

APPENDIX A

Future Land Use Analysis Details

Appendix A provides a more detailed narrative on how the proposed CRC bridges impacts on navigation could potentially affect future land use along the river. This information is summarized in Section 7.4 of the Navigation Impacts report.

A. Appendix A: Future Use Analysis

A.1 Introduction and Methodology

A.1.1 Project Area

The geographical extent analyzed upward of the river is from the proposed new Interstate 5 (I-5) bridges to the BNSF Railway rail bridge at Celilo Falls (see Exhibit 5.1-1 in the main navigation report). The geographical extent analyzed landward from the river is approximately one-half mile. Together, these geographical extents comprise the “project area.” Land uses farther inland may generate marine traffic; however, it is assumed that if cargo can fit on a truck or in a container, then there are other options for shipping, and if the cargo were shipped downriver, then most likely it could fit on a standard size barge.

A.1.2 Data Sources

The land use assessment used the following information:

- Geographical Information Systems (GIS) and Plan/Zoning Data: David Evans and Associates, Inc. (DEA) obtained and reviewed existing GIS and assessor data where water-dependent uses could occur. DEA also reviewed local comprehensive plan and zoning code information to identify potential development locations and the degree to which those areas might generate river traffic.
- Interviews: DEA interviewed city/county planning departments by telephone to confirm the key findings and identify potential concerns related to river traffic.
- River user information: DEA reviewed the DRAFT CRC Columbia River User Data Report (April 2012).

A.1.3 Land Use Assumptions

Zoning regulations state what types of land uses can be located in each zoning area. Some uses are allowed “by right,” which means they can be allowed through a simple application process. Other uses are often referred to as “conditional” or “limited uses” and are subject to extra requirements and additional review. Base zone requirements, which development may have to meet regardless of whether it is permitted outright, typically include dimensional regulations, including height and setbacks. Zoning overlays are additional designations that may further restrict the uses or development, such as addressing standards and potential mitigation requirements related to floodplain, riparian, wetlands, and wildlife habitat. The land use permitting process ensures that development is compatible with the designated uses and standards of the zone.

In the project area, zoning is typically industrial, residential, commercial, and open space/parks/recreation. Each jurisdiction allows different particular uses in the zone, as shown in

Table A-1. For analysis purposes, the following assumptions are made regarding the various uses and their potential to generate marine-dependent uses:

- **Industrial:** Typically allows for varying levels of manufacturing and production. Marine-dependent uses can include ship building, metal fabricating, timber processing, and boat building. These sites may also have the capability of generating large objects such as oil rigs.
- **Commercial:** These uses include restaurants, stores, and offices. Commercial uses may include commercial marinas; however, most commercial uses are unlikely to generate marine traffic. The marine traffic that would be generated by commercial uses is likely individually owned recreational boats, which could include sailboats or touring boats.
- **Residential:** Residences with various tax lot sizes and accessory structures such as docks. The marine traffic that would be generated by residential uses is likely privately owned recreational boats. This could include sailboats.
- **Open Space/Parks/Recreation:** Areas designated as Open Space/Parks/Recreation are typically used for habitat conservation and/or passive and active recreation. Public docks and marinas may be included with these uses for recreation purposes. Sailboats may use the docks and marinas.
- **Zoning Overlays:** It is assumed that, depending on the local jurisdiction, floodplain and riparian as well as other natural resource overlay standards may apply to all sites along the river.

A.1.4 Other Assumptions

There may be land uses outside of the project area, specifically agricultural, that may generate marine traffic. However, it is assumed that because the goods would have to be transported by another freight method to the riverfront, they could be accommodated by barge or shipped on boats that would not have any vertical clearance issues. Additionally, businesses outside of the area may provide service to the area. An example is marine contractors. Marine contractors are likely to be needed upriver in the future for a variety of projects, including infrastructure projects such as the SR 35 Bridge. Planning for the SR 35 Bridge for a future new crossing of the Columbia River between Bingen and White Salmon in Washington and Hood River in Oregon has occurred, and a Draft Environmental Impact Statement (DEIS) was completed in 2004, and a Type and Location Study (TSL) was completed in 2011. The bridge is not anticipated to be constructed within the next 20 years.

A.1.5 Site Suitability

Although lots may be zoned for a use along the Columbia River, there may be additional site factors that may limit or leverage development potential. These include:

- Plotted tax lot size and dimensions can reduce development potential by limiting the necessary space to accommodate development and meet zoning setback requirements.
- Lots can be constrained by roads, freeways (such as I-84), railroad (UPRR or BNSF line), or other public infrastructure (such as power lines). In addition, easements,

particularly recreational trail easements, may create a buffer between a development and the riverfront.

- Regulated natural resources, such as wetlands or Endangered Species Act (ESA) habitat, can prohibit development or make development cost-prohibitive because of the fees and mitigation requirements for environmental permitting, and local, state, and federal permitting (see following sections).
- Sites with existing infrastructure, especially docks (such as in Troutdale, see Section A.2.8), are more conducive to uses and redevelopment that may generate varying degrees of marine traffic. Depending on the development, these sites also would likely not be subject to as stringent environmental permitting requirements.

A.1.6 State and Federal Environmental Permitting Requirements

Water-dependent uses need access to the water, which usually involves a structure into the river. Depending on the type of development, where exactly development would occur in proximity to the river, and whether there is work below Ordinary High Water (OHW) in the Columbia River, the following state and federal permits potentially could be required in addition to local jurisdiction permitting requirements:

A.1.6.1 Federal

- U.S. Army Corps of Engineers Section 404/10,
- Department of Environmental Quality (DEQ) Section 401,
- A Biological Opinion, and
- Coast Guard (Section 9) Permit (may be needed for navigation).

A.1.6.2 Oregon

- Oregon Department of State Lands removal/fill permit, and
- Oregon Department of Fish and Wildlife Fish Passage

A.1.6.3 Washington

- Washington Hydraulic Project Approval,
- Washington Shorelines Master Program use permit (see below for a summary of the Washington Shorelines Act), and
- Washington Critical Areas Ordinance.

A.1.6.4 Columbia Gorge Scenic Area

The Columbia River Gorge National Scenic Area (NSA) lies to the east of Portland, Oregon, and Vancouver, Washington. It stretches about 83 miles from the Sandy River on the west to the Deschutes River on the east in Oregon and from Gibbons Creek in Clark County to a line 4 miles east of Wishram in Washington. The Scenic Area covers portions of six counties: Clark, Skamania, and Klickitat Counties in Washington, and Multnomah, Hood River, and Wasco Counties in Oregon.

The Columbia River Gorge Commission, a regional commission representing local, state, and national interests, was established in 1987 to develop and implement policies and programs that protect and enhance the scenic, natural, cultural, and recreational resources of the Scenic Area, while encouraging growth within existing urban areas of the Scenic Area and allowing development outside urban areas consistent with resource protection.

To achieve the purposes of the Columbia River Gorge National Scenic Area Act, Congress called for preparation of a Management Plan that would treat the two-state, six-county area as a region. Congress established a two-tiered management approach for preparing the Management Plan. It divided responsibility between the U.S. Forest Service and the Columbia River Gorge Commission. The six Gorge counties were authorized to implement the Management Plan through their land use ordinances.

The Scenic Area is divided into three categories of land: Urban Areas, the Special Management Area (SMA), and the General Management Area (GMA). Congress designated 13 cities and towns as Urban Areas: North Bonneville, Stevenson, Carson, Home Valley, White Salmon, Bingen, Lyle, Dallesport, and Wishram on the Washington side of the river and Cascade Locks, Hood River, Mosier, and The Dalles on the Oregon side. The Urban Areas are exempt from the Management Plan, but are eligible to receive federal funds authorized to implement it. The Urban Areas will be the primary focus for future growth and economic development. In addition, the Management Plan states that new industrial development shall not be allowed in the Scenic Area outside of the Urban Areas.

There are five established ports within the Scenic Area: Skamania and Klickitat on the Washington side of the river and Cascade Locks, Hood River, and The Dalles on the Oregon side. All five of these ports are within the designated Urban Areas. Land use regulations regarding development and redevelopment of property in the Scenic Area are promulgated through the Columbia River Gorge Commission's Land Use Ordinance (Chapter 350, Division 81). This code defines industrial uses as well as water-dependent uses. Any future expansions or development projects that would use the established ports as a water-dependent use would need to be within a designated Urban Area.

The importance of recreation to the Gorge is reflected in a number of mandates and provisions of the Scenic Area Act. Included in the first purpose of the Act is a directive to protect and enhance the recreation resources of the Columbia River Gorge [Section 3(1)]. Additionally, Chapter 7 of the Management Plan states:

CHAPTER 7 General Policies and Guidelines

DOCKS AND BOATHOUSES

GMA/SMA Policies

- 1. Multiple uses of docks on the Columbia River and its tributaries shall be encouraged. Private, single-purpose docks shall be discouraged.*
- 2. New docks shall be consistent with applicable guidelines for protection of scenic, cultural, natural, and recreation resources.*

The NSA does not allow industrial development outside of the Urban Areas. It also confines development to the relatively small urban areas (e.g., Bingen and Lyle), thus limiting the amount of space for industrial uses and space for the additional services used to support industrial uses. In addition, less developed areas could lack the skilled labor necessary for an industrial use. The Scenic Area does promote recreation and water-dependent recreation. The Scenic Area protects the resources of the Columbia River Gorge, which has some ideal fresh water sailing conditions from spring through fall. Therefore, the Gorge attracts sailors, including many from outside of the area. Water levels are often highest during the sail season. The number of sailboats visiting the Gorge is likely to increase.

A.1.6.5 Washington's Shoreline Management Act (SMA)

Washington's Shoreline Management Act (SMA) was passed by the State Legislature in 1971 and adopted in 1972. The goal of the Act is "to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines." The SMA applies to the counties within the affected area as they have "shorelines of the state." Each jurisdiction prepares its own Shoreline Management Plan to be in compliance with the Act. "Preferred" uses with respect to the SMA include single-family residences, ports, shoreline recreational uses, water-dependent industrial and commercial developments, and other developments that provide public access opportunities. Per the SMA, to the maximum extent possible, the shorelines should be reserved for "water-oriented" uses, including "water-dependent", "water-related" and "water-enjoyment" uses. The SMA emphasizes accommodation of appropriate uses that require a shoreline location, protection of shoreline environmental resources, and protection of the public's right to access and use the shorelines (RCW 90.58.020).

The SMA supports the use of the Columbia River shoreline for water-dependent industrial uses. However, development must meet the SMA "no net loss of shoreline ecological function" basis and therefore could potentially become impact or cost-prohibitive due to mitigation requirements for certain development proposals (<http://nsgl.gso.uri.edu/riu/riuc04001/pdffiles/papers/20825.pdf>).

