Lower Willamette River MANAGEMENT PLAN

FINAL 1992 MANAGEMENT PLAN FOR THE USE OF THE LOWER 17.5 MILES OF THE WILLAMETTE RIVER

OREGON STATE LAND BOARD DIVISION OF STATE LANDS
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PART A
EXECUTIVE SUMMARY
EXECUTIVE SUMMARY

The 1992 Lower Willamette River Management Plan (LWRMP) updates a similar plan adopted by the Oregon State Land Board and the Division of State Lands (DSL) in 1974. The Plan covers the lower 17.5 miles of the Willamette River from Kelley Point Park (at the confluence of the Willamette and Columbia Rivers) to just above the Sellwood Bridge, within the City of Portland, up to the level of bankfull stage on each riverbank.

The Plan was adopted by the State Land Board on September 14, 1992, as an administrative rule (OAR 141-80-105). It provides policy direction and guidance to DSL's regulatory and proprietary interests of the river. All new and existing developments must comply with the provisions of the LWRMP. The Plan's overall management goals for the lower Willamette River are:

- To preserve the existing diversity of uses (commercial, industrial, residential, recreational, and open space);
- To actively enhance the planning area's water quality, fish and wildlife habitat values, aesthetic appearance;
- To increase public access to the river as a gathering place for a wide range of recreational pursuits—active and passive, river-borne and shoreline; and
- To encourage new developments which contribute to the furtherance of multiple public trust values.

A working definition of the public trust is . . . a doctrine that requires the Division of State Lands to manage State-owned submerged and submersible lands for the benefit of the people so they can engage in such activities as commerce, navigation, fishing, and recreation.

In order to protect and enhance the public trust, the LWRMP focuses on . . .

a. protecting and conserving shallow water (less than 15' deep/Columbia River datum) for its high value for fish food production and aquatic habitat for warm water fish, yearling chinook salmon, and juvenile steelhead. Shallow water habitat is a term used to describe shoreline areas that are often more biologically productive than other areas. Depth is used as a general indicator for areas that receive more effective light penetration, have higher primary productivity (phytoplankton, emergent, submerged and riparian vegetation), have stable substrates; and have sites for periphyton, etc., that lead to greater value for aquatic life in the lower Willamette River. It is recognized that not all shallow water habitat areas are, in fact, biologically active or uniformly biologically important. Rather, these areas are typically more valuable than deeper areas. Shallow water habitat is arbitrarily defined as areas less than 15' Columbia River datum;

b. preserving and protecting water surface commonly used by recreational boaters (including fishermen), barges, tugs, and deep draft ships
to allow continued relative unencumbered use of the waterway now and in the future;

c. protecting the existing navigation channel from encroachment by development and allowing for its continued maintenance;

d. preserving and protecting designated water surface areas for existing and future river-dependent and river-related development;

e. providing for public access and riverbank rehabilitation when new activities are undertaken;

f. recognizing the harborline as a tool for protecting the river channel from development encroachment;

g. preserving and protecting designated water surface areas for their natural appearance and condition;

h. recognizing that improving water quality has beneficial effects on fisheries and recreation;

and

i. requiring equal replacement or gain of public trust values lost by filling to create new upland.

The Plan area was divided into four Waterway Management Areas—Development, Public Access, Conservancy, and Open Water. These designations were assigned based on such factors as upland development, water surface use, and natural resource values. Overall management guidelines were established for each Waterway Management Area that reflect their purpose and direct acceptable projects/activities. A matrix depicting 30 possible project/activity types (e.g., marinas, log rafts) and their appropriateness for each Management Area was developed. Some project/activities are allowed outright, others allowed under Provisional Standards, while some are not allowed at all.

Conditions that apply to all permitted projects/activities are listed as General Conditions. They include requirements for such things as riverbank clean-up, rehabilitation and re-vegetation, and public access. Provisional Standards outline special criteria that must be met before a project/activity is allowed (e.g., filling to create new upland and marinas, moorages and mooring buoys).

The LWRMP document is divided into ten parts, including this Executive Summary (Part A).

**Part B** is a general description of the Plan area, the Plan purpose, and history of the area.

**Part C** describes the planning process, particularly public and agency involvement.

**Part D** includes a segment by segment description of the existing physical condition of the area.

**Part E** describes the jurisdiction and regulations of the local, State, and Federal agencies.

**Part F** is the Implementation Plan. It includes the Plan Goals and Objectives, Waterway Management Area maps and matrix, General Conditions and Provisional Standards, as well as all other implementing measures of the LWRMP.

