with the GMA.</p>	
22		<p>Pasco and Franklin County are required to ensure that urban growth occurs within Pasco's designated UGA. Based on historical development patterns in the Pasco UGA, we have concerns that the City and County are not meeting their GMA requirements to ensure urban densities through zoning, adopted development regulations, and infrastructure investments. Urban density is a density for which cost-effective urban services can be provided. Higher densities generally lower the per capita cost to provide urban governmental services.</p> <p>Housing units inside the UGA allowed on half or one-acre lots, which may rely on septic systems or private wells, create a long-term financial</p>	<p>Alternatives evaluation will include densities evaluation. Alternative 3 increases densities. City sewer plans show sewer extensions and lift stations for lower density areas in west Pasco. Sewer has been a limitation in the past but plans are being made to address this issue.</p>

Comment No.	Commenter	Comment	Response
		<p>challenge in providing capital facilities and urban services. This is particularly problematic when assessing the complete life cycle of infrastructure costs, and ongoing operation and maintenance.</p> <p>We recognize that coordinating development review in the unincorporated UGA is challenging and may require collaboration not only with Franklin County, but potentially with other</p> <p>service providers as well. As part of the periodic update, we strongly encourage the City and County to establish an inter-local agreement or similar mechanism to ensure that future development occurs at urban densities, and that permitted development does not limit the ability to provide public services and infrastructure in a financially realistic manner.</p>	
23	Maria Sanchez	<p>As the city of Pasco faces a time of continued population growth, I strongly recommend that you maintain the current Urban Growth Area and optimize use of the existing infrastructure. Currently, Pasco is a sprawling city of mostly one-story buildings with acres of asphalt devoted to parking. It would be financially prudent for the city to concentrate on infill for new housing and businesses to increase density and make the city more walkable and to allow public transit to function more efficiently.</p>	<p>City has adopted a Complete Street Ordinance and has focused on centers for multi-modal transportation. BFT planning park and ride at Broadmoor.</p>

Comment No.	Commenter	Comment	Response
		<p>Even if the new developments on the outskirts of town were to be built at a higher density than the last iterations, residents would still find themselves forced to drive to reach the downtown area or commercial areas like that on road 68. This low-density density design produces less revenue for the city as property tax per acre, and increases future financial liability by committing the city to many more miles of roadway, sewer lines, electric lines, traffic congestion, etc.</p> <p>Pasco is in an excellent position right now to make sensible choices for the financial future of the city by planning for better walkability, transit options, and a vibrant downtown center filled with people and businesses rather than parking lots. A dense, walkable city is the type of place that educated young people, empty-nesters and corporate headquarters seek out. There is vast potential for improvement within the current urban boundaries. Build up, not out.</p>	
Water			
24	Will Simpson, WA State Dept. of Commerce	The City must ensure that they have sufficient water rights to support new growth or UGA expansions. The analysis should clarify how much inchoate water is available under the Quad City Water Right to support additional growth, and what growth,if any,is supported by irrigation water rights. Much of the residential water use in the semiarid west is for	City operates 14 irrigation circles to dispose of food processing wastewater. Wastewater returns also reduce water consumption.

Comment No.	Commenter	Comment	Response
		<p>lawn irrigation. This is especially true in the summer when water is most scarce. The City should consider the water demands for different development pattern alternatives. Large-lot development typically has much higher water demands because of seasonal irrigation than small lot, or multi-family development. It is important for the city to understand how the zoning decisions will impact the long-term water budget and the availability of water to support growth for the 20-year plan horizon and beyond. Water-efficient land uses, including higher density zoning for multifamily development, or limitations on irrigation-dependent landscaping (xeriscaping), relate to density decisions and the ultimate UGA configuration. The City and County may consider how promoting efficient water use development patterns will save resources to support more growth beyond the twenty-year planning horizon.</p>	<p>City also has code provision for xeriscape in commercial areas.</p>
25	Futurewise	<p>Water including surface water movement, quantity and quality, runoff and absorption, groundwater movement, quantity, and quality, and public water supplies are all elements of the environment. Water conservation and focusing growth into existing cities and towns can stretch water supplies and accommodate growth and it is important to reserve water for agriculture and value-added agricultural processing and manufacturing to maintain and enhance the county economy. The development authorized by the comprehensive plan and the urban growth area expansions can adversely affect water and increase water use and runoff. This is a probable adverse impact on the elements of the environment s and should be</p>	<p>Water resources information and analysis, including existing conservation plans, will be considered.</p>