A.2 Review of Land Uses in Affected Counties

The following sections identify the potential land uses existing and potential future capability to generate marine traffic. This review includes an evaluation of policies in comprehensive plans and zoning designations to ascertain long term goals for river front tax lots. The jurisdictions evaluated include the six counties that are located between the I-5 bridges and the BNSF Bridge at Celilo Falls:

- Washington
 - Clark County (Vancouver, Camas, Washougal)
 - Skamania County (North Bonneville, Stevenson, Home Valley)
 - Klickitat County (Bingen, Dallesport)
- Oregon
 - Multnomah County (Portland, Fairview, Troutdale)

- Hood River County (Cascade Locks, Hood River), and
- Wasco County (The Dalles).

A summary of regulatory standards and any key issues/areas of concern are described for each jurisdiction. Detailed zoning and regulatory analysis is included in Section A.3.

A.2.1 Clark County, Washington (Vancouver)

This section describes the existing and expected future land uses along the riverfront in the City of Vancouver in Clark County.

A.2.1.1 Existing Uses

The shoreline in the City of Vancouver contains a wide mix of uses, including heavy industry, residential, and recreational uses.

Columbia Business Center

The Columbia Business Center (CBC) is the first industrial parcel, located approximately 1.2 miles upriver from the I-5 bridges. To the west of the CBC is a mixed use development, which includes residential housing, retail and restaurants. To the east of the CBC is a park with a boat ramp and Christianson Shipyard.

The CBC includes approximately 2.3 million square feet of space in 26 buildings and approximately 1.0 million square feet of open leasable space. It is reported to be 92 percent occupied¹ and offers space for heavy and light industrial uses.

Figure A-1. Columbia Business Center



Source: Columbia Business Center

The Center provides both barge and rail access. The BNSF mainline borders the north side of the property. Rail access within Center is provided by a private switching service expediting transfer

¹ Source: Presale Report GS Mortgage Securities Trust, Series 2012-GCJ7, DBRS, May 2012, pages 17-22

of goods on and off cars and reducing demurrage charges. The CBC has a barge slip accommodating river and ocean barges. The East slip, which was recently upgraded, is 130 feet long with water depth at minus 10 feet MLLW. The East Slip is used to receive and ship fabricated steel products, as well as construction materials and supplies. The West Slip is not active and there are no plans to improve it. There is a dock located just to the west of the West Slip, which is used by JT Marine.

The CBC area has the following water-dependent users.

Thompson Metal Fab (TMF), which is the largest tenant at the CBC, provides fabrication for a wide range of industrial uses including US Army Corp of Engineers, oil and gas, nuclear, tank and vessel, marine and hydro, renewable energy, bridge and structural, and other high-tech industries. The oil rigs and some other structures (fish weirs for the USACE) are height constrained. TMF has increased its presence at the CBD from approximately 200,000 square feet in 2006 to its current 717,762 square feet, which represents 30.8 percent of the net rentable area (NRA) in the CBC. The most recent expansion, in 2011, consisted of master leasing two large older buildings (buildings 40 and 41) and a large portion of the outside working area located between Building 40 and the Columbia River.²

Oregon Iron Works (OIW) also fabricates structures for the alternative energy industry in the Pacific Northwest (systems for tidal power and ocean-based wind energy systems), bridges and transportation equipment for state and local transportation projects and structures for the U.S. Army Corps of Engineers (fish weirs, lock gates and other products). OIW leases approximately 75,000 square feet from CBC (including building 33 and lay down area immediately to the east of the building). OIW owns property immediately in the CBC (a portion of the hatched area of Figure A-1), including Building 48 (approximately 50,000 square feet) and open working area south of the building. OIW also has an industrial facility in Clackamas Oregon. Some of the structures (fish weirs for the USACE and support bases for the energy systems) are height constrained.

Greenberry Industrial (GI) is a full service mechanical contractor, providing industrial fabrication and installation for various industries in the Pacific Northwest as well as oil rigs and modules for the oil industry. GI's facilities³ include six acres in Corvallis, approximately 140,000 square feet at the Columbia Business Center and a fabrication facility in Ferndale, Washington (approximately eight acres). The oil rigs fabricated by GI are height constrained.

JT Marine (JTM) operates a diverse array of services, including: tug and barge service, shipyard services (providing mobile repair services for the tug and barge industry), salvage services along the Columbia River, and marine contractor engaged in projects such as the Sellwood Bridge and stainless steel tanks for oil rigs bound for the North Slope. JTM leases a portion of the west end waterfront from the CBC. Some of the cranes owned by JT Marine are height constrained.

There are no known plans for redevelopment of the Columbia Business Center.

² *ibid*

³ Source: Greenberry Industrial website <http://www.greenberry.com/>

Christensen Shipyard

Christensen Shipyards Ltd, which is located east of the Columbia Business Center, is a major builder of composite fiberglass ocean going motor yachts, ranging from 100 feet to 165 feet in length. The Christensen Shipyard has approximately 180,000 square feet of manufacturing space and a seven-acre marina. There are 12 large manufacturing and assembly bays, one of which houses an expandable mold for hulls from 100 to 165 feet. One of the assemble bays features an 80 foot high ceiling. Christiansen’s largest megayachts have an estimated height of 60 feet and are not constrained by the height of the CBC. There are no planned modifications at the site.

Figure A-2. Christensen Shipyards



Steamboat Landing Marina⁴

Steamboat Landing Marina includes approximately 153 slips, ranging in length from 20 to 40 feet, and with some end-ties and side-ties for longer boats. The marina serves the general public and draws customers from across the County and beyond. However, a large number of the marina tenants are residents of the adjacent development.

There were plans to add an additional float but these have been placed on hold until the economy improves. The marina will focus on maintenance, including spot dredging along selected floats. Sailboats that moor at the marina are typically too small to be height constrained by the proposed CRC (discussed in greater detail in Section 7.4.2).

Figure A-3. Steamboat Landing Marina



Kiewit Construction Property⁵

Kiewit Construction owns approximately 13 acres on the Columbia River, located just east of the City of Vancouver boundary. Most of the site is leased by Columbia Vista Corporation for use as a sawmill under a long-term contract. The facility has a barge dock for outbound shipment of lumber products and has capability to access log rafts.

In addition, there is a crane at the site for loading rock and stone from the Fisher Quarry, located across SR14. The western area of the quarry is owned by Pacific Rock Products (a subsidiary of CEMEX) and the eastern portion is owned by Weston Investments (known as the Smith or WSDOT Quarry). Rock from this quarry is used for rip-rap along the shoreline of the Columbia River among other places. It is expected that rock shipment would continue for a period of around 7 to 10 years, depending upon the progress of the redevelopment project.

The City of Vancouver Riverview Gateway Subarea plan (February 2009) applies to the eastern section of Vancouver's riverfront. This plan does not plan future changes of uses along the river. There is one Industrial site within this plan area which is zoned industrial for the Columbia River Mill.

⁴ Source: Clark County Shoreline Management Plan, Appendix D, BST Associates, page 35.

⁵ Source: Clark County Shoreline Management Plan, Appendix D, BST Associates, page 38.

The waterfront site is zoned for heavy industry. It is expected that heavy industrial use will continue through the long-term future.

Figure A-4. Kiewit Construction Property



A.2.1.2 Overview of Land Use Regulations

The Vancouver Comprehensive Plan (2011-2030) does not include goals or policies specific to marine uses or land uses that would support further development of marine uses.

Much of the zoning along the Columbia east of the I-5 bridges is residential interspersed with parks and open space uses which host waterfront trails. Where there isn't a waterfront trail, some of the residences have private boat docks. The industrially zoned tax lots along the river appear, from aeriels, to be largely developed and provide support to marine uses. However, this does not preclude them from being further developed or redeveloped for additional marine uses. The industrial zoning classification can accommodate a wide-range of uses permitted outright. Additionally, the City Center zoning classification allows marinas, and the residential zoning classification also includes marinas as a conditional use.

A.2.1.3 Key Findings

There are three existing water-dependent industrial sites within the jurisdiction of the City of Vancouver, including Columbia Business Center, Christiansen Shipyard and the Kiewit property. It is likely that these areas will continue in industrial use. Only the uses at the Columbia Business Center are currently height constrained.

In addition, there is one marina (Steamboat Landing Marina) and several private docks associated with private residences. These marinas typically serve smaller powerboats and sailboats (up to 40 feet) and are not known to be height constrained. However, some recreational boats may experience height constraints depending on the option under consideration (this issue is discussed in greater detail in Section 7.4.2).

Based upon existing land use regulations, there are no vacant waterfront parcels that could be placed in industrial use.

A.2.2 Clark County, Washington (Camas)

The following section describes the existing and expected future land uses along the riverfront in the City of Camas in Clark County.

A.2.2.1 Existing Uses

The existing commercial/industrial waterfront uses in the City of Camas include a paper mill, a marine fabricator, a marina and a boat ramp.

Georgia Pacific Camas Mill⁶

Georgia-Pacific's (GP) Camas mill, which encompasses 660 acres (including Lady Island), produces business papers (bond, copy, and recycled), towel and tissue products for restaurant, commercial and institutional users, and bath tissue for residential use. This plant is one of the largest employers in Clark County, with approximately 500 employees.

The Camas mill has several dock facilities:

- Chip unloading dock, which is used to receive hogged fuel and wood chips that are transferred via conveyor to an open storage area. Chips are also received by truck and rail. This dock is listed as 360 feet long with water depth of 12 to 15 feet at MLLW.
- Log lift, previously used as a storage area for log rafts. This facility extends along both sides of Camas Slough and along the right bank of Columbia River to a point approximately 2 1/2 miles below log lift; rafts being secured to timber and steel piling. This facility is not currently being used. Listed with water depth of 7 to 10 feet at MLLW.
- A petroleum receiving dock with a pipeline that extends from wharf to storage tanks. This facility is not being used at the present time.
- The shipping dock has been used in the past to ship products by barge but is not being used at the present time. This dock is recorded as 366 feet long with a water depth of

⁶ Source: Clark County Shoreline Management Plan, Appendix D, BST Associates, page 40.

12 to 15 feet at MLLW. There is a 30,000 square foot warehouse located near this dock that is currently being used to store product prior to shipment.

It is likely that this facility will remain in heavy industrial use. However, the GP mill is height constrained by the bridges on US 14 that provide access to Lady Island at Camas. The upstream span is fixed with a vertical clearance⁷ 37 feet and the downstream span is fixed with a vertical clearance 69 feet. These clearances are less than the heights of the proposed CRC. Thus, while the existing use may not change, it will not be height constrained.