**Part G** describes a few of the Public Trust Values (e.g., recreation, fisheries, commercial navigation) within the LWRMP and evaluates how the Implementation Plan protects and enhances them.

**Part H** includes a description of plans done by other agencies that affect the LWRMP (e.g., Central City Plan). An evaluation of the LWRMP's compatibility with these other plans is included.

**Part I** is a listing of recommendations to address conditions or problems within the LWRMP that go beyond the interest or authority of DSL.
Appendix includes key elements of background information including a listing of plan participants and a bibliography.

NOTE: Inventory maps and additional support data can be obtained by contacting the Division of State Lands at 775 Summer Street NE, Salem, OR 97310; (503) 378-3805
PART B

INTRODUCTION
INTRODUCTION

The lower Willamette River (from Kelley Point Park to just above the Sellwood Bridge) has historically provided Oregon with abundant natural resources, and has also been a transportation highway for the movement of people and products to and from the Willamette Valley. Geographical destiny (i.e. the location of the confluence of the Columbia River) has conspired to make the lower Willamette River the state’s major port and population center.

Because the lower Willamette River flows through a major metropolitan area, it must serve a great variety of activities. While meeting the needs of shipping and other industrial activities, the health of the river system must also be maintained to support a major salmon run, sport fishing and other recreational activities. In addition, the river has rapidly become the City’s public focal point and a hub for numerous public attractions and activities.

The State Land Board, through its administrative arm the Division of State Lands (DSL), has two primary functions affecting the lower Willamette River area (Kelley Point Park to just above the Sellwood Bridge). First, the Division is responsible for management of various State-owned lands that contribute to the Common School Fund. For the most part, this includes the bed of the river often referred to as submerged lands. (Note: Within this segment of the Willamette, most of the riverbanks or submersible land is not in State ownership.) Second, the Division is responsible for the State Removal-Fill Law, requiring regulatory approval for alteration of “waters of the state,” which include both navigable and non-navigable waterways, and wetlands.

The Oregon Constitution requires that the State Land Board (and thus the Division) manage lands under its jurisdiction, including submerged and submersible lands, “...with the object of obtaining the greatest benefit for the people of the state, consistent with the conservation of this resource under sound techniques of land management.” (Article VIII, Section 5[2], Oregon Constitution). Protection and preservation of public safety, economic, scenic, and recreational values are considered before any lease, easement or license is granted on submerged or submersible State-owned land.

At the same time, the Division of State Lands’ fill and removal program, established by State law, regulates removal projects to assure they will not create hazards to the health, safety, and welfare of the people of Oregon. Similarly, for fill projects, the law mandates that preservation of the navigation, fishing, and public recreation uses of the river be paramount considerations in the issuance of any permit.

Currently, within the LWRMP study area, DSL has waterway leases for a variety of uses including marinas and log rafts. Over the last 15 years, approximately 122 removal/fill permits have been issued. In addition, a number of easements have been granted.
PLAN PURPOSE AND STUDY AREA

The Lower Willamette River Management Plan (LWRMP) guides the Division of State Lands’ (DSL) regulatory and proprietary interests within the river from Kelley Point Park to just above the Sellwood Bridge (City of Portland and Multnomah County) and up to the bankfull stage-level on each riverbank.

This Plan is a revision of the original LWRMP first completed in 1974. The Plan provides uniform policy guidance for Division and Land Board review of waterway development on the lower Willamette River. In addition, the Plan will: (1) result in better coordination of the LWRMP with local comprehensive land use plans; (2) inform local jurisdictions and private interests involved in riverfront development of DSL’s interest; (3) assure that all aspects of river development come under a management program—even those not addressed by local plans and zoning ordinances; and (4) address the cumulative impacts of river development on navigation, recreation, commerce, and fishing.

Decisions for this Plan must conform to the Division’s removal/fill permit program (ORS 196.800–990) and waterway leasing and management program (ORS 274.040, .043, .922, .994).

Over the 17.5 mile long Plan area (reaching from Kelley Point Park to the southern Portland city limits), there are about 3420 surface acres of water; about 525 acres are occupied by piers, marinas, docks, and floating home moorages. The widest portion of the river within the LWRMP is along Sauvie Island (2200 ft.); the narrowest is about 680’ in the McCormick Pier area and 400’ in Holgate Slough. There are about 47 miles of shoreline within the LWRMP. Of that, about 58% is in private ownership.