Comment No.	Commenter	Comment	Response
		analyzed in the EIS.	
Miscellaneous			
26Y	Futurewise	Housing is an element is an element of the environment. Different alternatives may have different impacts on the affordable housing. For example, different alternatives may displace existing affordable housing which maybe a significant adverse impact that should be analyzed in the EIS.	Alternatives will include consideration of a variety of housing densities. ADU already allowed.
27		Residential growth in the City of Pasco has increased the exposure of residents on the Wildland Urban Interface to wildfires. Expanding the city onto agricultural and rural lands will increase this expose. Fire services are an element of the environment. The impacts of the alternatives and UGA expansion on community fire safety must be analyzed in the Draft EIS and mitigation measures identified such as: directing growth away from areas with a moderate to high wildfire threat level.4 Another potential mitigating measure would be to require new developments to meet Firewise Communities Program standards or the equivalent. The changing climate will also increase wildfires in the West including the	Irrigation exists surrounding the City, and this significantly reduces wildfire risk.

Comment No.	Commenter	Comment	Response
		<p>City of Pasco. A recent peer reviewed study showed that human caused global warming has made wildfire fuels drier and caused an increase in the area burnt by wildfires between 1984 and 2015.5 Global warming’s drying of wildfire fuels is projected to increasingly promote wildfire potential across the western US.6 The area of this increase in drying fuels includes the City of Pasco.</p>	
28		<p>Historic and cultural preservation are elements of the environment. The Washington State Department of Archaeology and Historic Preservation has developed an archaeological predictive model that can predict where archaeological resources, a type of cultural resource, are likely to be located and where the department recommends archaeological surveys should be completed before earth disturbing activities and other uses and activities that can damage archaeological sites are undertaken. The predictive model shows that Pasco and the urban growth expansion area has a “high risk” and “very high risk” of cultural resources in these areas. Land development can adverse impact these resources and the EIS should analyze the impacts of development authorized by the comprehensive plan and the UGA expansion on historic and cultural resources.</p>	<p>Cultural resources will be considered in the EIS evaluation.</p>
29		<p>Air quality is an element of the environment. Elevated ozone level averages in the Tri-Cities for 2015 through 2017 exceeded the federal regulatory limit which could trigger sanctions from the Environmental Protection Agency. As a result, a joint study was</p>	<p>The preferred alternative is geared towards a pedestrian friendly environment. City encourages walkability and bike usage. City has regulations for dust control during construction. Broadmoor Park and Ride will help too.</p>

Comment No.	Commenter	Comment	Response
		<p>conducted with the Department of Ecology, Washington State University, and Benton Air Authority, the Tri-Cities Ozone Precursor Study (T-COPS). The study found that elevated ozone levels are not caused by one source and that traffic emissions are a major source of air pollutants in the TriCities. Particulate matter from vehicle emissions, fires, and blowing dust contribute to unhealthy air quality that increase symptoms of asthma and heart disease. Weather, topography and wind directions contribute to high-levels of ozone in the Tri-Cities. Expanding the urban growth boundary will likely increase vehicle miles travelled and emissions. Development will increase dust. These are all probable adverse impacts on elements of the environment and should be analyzed in the EIS.</p> <p>Climate is also an element of the environment. Washington State enacted limits on greenhouse gas emissions and a statewide goal to reduce annual per capita vehicle miles traveled for light-duty vehicles. Comprehensive planning is one way to address both the reduction of greenhouse gases and vehicle miles traveled. Almost half of all greenhouse gas emissions in our state result from the transportation sector. Land use and transportation strategies that promote compact and mixed-use development and infill reduce the</p>	

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		<p>need to drive, reducing the amount of greenhouse gas emissions. Expanding the urban growth boundary will likely increase vehicle miles travelled and emissions. These are all probable adverse impacts on climate, an element of the environment, and should be analyzed in the EIS.</p> <p>Additionally, the U.S. Environmental Protection Agency (EPA) found that state and local governments can significantly reduce greenhouse gas emissions through land and materials management practices such as materials efficiency, industrial ecology, green design, land revitalization, sustainable consumption, smart growth, pollution prevention and designed for environment. Land use planning that encourages the use of transit, walking and cycling, and the creation of mixed-use urban centers can improve air quality by reducing automobile trips and congestion.</p>	