Figure A-5. Georgia Pacific Camas Mill



⁷ Source: NOAA chart 18531, Edition 23, June 2012

City of Camas Ramp

The City of Camas owns a boat ramp located just to the south of their sewage treatment plant, which has been leased to Mark Marine Service for approximately 25 years. Mark Marine, which is engaged in marine construction, moors several company-owned vessels and barges at the site. The lease was renewed in February 2011 for another five years.⁸ There are no plans to improve the site. The City may consider using this site for another purpose (public access) in the longer-term future; however, changing uses would depend on future planning and funding for the proposed project. As a result, this site should be considered as potentially in industrial use for the long-term.

Mark Marine has indicated that it would be height constrained under some of the options under consideration for the CRC (see Section 6.2 for additional details).

Figure A-6. City of Camas Slip



A.2.2.2 Overview of Land Use Regulations

Much of the zoning along the Columbia within the jurisdiction of the City of Camas is Heavy Industrial, but this is dominated by the Georgia Pacific Paper Mill. Other heavy industrial zoned lots appear to be undeveloped. The heavy industrial zoning classification includes boat building, boat repair and sales, metal fabrication and assembly as uses permitted outright. The City of Camas Comprehensive Plan (March 2004) provides several economic policies in support of ensuring that land adjacent to the Columbia River is used for water-related uses as provided below:

Economic Development Element:

- Goal EN-9: Limit new shoreline industrial and commercial development to that which is classified as water-dependent, water-related, or water-enjoyment uses and discourage and/or prohibit non-water-orientated use.
- Goal EN-43: Coordinate with Camas Parks and Recreation to optimize opportunities for water-orientated recreation.

⁸ Source: Personal conversation with Eric Levison, director of Public Works, City of Camas, September 24, 2012.

- Goals EN-52: Identify and reserve shoreline and water areas with unique attributes for specific long-term uses, including agricultural, commercial, industrial, residential, recreational, and open space uses.

However, according to the City of Camas Trails and Open Space Plan,⁹ much of the area zoned heavy industrial area is identified as part of a Proposed Open Space Network, which include a riverfront trail.

A.2.2.3 Key Findings

There are two existing water-dependent industrial sites within the jurisdiction of the City of Camas, including the Georgia Pacific Camas Mill and the City of Camas Ramp. It is likely that both sites will remain in industrial in the future.

Based on existing data and plans, it is anticipated that there will be no additional industrial uses developed in the City of Camas. The Heavy Industrial zone does allow for some marine generating uses to be permitted outright.

The GP Mill cannot be constrained by the proposed CRC options because it already has a height constraint imposed by the bridges that connect US 14 to Lady Island. Mark Marine Service reports that they are height constrained by some of the options considered for the CRC.

A.2.3 Clark County, Washington (Washougal)

This section describes the existing and expected future land uses along the riverfront in the City of Washougal in Clark County.

A.2.3.1 Existing Uses

The existing waterfront sites on the shoreline of the City of Washougal include the Port of Camas-Washougal Marina, the Hambleton Mill site, the Port of Camas-Washougal Sixth Street property and the Port of Camas-Washougal Industrial park (near the waterfront but not water-dependent). In addition, Legendary Yachts manufactures yachts on an upland facility in the City of Washougal.

Washougal Waterfront

The Washougal Waterfront consists of the Port of Camas-Washougal's Marina and Sixth Street property and the Hambleton Lumber site.

The Port of Camas-Washougal Marina has 356 moorage slips, ranging in length from 20 feet to 55 feet. Most of the moorage is covered and can only be used by powerboats, which do not have a height constraint. There are a few slips that are open and are used by sailboats, which can be height constrained. In addition to the leased slips, the marina has 1,200 linear feet of transient moorage. The Port also has a four-lane launch ramp with attendant floating docks.

The Hambleton Lumber Company site, which consists of approximately 25 acres, is located directly east of the Port's marina. The mill closed its operations in June 2010.

⁹ (http://www.ci.cameras.wa.us/images/DOCS/PARK_REC/REPORTS/2006trailsopenspace.pdf)

The Sixth Street property, which includes around 14-acres, is located just east of Hambleton Lumber.

Figure A-7. City of Washougal Waterfront



The Port of Camas-Washougal, in conjunction with a private developer (Killian Pacific) is seeking to redevelop the Washougal Waterfront. The site would remain zoned as highway commercial and would be developed into a mixed-use waterfront project, featuring residential and commercial uses (condos, offices, retail and restaurants, et al.) as shown in Figure A-7.¹⁰

The Clark County Economic Development Plan encourages new mixed-use developments along the Columbia River offering retail, residential, commercial, dining, entertainment, and office amenities. It specifically mentions efforts to “work with the City of Washougal, Port of Camas-Washougal, and private developer to develop the 25- acre Hambleton Lumber Property Waterfront Redevelopment Project”.¹¹

Figure A-8. Washougal Waterfront Land Use Concept Plan



¹⁰ Source: http://portcw.com/index.php/projects/waterfront_revitalization/

¹¹ Source: Clark County Economic Development Plan, prepared for the Columbia River Economic Development Council, by TIP Strategies, Inc, September 2011.

Legendary Yachts

Legendary Yachts builds both power and sail classic wooden yachts at an upland facility located just north of the Port of Camas-Washougal's Industrial Park. Boats are loaded on a hydraulic trailer for delivery to a launch site in Camas (using a crane at the Hambleton Lumber site, when they were in business) or Portland (Schooner Creek Boat Works, located just south of the I-5 bridges). Their largest sailboat to date was the Radiance, which had a length of 84 feet and a mast height above water of 86 feet. This vessel could pass under most of the options under consideration for the CRC. However, Legendary Yachts is capable of building taller sailboats, which may be height constrained.¹² These vessels are not typically moored in the impact area after construction so the impact focuses on the launch of the vessel, which can occur downstream.

Figure A-9. Port of Camas-Washougal Industrial Park and Steigerwald Commerce Center



Port of Camas-Washougal Steigerwald Commerce Center¹³

The Port of Camas-Washougal began development of the 310-acre Washougal Industrial Park in 1970. The Industrial Park has grown in use and currently averages a 90+ percent occupancy rate. In order to provide additional land for industrial development, the Port is planning an area of undeveloped property east of and adjacent to the Industrial Park. The Steigerwald Commerce Center includes approximately 122 net acres, including 78 acres within Washougal city limits, 44 acres outside of Washougal city limits (but within the Urban Growth Boundary) and 5 acres outside of the City's Urban Growth Boundary in unincorporated Clark County and within the Columbia River Gorge Scenic Area.

Different portions of the property are designated as heavy industrial, industrial, and parks/open space. A significant amount of the property is currently designated for heavy industrial development, including approximately 29 acres in the northeast portion of the site that were recently included in the urban growth boundary (UGB) and designated as industrial. Additionally there are about 15 acres found in the southeastern part of the site that are within the UGB and are designated as parks/open space.

¹² Personal conversation with Will Pollard, Vice President at Legendary Yachts, September 25, 2012.

¹³ Source: Port of Camas Washougal website:

http://portcw.com/index.php/projects/steigerwald_commerce_center_master_plan_2009-10/history_of_the_site/

A levee separates the Industrial Park from park and public access along the shores of the Columbia River. The levee allowed industrial development to proceed in the uplands but does not allow water-dependent industrial uses.

Figure A-10. Port of Camas-Washougal Industrial Park and Steigerwald Commerce Center



A.2.3.2 Overview of Land Use Regulations

The Washougal Comprehensive Plan Update (2003) does not include goals or policies specific to marine uses or land uses that would support further development of marine uses. It does have goals and policies related to increasing public access to water resources for recreational purposes (Parks and Open Space, Goal 4).

A large portion of Washougal's waterfront is zoned Parks/Open Space, starting from the eastern edge of the URA until 22nd Street. West of the Open Space is primarily residential and town center-core designations, with a small area of industrial sandwiched between them. Industrial uses abut the parks and open space use to the north.

Selected goals of the Port of Camas Washougal's to promote industrial development¹⁴ include:

Goal 2: Improve local economic opportunities by supporting the retention, expansion, and recruitment of preferred employers.

Goal 3: Promote sustainable community prosperity by ensuring an ample supply of land, infrastructure, and facilities to meet the needs of potential employers.

Strategy 3.1 Maintain an ample supply of land and incubator space to meet the needs of preferred employers.

Strategy 3.2 Acquire additional property (that meet certain criteria)

¹⁴ Source: Port of Camas Washougal Comprehensive Scheme of Harbor Improvements and Strategic Plan Adopted December 21, 2010; http://portcw.com/index.php/projects/comprehensive_plan_2010/

Strategy 3.3 Consider the sale of property when doing so would better advance Goal 2.

Selected goals of the Port of Camas-Washougal's also promote mixed use commercial development along the Washougal waterfront, including:

Goal 4: Lead a collaborative effort to develop a more vibrant, economically viable, and publicly accessible Columbia River waterfront.

Strategy 4.1 Work collaboratively with property owners, the public, and the Port's agency partners to develop a master plan for the future development and redevelopment of the Columbia River waterfront property for the area within the Port District. The master plan should provide sufficient flexibility to attract a range of employers.

Strategy 4.2 Prefer land uses and employers on the waterfront, that are water-dependent, -oriented, or - related.

Strategy 4.3 Manage marina operations, capital facilities, and lands in a manner that strives to generate sufficient revenues to offset marina operating expenses.

Strategy 4.4 Strongly support the provision of continuous public access along the Columbia River shoreline.

Strategy 4.5 Maintain Captain William Clark Park, the Parkersville Historic Park, Marina Park, and the boat launch facility as public recreation areas.

A.2.3.3 Key Findings

After the closure of the Hambleton Lumber mill in 2010, the waterfront industrial property in Washougal was rezoned to highway commercial zoning and is undergoing a process of waterfront revitalization, focusing on mixed-use development (residential and commercial).

The Port of Camas-Washougal's Marina will remain as an integral part of the Washougal Waterfront. Most of the moorage slips are covered and are not affected by height constraints from the proposed I-5 bridges. There may be use by sailboats at the Marina that are height constrained but most of the sailboat use is limited to boats up to 50 feet long, which would not be height constrained by the options under consideration. The Port also has a four-lane launch ramp with attendant floating docks. However, the use of the boat ramp is generally by powerboats, which are not height constrained by the proposed CRC.

Boats constructed at Legendary Yachts may be constrained by the CRC options under consideration. However, the firm is not located on the River and transports boats to a launch site, where the mast is stepped. This activity could occur downriver of the CRC.

Industrial development in Washougal is centered in the Port of Washougal's industrial properties at the eastern edge of the City. The heavy industrial zoning designation allows uses that are permitted outright, such as bulk petroleum product terminals, plants and storage facilities which could generate marine traffic. However, the levee and recreation areas/trails that parallel the river create a buffer which inhibits marine uses along the riverfront in Washougal.

A.2.4 Skamania County, Washington

This section describes the existing and expected future land uses along the riverfront in Skamania County.

A.2.4.1 Existing Uses

Commercial/industrial waterfront properties in Skamania County include two former mill sites and property owned by the Port of Skamania County.