HISTORIC DEVELOPMENT OF THE LOWER WILLAMETTE RIVER*

The Natural Setting

Settlement began in the lower Willamette River area approximately 140 years ago. Back in the early 1840’s, the land on both sides of the river was undeveloped, providing continuous vegetative cover.

The river’s edge was physically different, with a broad and deeper expanse of wetlands, particularly on the east bank. The uplands area behind consisted of a dense coverage of fir, oak, and cottonwood, with very few clearings.

The east bank, particularly the land upstream from the bluff at the University of Portland, was covered with a broad expanse of wetlands, fed by numerous streams. These streams cut ravines through the uplands, depositing large amounts of alluvial material along the east bank, creating and expanding the wetlands, and filling the Willamette with sandbars and shoals.

The west bank tended to have a narrower strip of wetlands, due primarily to the location of the river current closest to the bank for much of the lower river. Consequently, the west bank provided natural boat docking areas, and the narrow stretch of wetlands allowed buildings to be located closer to the river. There were a few exceptions on the west bank. Sauvie Island, at the confluence of the Willamette and Columbia Rivers, consisted primarily of lowlands subject to frequent flooding. The area from Fremont Bridge downstream almost to the railroad bridge was covered by several small lakes and ponds, the largest being Guild Lake, with wetlands and bars connecting this area to the river. Another stretch of wetlands covered the area around Ross Island and Marquam Bridges.

The river itself was different too. It was wider, with more sand bars and shoals, and was subject to greater fluctuations in water levels, particularly when spring thaw on the Columbia and Willamette Rivers coincided. Today, numerous upstream dams on both the Columbia and Willamette river systems have all but eliminated these fluctuations; filling and dredging have narrowed and deepened the rivers’ courses. This entire reach of the Willamette is also tidally influenced.

**Riverfront Development (1840-1910)**

From the beginning, the development of Portland has been intertwined with the development of its waterfront. It was from a small clearing on the west bank of the Willamette River that the City of Portland grew.

Francis Pettygrove first recognized the potential of this site, located at what he considered the head of navigation on the Willamette River. Ships could go further upstream, but sandbars at Ross Island, and shoals and rapids at the confluence of the Clackamas and Willamette Rivers made travel to Oregon City for most ships difficult if not impossible, except during very high water levels.

Development of the Portland townsite began during the winter of 1844-45, with the building of a cabin. In October, when the American ship ‘‘Toulon’’ arrived and began unloading its cargo, Portland’s future as an inland port was assured.

The California gold rush began in 1848, and brought with it an immediate demand for Oregon lumber, food, and general merchandise. From an average of one ship a month in 1847, river activity escalated to five ships a month, with a record of twenty ships at one time in 1848.

In 1851, Portland could boast a number of wharfs along the west bank from Burnside to Jefferson, with several steamship companies providing international and intercoastal service to Portland.

From 1859 to 1870, Portland experienced rapid growth and became an exporter of grain to the east coast and international markets. The growth meant stability for the Portland economy and continued investment. Brick buildings began to replace the white wooden-framed structures prevalent along the waterfront. The harbor was alive, crowded with sailing ships (primarily grain ships), paddlewheelers, ferry boats, canoes, bateaux, and skiffs.

In 1868, the Willamette River was dredged for the first time, cutting a channel across the Swan Island sand bar. The previous 12-15 foot clearance over this bar at low tide had been a major impediment to maritime growth, due to the increasing size of ships.

The whole lower Willamette River was transforming during the period of 1870-1900. Numerous townsites upstream and downstream from Portland (established during the 1840’s) began to develop, attracting new industrial growth along the river. These town sites were Linnton, Fulton, Albina, and St. Johns. Linnton was annexed by the City of Portland in 1915.

South of the Portland townsite, the Community of Fulton Landing (the present day John’s Landing area) developed on the west bank of the Willamette River around the steamboat landing and ferry slip located there. The ferry connected the east bank farmlands with Macadam Road (the major road between Portland and Oregon City at that time) and Taylors Ferry Road, which ran over the west hills to the Tualatin Valley.