Stevenson Co-Ply Property

The Stevenson Co-Ply mill, which is owned by Wilkins, Kaiser & Olsen Inc. (WKO), ceased operations in 1992. The site has approximately 26 acres of uplands and is located inside the UGA of the City of Stevenson, but outside the City limits. The site has been idle since it closed and there are no current plans to redevelop this site.

Figure A-11. Co-Ply Property



Stevenson Waterfront

The vision for development on the Stevenson Waterfront, which includes Stevenson Landing, the Tichenor Building and the Cascade Boat Launch, is based on fostering an active waterfront for recreation and visitors, healthy economy, natural/scenic beauty, and high quality of life.

Stevenson Landing, which is owned by the Port of Skamania County, is a cruise ship pier located on the Columbia River at river mile 150 of the Columbia River. Stevenson Landing was improved prior to the spring cruise season in 1997 in order to accommodate vessels of different sizes. The pier is 200 feet long, 15 feet wide and has a 55 foot by 6.5 foot adjustable steel gangway. There are three sets of dolphins centered on gangway at various locations to allow for a range of docking possibilities. Cruise lines calling at Stevenson Landing. The Port has had calls

by the *Queen of the West* (American Cruise Lines), *Lady Washington* and *Hawaiian Chieftain* in the past few years.

The Tichenor Building, which is located just upriver of Stevenson Landing, offers 30,000 square feet of flex industrial space. It was built in 1992 and has experienced success in transitioning from dependence from previous dependence on the forest products industry to a more diverse economy, serving a mix of light industrial and professional services. The Tichenor Building takes advantage of the views and amenities of proximity to the Columbia River but does not have direct water access for water-dependent businesses.

The Cascade Boat Launch is located in downtown Stevenson on the waterfront just east of the Tichenor Building. The boat launch is used by power boats and hand-powered craft.

Figure A-12. Stevenson Waterfront



Home Valley

High Cascade Veneer (a subsidiary of WKO) began operating out of the former Stevenson Co-Ply peeler plant in Home Valley in the 1990s. The mill is still active but has been used sporadically in recent years due to market conditions. The site includes approximately 94 acres of upland area.

Figure A-13. Home Valley



Broughton Landing

The Broughton Lumber Company, which is located just west of Underwood, ceased operations in 1986 and has remained idle since. However, in the past five years, a plan was developed to create a destination resort, called Broughton Landing. The property includes approximately 60 acres, and is inside the National Scenic Area of the gorge but outside any urban growth area. The plan calls for “a new resort comprised of approximately 250 new vacation homes, recreational amenities and retail areas serving resort guests, locals and visitors alike.”¹⁵

¹⁵ Source: <http://www.broughtonlanding.com/Overview/>

Figure A-14. Broughton Landing



A.2.4.2 Overview of Land Use Regulations

Skamania County, 2007 Comprehensive Plan Final (July 10, 2007) does not include goals or policies specific to marine uses or land uses that would support further development of marine uses.

North Bonneville's riverfront is largely reserved for recreational uses, or is under federal ownership because of the dam. Therefore, impacts to marine uses are not anticipated in this section of Skamania County.

However, in Stevenson, there are industrially designated lands identified along the southern portion of the riverfront (Stevenson Co-Ply). North of the industrial designations is a strip of commercial recreation, followed by commercially designated lots, one lot designated light industrial and then community commercial. Uses along the river include hotels, restaurants, and a kite-boarding school in the commercially zoned areas. The industrially zoned lots are used for timber related uses.

A.2.4.3 Key Findings

The industrial waterfront properties in Skamania County have been traditionally used by the forest products industry, including the mill sites at Stevenson, Home Valley and Underwood. As the forest product sector declined, properties have been held by forest product firms for potential future re-use as a mill site or have been planned for redevelopment to resort or mixed-use development. The proposed I-5 bridges do not impose a height constraint on shipping activities related to the forest products industry because log rafts or barges carrying logs, chips or other forest products can easily pass under the bridges for destinations downriver of the bridges.

The Port of Skamania developed a business park, cruise terminal and boat launch at Stevenson. The Port property at Stevenson Landing is on the waterfront and has a cruise ship dock but does not offer waterfront access for water-dependent firms requiring barge service. Within the City of Stevenson, the movement is towards more of a recreational waterfront with public access.

Potential impacts could occur from navigational height restrictions downstream affecting cruise vessels and sailboats. However, these effects can be mitigated for most of the options being

considered for the CRC. The *Queen of the West* and the *Lady Washington* (when mast is lowered) are not impacted by any of the alternatives considered for the CRC. The *Hawaiian Chieftain* has a height restriction if the CRC is constructed at 95 feet, if there is no reduction in river level or air gap requirements. If the gap is reduced or a higher option is selected, there are no impacts. See Section 7.4 for additional details.

There are no sailboats over 44 feet that are owned by residents of Skamania County or Klickitat County in Washington State or residents of Hood River County or Wasco County in Oregon State (see Section 7.4.2 for a discussion of mast height and boat length). As a result, there is no impact to the local sailboat community. There is potential for a visiting transient sailboat to be impacted, but there is no record of this happening in the past.

The Port of Skamania County's other land holdings do not have direct access to the Columbia River (e.g., Cascades Business Park, the Lewis and Clark Business Park and the Wind River Business Park).

A.2.5 Klickitat County, Washington

This section describes the existing and expected future land uses along the riverfront in Klickitat County.

A.2.5.1 Existing Uses

Klickitat County includes the small urban areas of Dallesport, Lyle and Bingen.

Bingen

The SDS Lumber Mill and the Port of Klickitat County's Bingen Point Business Park are located in Bingen.

SDS Lumber Mill

The SDS Lumber Company mill site, located on the riverfront in Bingen, consists of approximately 170 acres (including uplands and in-water parcels). The mill produces lumber and plywood.

In addition, the site is used by the tug and barge operations of SDS, which includes a mooring area, and approximately 30 acres of upland area for storage/staging of products. SDS can transload products from upland to barge, log yard and ramp for raft/bundle preparation.¹⁶ It also has a construction fleet network with cranes up to 150 ton capacity. The tugs and barges are not height constrained but the construction equipment may be constrained depending upon the length and angle of the boom (see Sections 7.2 and 7.4 for additional details).

¹⁶ Source: SDS Lumber Mill website <http://sdslumber.com/>

Figure A-15. SDS Lumber Mill



Bingen Point Business Park

The Port of Klickitat's Bingen Point Business Park, which is located just east of the SDS Lumber Mill, has 52 acres at Bingen Point available for light industrial and commercial uses. Bingen Point Business Park does not have direct access to the waterfront. Some of the key tenants at the business park are Insitu Group, Inc., which produces miniature unmanned aerial vehicles (UAV) for military and commercial applications and Innovative Composite Engineering (ICE), a specialized carbon composite tubing manufacturer.

Figure A-16. Port of Klickitat Bingen Point Industrial Park



Bingen Marina

The Port of Klickitat owns the Bingen Marina, which includes a two-ramp boat launch, restrooms, and a parking area for boat trailers. Future plans call for the development of additional facilities including transitory and long-term moorage, a fuel dock, pump-out facility, and other amenities.¹⁷

Figure A-17. Port of Klickitat Bingen Point Industrial Park



There are no sailboats over 44 feet that are owned by residents of Skamania County or Klickitat County in Washington State or residents of Hood River County or Wasco County in Oregon State (see Section 7.4.2 for a discussion of mast height and boat length). As a result, there is no impact to the local community. There could potentially be a visit by a transient sailboat that could be impacted, but there is no record of this happening.

Dallesport

The Port's Dallesport Industrial Park covers approximately 660 acres immediately east of US Highway 197 and north of the Columbia River. The facility is zoned for light and heavy industrial use. This site includes a barge terminal used for log exports immediately upstream of The Dalles Dam, which is operated by The Dallesport Log Yard. It was also used in the past by an excursion boat which would tie up while passengers visited the Mary Hill Museum. However, this excursion boat activity has not occurred in the recent past.¹⁸

¹⁷ Source: Port of Klickitat website <http://www.portofklickitat.com/recreation/marina.asp>

¹⁸ Source: PBPorts interview with Port of Klickitat.

Figure A-18. Port of Klickitat Dallesport Industrial Park



A.2.5.2 Overview of Land Use Regulations

The western portions of Bingen along Alpine Avenue are targeted for business, high technology, and light industry. The eastern portions along Parallel Avenue are targeted for moderate to heavy industry. Property north of Dow Road has been set aside for aggregate mining operations and future development. The Port's Bingen Point Business Park is located along the Columbia River just outside Bingen, Washington, and across from Hood River, Oregon.

Waterfront zoning outside of White Salmon city limits includes suburban residential to the west and industrial park to the east in Bingen. The industrial park area appears from aerials to be used for river-related timber related industry. Inside White Salmon, the western portion of the riverfront is designated as Open Space and the eastern section as RPD Riverfront Planned District. Not all of the industrial lots are being used for industrial use; some are being used for residential uses such as an RV park. Also, the railroad tracks constrain many of the industrially lots, making them shallow. Waterfront zoning in Lyle is almost entirely suburban residential. The riverfront property in Lyle appears to be largely undeveloped.

Zoning in Dallesport along the Columbia is almost entirely residential in the western portion with some areas of Open space and industrially zoned areas to the east.

A.2.5.3 Key Findings

Most of the occupied industrial lots along the riverfront are used by the timber industry, which generates non-height constrained cargoes (logs, wood chips, and aggregates, etc.). It is expected that the proposed CRC will not have any impacts to shipping related to the timber industry.

SDS Lumber also has construction equipment that may be height constrained (see Section 7.2 for additional details).

There are some undeveloped industrial lots along the river. Industrial Park zoning allows for boat building, assembly and fabrication of metal products and additional manufacturing uses as uses permitted outright. However, many of the industrially designated lots are limited by the railroad tracks that create shallow lots from the river, and potentially limiting the possibility of large industrial structures on the site.

There are also vacant developable industrial lands at Dallesport Industrial Park. However, the BNSF railroad right of way cuts through the property near the river, leaving a narrow band of land adjacent to the river that is currently used by a barge terminal. It is unlikely that future uses would be height constrained at this location.¹⁹

A.2.6 Multnomah County, Oregon (Portland)

This section describes the existing and expected future land uses along the riverfront in Multnomah County in the City of Portland, upriver from the I-5 bridges.

A.2.6.1 Existing Uses

The portion of Portland east of the CRC has several waterfront uses, including marinas and houseboat communities.

Hayden Island to Government Island

There are several marinas and floating home communities in the area from East Hayden Island to Government Island but there are no industrial uses on the riverfront east of the I-5 bridges up to the City of Fairview (see next section).

According to a recent report on recreational use of Hayden Island, “there are more than 3,600 slips for both motorized boats, sailboats and floating homes. Slip size ranges from 26 feet to 100 feet, and side tie areas are available that can accommodate vessels up to 200 feet. Services provided at the marinas include restaurants, boat fuel, recreational facilities, and live entertainment. Additionally, there are several membership yacht clubs and sailing clubs on Hayden Island that provide recreational facilities and access. Demand for boat slips is high. Approximately 100 percent of the available boat slips on Hayden Island are leased between April to October, while approximately 25 to 30 percent are leased the remainder of the year.”²⁰

¹⁹ Personal conversation with Mr. Marc Thornsby, Executive Director, Port of Klickitat, September 11, 2012.

²⁰ Source: Recreation Participation, Development Potential, and Current Value On and Around West Hayden Island, prepared by Entrix, Inc for the City of Portland, June, 2010 Pages 4-5.

Figure A-19. Marinas in Oregon on the Columbia River



Source: Oregon State Marine Board, *Boating Facilities Guide, 2009-11, Page 20*

As noted in Section 6.1, there were an average of 71 bridge openings per year for sailboats, which amounted to just 0.04 percent of all recreational boating days and only 0.36 percent of all sailboat activity days. Most of the sailboats requiring a bridge opening were from the Portland area. This underscores the fact that most sailboats either do not require a bridge opening or avoid bridge openings.

A.2.6.2 Overview of Land Use Regulations

Zoning along the Columbia River east of the I-5 bridges is primarily open space which accommodates a riverfront multi-use trail. There are additional small pockets of residential zoning and areas of commercial zoning close to the bridges and on Hayden Island. There are two areas designated industrial: one on the south side of Hayden Island and one just north of 33rd road and Marine Drive. The lots along Marine Drive are shallow in depth as they are in between Marine Drive and the River. There are numerous private marinas, especially closer to the I-5 bridges. In addition, there are marine-related uses such as watercraft rentals and sales. Manufacturing and warehouse and freight movement are permitted outright in the industrial zone.

A.2.6.3 Key Findings

There are many recreational marinas that are used by both powerboats and sailboats. Sailboats that are affected by the existing I-5 bridges generally had an air draft ranging from 50 to 90 feet, with an average of approximately 70 feet. Most of these sailboats would be able to transit the options being considered for the proposed CRC. In 2012, there were only 48 sailboats owned by residents of the great Portland Metro area that were 46 feet or longer, which could be height constrained at 95 feet. Powerboats have an air draft that ranged from 20 feet to 25 feet can use Oregon Slough and thus never require a bridge opening.

A.2.7 Multnomah County, Oregon (Fairview)

This section describes the existing and expected future land uses along the riverfront in Multnomah County in the City of Fairview.

A.2.7.1 Existing Uses

There are two barge terminal sites in Fairview.

Cal Portland Blue Lake Aggregate Yard

Cal Portland owns and operates the Blue Lake aggregates terminal in Fairview. Aggregate is barged to the terminal from downriver sites, unloaded and then trucked to construction sites in the Portland area. The facility is served by tugs and barges that are not height constrained under any of the alternatives being considered for CRC.

Figure A-20. Cal Portland Blue Lake Aggregate Yard



Georgia Pacific West – Sundial Chip Reload

Georgia Pacific West owns a chip reload terminal in Fairview. The facility receives and ships chips by barge.

Figure A-21. Georgia Pacific Chip Reload



A.2.7.2 Overview of Land Use Regulations

Metro owns a large portion of land on the north side of the City of Fairview, including Blue Lake Park, Chinook Landing Marine Park, and the Columbia River Open Space. Part of the 40-mile loop trail is planned to go along the Columbia River in this area. There is also an area designated general Industrial, and as noted above, there are two marine-development uses in Fairview.

The Fairview Comprehensive Plan (2004) encourages private landowners along the Columbia River to seek redevelopment options that would replace existing industrial operations with river-oriented recreational, residential and commercial development. The Plan also recommends working with Metro to expand or develop recreational and commercial services and facilities at Blue Lake Park.

A.2.7.3 Key Findings

None of the existing industrial uses in the City of Fairview would be height constrained by the CRC. Although Columbia River industrial uses are permitted outright in the Industrial zone, the City of Fairview Comprehensive Plan identifies trail planning and river recreational uses for this area.

A.2.8 Multnomah County, Oregon (Troutdale)

This section describes the existing and expected future land uses along the riverfront in Multnomah County in the City of Troutdale.

A.2.8.1 Existing Uses

There is one barge terminal site in Troutdale and one former shipyard.

Sundial Marine Tug & Barge Works²¹

Tidewater operated the Sundial Tug & Barge Works in Fairview from 1970 until early 2011, when it closed operations. The decision to close the facility was undertaken because the repair and construction business was cyclical, and Tidewater decided to focus on its core businesses of barge transportation and terminal operations.

While operating Sundial Marine, Tidewater repaired tugs and barges from its own fleet and for other Pacific Northwest vessel owners, including tugs, barges and fishing boats. Tidewater also constructed barges at the facility, including a contract to build double hulled petroleum barges for the U.S. Navy, among other projects.

Sundial Marine includes approximately 26 acres of land with 1,200 feet of pier space, a 248 foot floating drydock (2,100-ton capacity), and a 300-foot by 65-foot end-launch building ways.

There were no known instances of height restrictions at Sundial Marine. There are no current plans to redevelop the site.

²¹ Source: Workbook.com <http://www.workboat.com/newsdetail.aspx?id=9885>

Figure A-22. Sundial Marine Tug & Barge Works



Knife River Corporation Aggregates Terminal

Knife River Corporation operates an aggregates terminal in Troutdale. The facility consists of a ready-mix concrete plant with a dock and conveyor for sand and gravel delivery by barge and unloading plus related facilities.²²

Figure A-23. Knife River Aggregates Terminal



Troutdale Reynolds Industrial Park (TRIP)

²² Source: Oregon Department of Environmental Quality Permit Evaluation and Fact Sheet, 7/13/2011.
https://docs.google.com/viewer?a=v&q=cache:XdY3wSdfFQ4J:www.deq.state.or.us/nwr/permits/KnifeRiverSundia1-ER-WQ.pdf+Knife+River+Troutdale+Plant&hl=en&gl=us&pid=bl&srcid=ADGEEShieFt1aCxdhH9tGsvZ8uL9K32re6ccjXPq_41ZtlVx8hEUZqXyLBvotSgvSeWSbUh8iMkDBSV4p3N-du2xY7OfOI4UYt-C2aehHrce7pYPSCDAIvxC50E5NqzJI4T6F1tJPVig&sig=AHIEtbSa6GfHI09_O82NIjIEgyqr75RkGA

The Port of Portland is developing the Troutdale Reynolds Industrial Park, which is located on the former site of the Troutdale Aluminum Smelter. This project will be accomplished in phases:

- Phase 1 consists of 130 acres (FedEx Ground Regional Hub opened in 2010; around 53 acres remaining)
- Phase 2 consists of 180 acres (planned for the period 2011-2015)
- Phase 3: 35 acres (planning will commence around 2015).

This development will respond to the need for large parcels of industrial land in the region. However, the development is not water-dependent. The parcels fronting the Columbia River and Sandy River will be left in open space.²³

Figure A-24. Troutdale Reynolds Industrial Park



A.2.8.2 Overview of Land Use Regulations

Troutdale zoning along the river includes open space and general industrial uses. Some of the industrial lots are known to support uses that generate marine traffic. The general industrial designation allows for manufacturing, marinas, and marine industrial/marine service facilities to be permitted outright.

A.2.8.3 Key Findings

The industrially zoned sites generate marine traffic that primarily consists of tugs and barges, which are not height constrained. The Knife River terminal is not expected to change in the near future. Sundial Marine is idle and could be sold or redeveloped. In either case, it is not expected that it will generate height constrained marine traffic.

A.2.9 Hood River County, Oregon (Cascade Locks)

A.2.9.1 Existing Uses

The Port of Cascade Locks operates an Industrial Park, marina and a cruise facility.

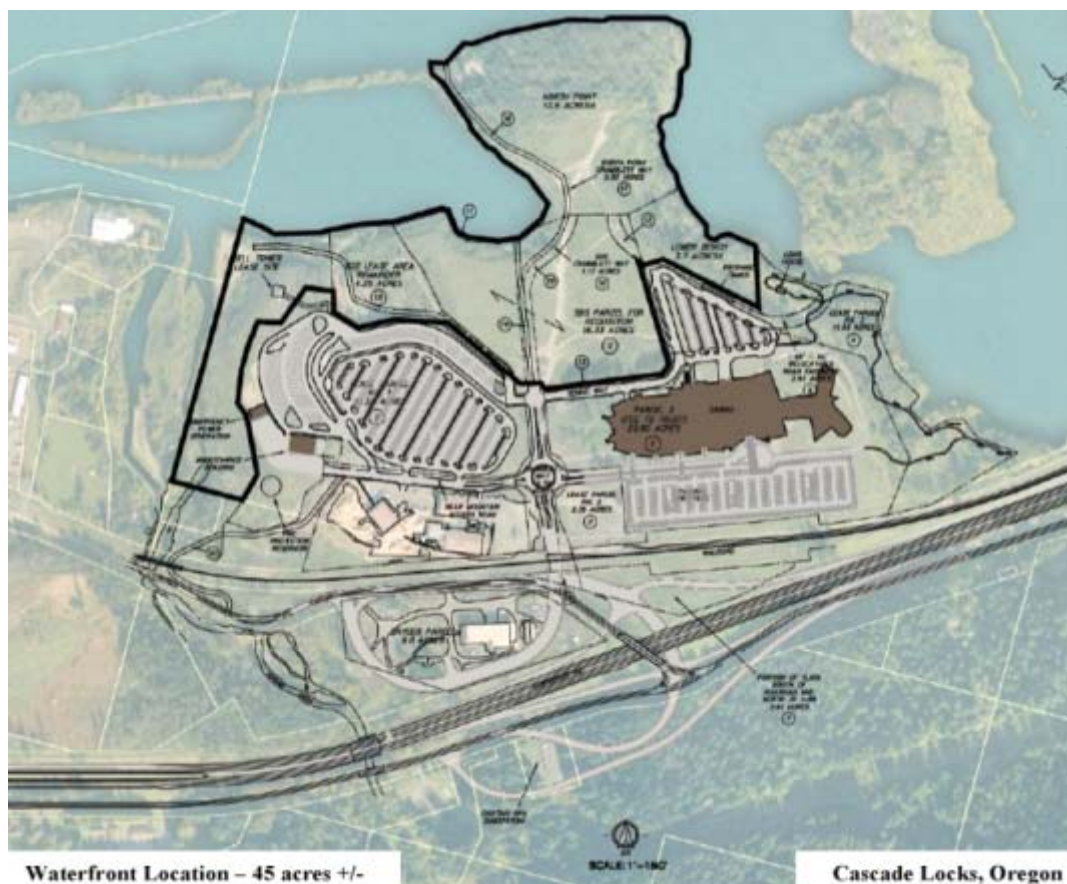
²³ Personal conversation with Joe Mollusky, Port of Portland Real Estate Project Manager September 21, 2012.

Port of Cascade Locks Industrial Park

As shown in Figure A-25, the Port of Cascade Locks Industrial Park (North Point, Herman Creek Cove, and Lower Bench) comprises approximately 191 acres. There are currently vacant acres at North Point (17.6 acres), Herman Creek Cove (4.25 acres), and Lower Bench (3.7 acres).

The Port and the Confederated Tribes of the Warm Springs are currently evaluating development of a casino at this site, which would be located on approximately 45 acres of land available from the Port of Cascade Locks and SDS Lumber.

Figure A-25. Port of Cascade Locks Industrial Park



Port of Cascade Locks Marina

The Port of Cascade Locks Marina has 36 slips. Cascade Locks is a well-established sailboat racing destination and is home to the Columbia Gorge Racing Association. There is an effort to draw regional, national and international competitors. These events are geared to smaller racing sailboats with one crew member and are not height constrained by the CRC. The Port expressed interest²⁴ in future development of another marina at Government Cove, but this would also serve smaller non-height constrained vessels.

²⁴ Source: PBPorts interview with Port of Cascade Locks.

Figure A-26. Port of Cascade Locks Marina



Port of Cascade Locks Cascade Locks Marine Park

The Sternwheeler *Columbia Gorge*, which is owned by the Port of Cascade Locks and operated by the Portland Spirit, is docked in the Cascade Locks Marine Park from May to October. There is also a Visitor Center in the Cascade Locks Marine Park. The Port expressed²⁵ a need for more dock space for excursion and passenger vessels and for transient recreational vessels. The Sternwheeler *Columbia Gorge* is not height constrained by the CRC and the other proposed vessels (cruise ships and visiting transient boats) are not expected to be height constrained by the CRC.

Figure A-27. Port of Cascade Locks Marine Park



The Port completed a feasibility study in 2005 for a Beach Improvements and Sail Park. The final recommended sailing center improvement included improvements to the existing Marina downtown which currently hosts Columbia Gorge Racing Association events and an ultimate world class sail park at the Port's industrial property by Herman Cove. This site would include a marina that could accommodate larger boats but these boats would not be large enough (over 44 feet) to be height constrained by the CRC.

²⁵ Ibid.

A.2.9.2 Overview of Land Use Regulations

Zoning along Cascade Locks shoreline is largely Open Space to the west and heavy industrial, light industrial, public, resort commercial, and high on either side of Herman Creek. The eastern edge of the jurisdictional line is zoned resort commercial. The industrial designation allows manufacturing and production as a use that is permitted outright.

Within the urban area of Cascade Locks, there five parcels available for industrial development. There are two undeveloped heavy industrial lots west of Herman Creek. These lots are zoned heavy industrial. The Nestle Corporation has shown interest in developing these lots for a bottling facility. They stipulate that access to I-84 for trucks is part of why they are interested in the lots. They do not identify an interest in marine shipping. The Nestle plant identified the Heavy Industrial sites west of Herman Creek for a bottling facility. However, documents found on Nestlé's website document truck for distribution, and not marine services (<http://projectupdates.nestlewaterspnw.com/>).

There are three parcels identified by the Port of Cascade Locks for industrial development along the Columbia River . The three lots are zoned either Light Industrial, Heavy Industrial, High Density Residential, and Resort Commercial although information from the Port of Cascade Locks stipulates that there are sections of property available for rezoning. The three lots consist of North Point with 17.6 acres which is zoned HDR and RC, Herman Creek Cove with 4.25 available acres which is zoned HI and , Lower Bench with 3.7 available acres which is zoned LI. Additionally, Port documentation identifies SDS Lumber parcels between the North Point parcel and Herman Creek parcel that may be available for development. The Cascade Locks Resort and Casino is planned for adjacent lots to the south.

Based on the Port's website (<http://www.portofcascadelocks.org/>), there is availability to construct an industrial park in this area with water access. Figure A-25 shows the lots along the river that area available for industrial development. Existing uses south of these lots include Bear Mountain which has been producing premium quality forest products in Oregon since 1988, and SDS lumber. The Warm Springs Resort and Casino is also planned south and adjacent to the available industrial lots in this area.

A.2.9.3 Key Findings

There are undeveloped industrial lots along the river. However, these lots have been identified for potential development that would not generate marine traffic, including business parks and entertainment and recreational uses (including a potential casino).

The Cascade Locks community is positioning itself as a sailboat racing destination. In general, there is a desire to attract the international sailing community, but the sailboats using this area are typically smaller and are not height constrained.

The Port of Cascade Locks also homeports the *Columbia Gorge* Sternwheeler during the tourist season, but this vessel is not height constrained by the CRC options.

A.2.10 Hood River County, Oregon (Hood River)

A.2.10.1 Existing Uses

The Port of Hood River operates a Business Park, marina and a cruise facility.

Port of Hood River Business Park

The Port of Hood River owns most of the waterfront properties in Hood River. The goal of the Port's Waterfront Development Strategy emphasizes preservation of and support for local light industrial businesses. In addition to job retention and business development, other Waterfront Development Strategy goals include quality development in a collaborative process, and ensuring compatibility with existing and future recreational activities.

There is no direct access to the Riverfront for barge or other terminals.

Figure A-28. Port of Hood River Business Park



Port of Hood River Marina Park

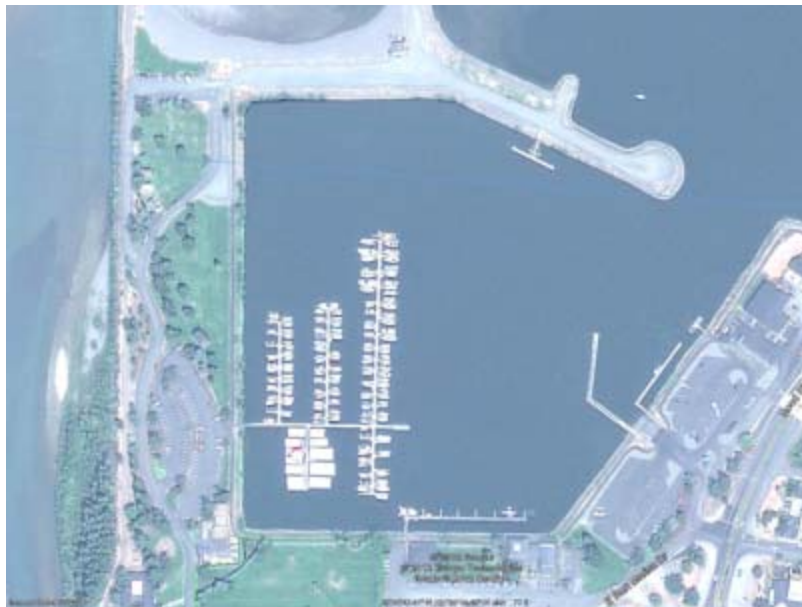
The Port's Marina offers moorage for over 150 vessels, with slip sizes ranging from 20 feet to 40 feet. The Marina has a short-term transient dock available for travelers. The boats homeported or calling on a transient basis are typically less than 40 feet long, and as a result are not height constrained by the CRC.

Other uses of the Marina include kayaking, small sailing craft, community education sailing classes, and Hood River Yacht Club activities.

The dock on the north side is reserved for small cruiseship vessels that call Hood River in the spring and fall seasons, including: InnerSea Discoveries (*Safari Quest*), Lindblad Expeditions (*Sea Bird* and *Sea Lion*) and Portland Spirit (*Columbia Gorge Sternwheeler*), among others. None of these cruise vessels are height constrained by the CRC. However, the Port facilities are located upstream and downstream of the mouth of Hood River, which discharges significant volumes of sediment. The sediment is accumulating in proximity to Port facilities including an excursion vessel dock that is not accessible due to this sedimentation. Thus, the cruise vessels

and U.S. Coast Guard buoy tender moor within the marina (located upstream of the accumulated sediment) where a suitable dock with sufficient depth is available.²⁶

Figure A-29. Port of Hood River Marina



A.2.10.2 Overview of Land Use Regulations

The Union Pacific railroad tracks run along the river creating a barrier between the river and uses on the other side of the river. Past the railroad tracks, inland are a variety of uses including general commercial, urban low density, open space and light industrial. There are several light industrial parcels that abut the river such as along Portway Avenue. The City of Hood River defines light industrial as: industrial service (e.g. corporate laundry and cleaning, etc.), research and development, manufacturing, processing, fabrication, packaging, assembly of goods, and warehousing.

The Port of Hood River's marina facilities are just west of the mouth of Hood River and can accommodate moorage for over 150 vessels. Other recreational uses of the marina include: kayaking, small sailing craft, community education sailing classes, and Hood River Yacht Club activities. The dock on the north side is reserved for small cruiseship vessels that visit Hood River in the spring and fall seasons. The marina has a short-term transient dock available for travelers. The waterfront business park is designated for commercial, recreational uses including a new hotel and retail development, and light industrial non-marine dependent uses. Kiteboarding and windsurfing rental and schools area also along the riverfront.

A.2.10.3 Key Findings

Uses of the Hood River waterfront that generate marine cargo are limited due to the railroad tracks which abut the river for a large portion of the extent along the river. In the Port of Hood

²⁶ Source: PBPorts interview with Port of Hood River.

River area, the emphasis is on recreational development and business park development rather than marine based industrial.

The cruise ships that call Hood River (*Safari Quest, Sea Bird, Sea Lion* and *Columbia Gorge Sternwheeler*) are not height constrained by the CRC.

The sailboats homeported in Hood River or calling on a transient basis at Hood River are typically less than 40-feet long, and as a result are not height constrained by the CRC.

There are no known existing or future activities that would be height constrained in Hood River.

A.2.11 Wasco County, Oregon

Wasco County waterfront facilities are located at The Port of The Dalles.

A.2.11.1 Existing Uses

Waterfront uses include two barge terminals and a marina.

Port of The Dalles Barge Terminals²⁷

Bernert Barge Lines provides barge towing for the transport of commodities and containers on the Columbia, Snake, and Willamette rivers. Bernert maintains a maintenance and fabrication facility in The Dalles that has a dock, crane, and shop with capabilities for marine repairs and general metalworking.

Mid Columbia Producers is a farmer-owned cooperative serving the grain producers of the Mid-Columbia region. Their offices and grain elevators on the riverfront load barges with wheat, primarily for export.

The Port sold all of its developable land, with the exception of one 85 acre tract adjacent to the Columbia River with barge access. The Port would like to see water-dependent development on this parcel but there are basalt outcroppings which will make certain types of development challenging.²⁸

²⁷ Source: Port of The Dalles http://www.portofthedalles.com/cm_directory.cfm

²⁸ Source: PBPorts interview with Port of Hood River.

Figure A-30. Port of The Dalles Barge Terminals



Port of The Dalles Marina²⁹

The Port's Marina has space for 62 boathouses and approximately 30 open moorage slips. A boat launch is located adjacent to the Marina to allow for easy haul outs with trailers. The Marina provides a variety of services (fuel, power, public restrooms, picnic facilities, boat holding tank pumpout and potty dump station). The Dalles Yacht Club is located at the marina.

Figure A-31. Port of The Dalles Marina



²⁹ Source: Port of The Dalles http://www.portofthedalles.com/m_facilities.cfm

The Dalles Cruise Dock

A new cruise dock was opened in The Dalles in September 2012. The floating dock will serve transient recreational boats, and the fixed pier will welcome cruise ships, similar to the vessels calling at Hood River.³⁰

Figure A-32. The Dalles Cruise Dock³¹



Northwest Aluminum

The Northwest Aluminum smelter ceased operations in 2000 and cleanup operations were largely completed by 2007. The site, which is approximately 120 acres, is now being planned for commercial and industrial development. According to the City of The Dalles Comprehensive Plan, this site “will be able to meet The Dalles’ need for large employment sites over the next 20 years.”³² This site is not located on the river.

³⁰ Source: <http://gorgenews.com/news/?p=17211>

³¹ Source: The Dalles City Budget Book FY2012/13, page 82

³² Source: The Dalles Comprehensive Land Use Plan, prepared by Winterbrook Planning, May 2011, Page 29

Figure A-33. Northwest Aluminum



A.2.11.2 Overview of Land Use Regulations

The western shoreline of The Dalles has a significant amount of industrially zoned land along the riverfront. This designation includes shipyards, and commercial docking facilities as uses permitted outright. In addition, manufacturing, fabricating are uses permitted outright. There are also pockets of commercial recreation and general commercial along the river. Some of the industrial sites support marine traffic generating uses. The Dalles riverfront trail parallels the river for 10 miles. In some locations it abuts the river and in others it meanders around natural features or existing business.

A new commercial dock was constructed in The Dalles with a fixed pier with cargo crane. There has been interest from numerous of parties in using the facility³³. Additionally, there is new docking space for tour boats. Recent updates to The Dalles Comprehensive Land Use Plan, Volume I (May 23, 2011) specifies that riverfront property should be reserved for riverfront use (Goal 8) and that there should be provisions to accommodate future barge traffic (Goal 12).

A.2.11.3 Key Findings

In the western Dalles along the river, there are numerous industrial lots along the river, some of which support industrial marine-dependent uses. There is potential the lots could be redeveloped for marine-related. Closer to downtown, the tourism and recreation industry is anticipated to generate increased marine traffic.

A recent planning study³⁴ finds that there is a shortage of commercial lands in The Dalles: “In order to capitalize on long-range economic and employment shifts, The Dalles will need to add to its existing supply of land for commercial uses within the UGB. Similar conversions of Port

³³ Personal conversation with Dan Durrow, Director of the Community Development Director, September 5, 2012.

³⁴ Source: Source: The Dalles Comprehensive Land Use Plan, prepared by Winterbrook Planning, May 2011, Page 29

industrial lands along the riverfront can produce a mixed use area to accommodate a slightly different market, including freeway commercial and recreational users.”

None of the planned development options in The Dalles will be constrained by the proposed CRC height.

A.3 Land Use Futures Analysis Acreage Summaries Methodology

A.3.1 Overview

Tax Lots from each county within 300 feet of the river were selected. Zoning information was then associated with each tax lot. Acreage summaries were then created by zoning, jurisdiction, and county.

A.3.2 Zoning Designation Review

The following table identifies: the zoning along the Columbia River by jurisdiction within the project extent, the permitted and conditional uses in the zones that may generate marine-dependent uses or marine traffic, the observed aerial uses with particular attention to uses that are river-related and the approximate waterfront acreage for each zone. The methodology and resources used for the acreage analysis follows these tables.

Table A-1. Zoning Characteristics

Classification	Permitted Uses ^a	Conditional or Limited Uses ^b	Aerial Observed Uses in Zone Along Shoreline ^c
CLARK COUNTY			
Vancouver			
Heavy Industrial (IH)	Community Recreation Industrial services Manufacturing and production Railroad yard	Warehouse/freight movement Waste-related Wholesale sales	Mill Steel Fabrication
Light Industrial (IL)	Community Recreation Industrial services Manufacturing and production	Warehouse/freight movement Water-related Wholesale sales	Metal fabrications Truck Repair
Waterfront Mixed Use District (WX)	Commercial, retail, office, institutional, some warehouse uses, residential, parks, public uses, pedestrian access along the Columbia River and including compatible industrial uses as well as regional scale facilities. One of this District's goal is to: Encourage water dependent, water related and water oriented uses within the waterfront area. Marina are permitted outright	none	Medium density residential, recreational trails, offices
City Center (CX)	Bulk Sales Outdoor Sales	none	

Classification	Permitted Uses ^a	Conditional or Limited Uses ^b	Aerial Observed Uses in Zone Along Shoreline ^c
Residential (R-4)	Marina		
	None	Marina	Residences some with private docks. Public marinas.
Park/Natural Area/Greenway	None	n/a	Parks and Recreation trail.
Camas			
Heavy Industrial (IH)	Boat building	N/A	Paper Mill
	Boat repair and sales		
	Recycling center		
	Recycling collection point		
	Recycling plant		
	Sand, soil, gravel sales and storage		
	Warehousing, wholesale and trade		
	Warehousing, bulk retail		
	Metal fabrication and assembly		
	Paper, pulp or related products		
	Manufacturing of miscellaneous goods (e.g. musical instruments, toys, vehicle parts)		
Residential	none	none	residences
Regional Commercial (RC)	Boat repair and sales	Boat building	Residences and sewer treatment plant(?), marine contractor
Heavy Industrial (IH)	Boat building	N/A	Paper Mill
	Boat repair and sales		
	Recycling center		
	Recycling collection point		
	Recycling plant		
	Sand, soil, gravel sales and storage		
	Warehousing, wholesale and trade		
	Warehousing, bulk retail		
	Metal fabrication and assembly		
	Paper, pulp or related products		
	Manufacturing of miscellaneous goods (e.g. musical instruments, toys, vehicle parts)		
Residential	none	none	residences
Regional Commercial (RC)	Boat repair and sales	Boat building	Residences and sewer treatment plant(?), marine contractor
Washougal			
Heavy Industrial (IH)	Bulk Petroleum Product Terminals, Plants and Storage Facilities	Hazardous Waste Receiving, Storage and Treatment Facilities	Custom Metal Fabrication
	Distribution Facilities		Industrial Plastics
	Galvanizing Plants and Similar Facilities		Manufacturing of Wood related products
	Heavy Equipment Sales, Service,		

Classification	Permitted Uses^a	Conditional or Limited Uses^b	Aerial Observed Uses in Zone Along Shoreline^c
	Rental, Storage and Repair Landfills Manufacturing, Processing or Assembling Finished Products from Raw or Crude Materials, Pulp Mills Solid Waste Transfer Stations (Including Household Waste) Wholesale Distribution Facilities		
Residential (RI-5)	none	none	residences
Highway Commercial (CH)	Transportation terminal Vehicle repair including boat	Commercial recreation facility, unenclosed	Hotel, undeveloped
Parks/Open Space	Public and semipublic uses; Recreational facilities of a noncommercial nature	none	park
Industrial (MG)	Industrial Uses Uses that are accessory to Industrial Uses	none	Timber-industry related sites
Industrial Business Park	Manufacturing or assembly of: food products; textile products; furniture and fixtures; hand-crafted stone, clay, glass products; signs, advertising display; small electrical equipment and appliances; fabricated products; light fabricated building components; toys, jewelry, musical instruments; chemical products	n/a	unknown
Industrial	Industrial Uses Uses that are accessory to Industrial Uses.	n/a	unknown
Community Commercial (CC)	Boats, trailers, sailboards, marine supplies and accessories Transportation terminals Warehousing	none	Hotels, residences
Commercial 1	none	none	unknown
Commercial Recreation (CR)	Outdoor recreational facilities such as piers and docks, boat launches, tennis courts, swimming pools, fee fishing ponds, and golf courses.	none	unknown
Residential 1	none	Recreation facilities Surface mining Semi-public facilities	residences
Rural Estate	Recreational facilities Surface mining	none	unknown
Public Use and Recreation	Parks and Open Space	none	parks
Klickitat County			
Wishram			
Industrial Park	Assembly and fabrication of metal	Fuel oil distributor.	Railyard. Little land area between train tracks and

Classification	Permitted Uses^a	Conditional or Limited Uses^b	Aerial Observed Uses in Zone Along Shoreline^c
	<p>products.</p> <p>Assembly of electrical appliances, electronic instruments and devices.</p> <p>Boat building.</p> <p>Cereal mills.</p> <p>Manufacture, compounding, processing, packaging or treatment of such products as bakery goods, candy, cosmetics, dairy products, drugs, food and beverage products.</p> <p>Manufacture, compounding, assembling or treatment of articles or merchandise from previously prepared materials, such as bone, cellophane, canvas, cloth and glass.</p>	Grain elevator.	river.
Dallesport			
Rural Residential 12	none	<p>Excavation, removal and processing of sand, gravel, stone, loam, dirt, or other earth or natural materials.</p> <p>Commercial or industrial activity directly serving agricultural, and forest related operations.</p>	Undeveloped narrow band between river and railroad tracks.
General Industrial	<p>Manufacturing, fabrication, recycling, storage, distribution, marketing, wholesale/retail sale, or repair of products and other items;</p> <p>Transportation-oriented facilities of all types;</p> <p>Public facilities and associated activities including, but not limited to utilities and cogeneration, public works, parks;</p> <p>Other uses determined by the Planning Director to be similar to the above uses.</p>	<p>Cement, lime, gypsum or plaster manufacture.</p> <p>Fertilizer manufacture.</p> <p>Pulp and paper manufacture.</p> <p>Petroleum refining, petroleum gasoline and other inflammable liquid.</p> <p>Steel manufacture.</p> <p>Storage.</p> <p>Any other uses judged by the Board of Adjustment to be consistent with the purposes and intent of this chapter and to be no more detrimental to the adjacent properties than, and of the same type and character as, the above listed uses.</p>	undeveloped
Open Space	None	none	Partially undeveloped
Tourist Commercial and General Commercial	Marina and boat launch facilities, including boat maintenance facilities.	<p>This section shall have no applicability within the Dallesport Subarea Master Plan District.</p> <p>Commercial recreation facility.</p>	Partially undeveloped
Lyle			
Suburban Residential	None	Excavation, removal, and processing of sand, gravel, stone, loam, dirt, or other earth or natural materials.	Undeveloped areas
General Rural	None	Commercial or industrial	Undeveloped areas

Classification	Permitted Uses ^a	Conditional or Limited Uses ^b	Aerial Observed Uses in Zone Along Shoreline ^c
		activity directly serving agricultural operations, including the preparation and storage of farm products.	
Bingen			
Industrial Park			SDS Lumber
White Salmon			
OS Open Space			
RPD Riverfront Planned District	Assembly, fabrication, manufacture, compounding, processing, packaging or treatment of products primarily related to the recreational, tourist and related activities of the White Salmon vicinity.	n/a	Campground, dock, greenhouse (?), warehouse
MULTNOMAH COUNTY			
Portland			
Industrial General (IG)/IG2	Commercial Outdoor Recreation Manufacturing and Production Warehouse and Freight Movement Wholesale Sales Industrial Service Railroad Yards Parks and Open Areas	Waste-related	Commercial marinas
General Employment 2 (EG2)	Commercial Outdoor Recreation Manufacturing and Production Warehouse and Freight Movement Wholesale Sales Industrial Service	n/a	unknown
Open Space (OS)	Parks and Open Spaces are the only uses allowed outright and some park and open space accessory uses require a Conditional Use review.	Commercial Outdoor Recreation; Manufacturing and Production. This regulation applies to all parts of Table 100-1 that have note [6]. Utility Scale Energy Production from Large Wind Turbines is a conditional use. All other Manufacturing And Production uses are prohibited. Parks And Open Areas uses are allowed by right. However, certain accessory uses and facilities which are part of a Parks And Open Areas use require a conditional use review. d. Boat ramps.	Pedestrian Trail, boat launch, commercial marina
Residential Farming (RF)		Manufacturing And Production. This regulation applies to all parts of Table110-1 that have note Utility Scale Energy	Houseboats, parking lot, marina with boats

Classification	Permitted Uses ^a	Conditional or Limited Uses ^b	Aerial Observed Uses in Zone Along Shoreline ^c
		<p>Production from large wind turbines is a conditional use in the RF zone. All other Manufacturing And production uses are prohibited.</p> <p>Parks And Open Areas uses are allowed by right. However, certain accessory uses and facilities which are part of a Parks And Open Areas use require a conditional use review.</p> <p>d. Boat ramps.</p>	
General Commercial (CG)	Commercial Outdoor Recreation Parks And Open Areas	Manufacturing and Production Warehouse and Freight Movement Wholesale Sales Industrial Service	Hotels, restaurants
Neighborhood Commercial 2 (CN2)	n/a	Manufacturing And Production	unknown
Mixed Commercial/Residential (CM)	n/a	Manufacturing And Production	unknown
Residential (R 1,2, 3, 7, 10)	n/a	<p>Parks And Open Areas uses are allowed by right. However, certain accessory uses and facilities which are part of a Parks And Open Areas use require a conditional use review.</p> <p>d. Boat ramps.</p>	Residences along river with docks
Fairview			
General Industrial	1. Industrial a. Heavy manufacturing, assembly, and processing of raw materials (CU) e. Columbia River industrial uses north of Marine Drive	None	Timber related industry with marine support structure.
R/MF	River-orientated commercial or possibly industrial	n/a	Gravel processing with marine support structure.
R/CSP	Parks and open space, river-orientated	n/a	Public dock
Troutdale			
General Industrial and Urban Planning Area (General Industrial)	Primary manufacturing. Marinas. Marine Industrial/Marine Service Facilities.	None	Wood chip processing with marine facilities. Boat building with marine facilities.
Open Space	none	Boat ramps.	Natural space.
HOOD RIVER COUNTY			
Cascade Locks			
Light Industrial	Manufacturing and production; Industrial services, light; Retail sales and service (conducted indoors or	none	Gravel processing, small marine structure.

Classification	Permitted Uses ^a	Conditional or Limited Uses ^b	Aerial Observed Uses in Zone Along Shoreline ^c
	outdoors), Vehicle sales/rental and repair		
Heavy Industrial	Manufacturing and production; Industrial services, light	Industrial services, heavy	SDS Lumber, small marine structure.
RC resort commercial	Includes marina, residential attached, higher density.	none	undeveloped
Light Density Residential	none	none	unknown
Rural Residential	none	none	unknown
Public/Open Space	Parks and open space	Marinas	undeveloped
Hood River			
Light Industrial (LI)	Transportation Facilities pursuant to 17.20.050 (A). B. Permitted Uses Subject to Site Plan Review. 1. Light Industrial Uses including the following when accessory and essential to the permitted light industrial use: office uses, wholesale sales, marketing, training and outside storage.	Industrial Office uses greater than 25,000 square feet of gross floor area, subject to design standards in 17.16.055. Public facilities and uses, including change of use. Light Industrial and Industrial Office Uses on parcels of more than 5 acres.	Marble and granite, undeveloped.
Columbia River Recreational/Commercial	13. Boat docks, excluding marinas	none	Event site, waterfront park
C-2 General Commercial	B. Permitted Uses Subject to Site Plan Review. 1. Commercial uses 2. Industrial uses incidental and essential to an on-site commercial use (Refer to the section below, "K")	9. Public facilities and uses	Marinas, restaurant, hotel
Urban low density	7. Transportation facilities pursuant to 17.20.050(A) 8. Public parks, playgrounds, and related facilities in an approved subdivision, subject to site plan review	none	residences
Open Space/Public Facility (OS/PF)	A. Permitted Uses Subject to Site Plan Review. 1. Public parks, playgrounds, temporary concessions incidental to and serving park/recreation user, swimming pools, and tennis courts. 2. Municipal and governmental services and functions.	n/a	Recreation path
WASCO COUNTY			
The Dalles			
Industrial District (I)	3. Feed, seed and fuel stores (excluding bulk storage of petroleum or gas, which shall be processed as a conditional use per <i>Subsection 5 090 030: Conditional Uses</i> below) located wholly within completely enclosed buildings.	A. Agriculture and Aquaculture, excluding livestock and poultry operations. B. Bulk fuel stores (petroleum, methane, propane, and gasoline).	Includes manufacturing some with marine structures (3 observed from aeriels)

Classification	Permitted Uses ^a	Conditional or Limited Uses ^b	Aerial Observed Uses in Zone Along Shoreline ^c
	<p>Packaged materials may be stored in an enclosed yard.</p> <p>4. Food production and manufacturing.</p> <p>6. Heavy Equipment Sales and Service, on site only.</p> <p>8. Manufacturing, fabricating, processing, repair, engineering, research and development, assembly, wholesale, transfer, distribution, and storage uses (except manufacture of explosives, the slaughter of animals, and the rendering of fats).</p> <p>11. Public and Private vehicle servicing and fueling stations.</p> <p>12. Public Parks and Open Space (excluding spectator and participant sports facilities, which shall be processed as Community Facilities Sites per the provisions <i>Subsection 5 090 030: Conditional Uses</i> below).</p> <p>13. Railroad yards and spurs, shipyards, and commercial docking facilities.</p> <p>14. Rock, sand, and gravel cleaning, crushing, processing, and assaying.</p> <p>17. Transportation Facilities.</p> <p>20. Warehouses.</p> <p>22. Other uses determined by the Director to be similar to the above Uses.</p>	<p>D. Collection, packaging, storage and reprocessing of recyclable materials, so long as the market area is more than 50% from the local area.</p> <p>F. Recreation Facilities (Commercial - Outdoor), including golf courses and shooting ranges.</p> <p>H. Other uses determined by the Director to be similar to the above uses.</p> <p>I. Community Facilities Sites</p>	
<p>Commercial Recreation (CR)</p>	<p>A. Primary Uses Permitted Outright. The following primary uses shall be processed per the provisions of Section 3.030: Site Plan Review:</p> <p>4. Light Industrial (campus setting or compatible with commercial and recreational uses).</p> <p>11. Recreational Vehicle Parks, in accordance with <i>Chapter 12 - Recreational Vehicle Parks</i></p> <p>13. Other uses determined by the Director to be similar to the above uses.</p>	<p>none</p>	<p>Recreational marinas</p>
<p>CG-General Commercial District</p>	<p>9. Light manufacture, assembly, or packaging (generates no nuisance conditions by commercial standards, conducted entirely within the building).</p> <p>18. Public Parks and Open Space (excluding spectator and participant sports facilities...)</p>	<p>E. Heavy Equipment Sales and service, on site only.</p> <p>J. Public and private transportation depots and terminals (passengers and freight).</p> <p>K. Warehousing-retail only, storage, and distribution of equipment, commodities and products in an enclosed area, including mini-storage</p>	<p>hotels</p>

Classification	Permitted Uses ^a	Conditional or Limited Uses ^b	Aerial Observed Uses in Zone Along Shoreline ^c
		facilities. M. Other uses determined by the Commission to be similar to the above uses.	
Parks and Open Spaces	n/a	E. Marinas. F. Docks for recreation.	Trails, waterfront park

a The permitted uses only include uses that are considered marine-dependent, related or could generate marine traffic
b The conditional/limited uses only include uses that are considered marine-dependent, related or could generate marine traffic
c This is a “best guess” of uses based on aerial map observations and additional web based research

Table A-2 summarizes the number of acres along waterfront parcels by county and by generalized zoning designation.

Table A-2. Acres by Zoning for Affected Counties

Zoning Type	Clark	Skamania	Klickitat	Multnomah	Hood River	Wasco
Industrial	749.3	401.5	346.5	1,613.5	108.0	142.8
Commercial	222.2	162.5	141.2	26.0	372.3	78.3
Forest/ag	834.0	1,589.8	668.5	4,816.2	517.8	-
Other commercial	47.3	28.3	-	411.2	-	32.1
Public/recreation	796.1	3,631.4	2,445.9	101.2	2,510.3	91.9
Residential	472.8	420.6	1,878.6	121.8	433.2	-
Total	3,121.7	6,234.0	5,480.7	7,090.1	3,941.6	345.1

A.3.2.1 Land Use Futures Analysis Acreage Summaries Methodology

Tax Lots from each county within 300 feet of the river were selected. Zoning information was then associated with each tax lot. Acreage summaries were then created by zoning, jurisdiction, and county.

Details

Data Prep: county and local jurisdiction zoning data was prepared by putting all zoning data from a county into one “County” zoning feature class. This allowed for the creating of only one tax lot file per county with associated zoning information.

Data Files Used:

- Tax lots for each county
- River
- Zoning for each county
- Output GIS Analysis
- Output Excel tables

Data Processing:

- ArcMAP
- Selection, select by location:
 - Target layer = taxlots layer
 - Source layer = Hydro
 - Method = are within a distance of the source layer feature
 - Distance = 300 feet
 - Review manually and add those features that need to be added