Portland spent $1.3 million to fill the area from Sullivan’s Gulch to the Hawthorne Bridge from Ninth Avenue to the Willamette, using dredge material from the river.

The townsite of Albina was laid out in 1872. Union Pacific Railroad located their divisional shops adjacent to the river in 1874, stimulating some industrial development, including flour mills, a sawmill, and a shipbuilding yard.
After expanding eastward and northward through annexations in 1891 to become the largest city in the region, Albina itself was incorporated that year into the City of Portland.

Settlement in the St. Johns area began in 1846. By 1852 the townsite was platted on the bluff above the river, including two shipbuilding yards and a drydock—the first on the Pacific coast.

Riverfront Development (1910-1950)

The Railroads. The riverfront underwent dramatic change with the arrival of the railroads. Rail lines were laid along most of the waterfront, requiring fill in many places to cross expanses of wetlands, particularly in northwest Portland between Guild Lake and the river, and in the Albina and Mocks Bottom areas. The lines and yards came to dominate much of the riverfront, physically and economically.

Channel Maintenance and Maritime Growth. By the 1890’s, other ports on the west coast were beginning to rival Portland. Seattle and Tacoma had grown considerably and were very competitive. In order to retain its lead, civic leaders realized that improvements in channel maintenance and dock facilities were needed. Portland alone did not have the capability to maintain a channel and when East Portland and Albina would not participate, responsibility was assumed by the State. In 1891, the State Legislature created the Port of Portland and charged it with the responsibility of maintaining a 25 foot channel. Over time, the channel depth has increased to 40 feet, and the Port’s responsibilities grown.

In 1910, the City Commission of Public Docks was established to promote maritime commerce by providing warehouses, docks, and wharves.

By 1925, Portland voters had authorized $10.5 million of bond issues for harbor and dock development, resulting in the construction of four terminals, all with railroad access. Terminal 1 was built in northwest Portland; Terminal 2 was located in the Central Eastside across from the downtown, between the Burnside and Morrison bridges; the existing facilities in St. Johns at the foot of Baltimore became Terminal 3; and Terminal 4 was located just north of St. Johns.

From 1910 to 1930, tonnage increased from 2.5 million to 4.1 million tons. Visitors from around the world considered Portland’s harbor one of the finest, though perhaps not one of the most glamorous.

World War I. World War I had a pronounced effect on Portland. The submarine menace meant a drastic reduction in the exporting of wheat and lumber to Europe, cutting exports by 83% and 63% respectively. The result was a depression in Portland lasting three years. This was partially offset by increased eastern U.S.A. demand for lumber, which led to the opening of several sawmills in Portland.

By 1917, however, the war introduced a new twist. The success of German submarines meant an increased need for ships. In 1916, Northwest Steel Company converted to shipbuilding to fill European orders. By the end of the year, Albina Engine and Machine Works had also converted. When the United States entered the war in 1917, the U.S. Emergency Fleet Corporation commandeered all ships under construction. During 1917-19, a total of 96 steel ships were built.

One side effect of the war was a shortage of steel. As a consequence, the Emergency Fleet Corporation contracted for wooden hulled ships. By 1919, there were about ten firms laying keels in Portland. In 1918, Portland yards completed 80 wooden ships, drawing their material from an expanding lumber industry. The boom, however, ended quickly with the armistice.

The Bridges. The period from 1880 to 1931 saw the construction and replacement of most of Portland’s bridges. The bridging of the Willamette
began with the Steel Bridge in 1880 (rail only), followed by the Morrison Bridge (1887), the Steel Bridge (1888-auto addition), the Madison Bridge (1891), the Hawthorne Bridge (1911-replaced wooden Madison Bridge), a new Morrison Bridge (1911-converted to steel), the Broadway Bridge (1913), a new Burnside Bridge (1925), the Sellwood Bridge (1925), the Ross Island Bridge (1925), and the St. John's Bridge (1931). These bridges expedited the development of eastern Portland.

**Industrial Development.** The Port and Dock Commissions were concerned primarily with the development of new industrial areas. A blue ribbon committee examining this matter issued a set of recommendations in 1920, which included dredging the west channel off Swan Island, and using the fill to develop Guild Lake, Swan Island, and Mock's Bottom for industrial purposes. The Commissions began shortly afterward to implement these recommendations.

The Port of Portland Commission bought Swan Island in 1922. Dredging of the west channel resulted in the infill of 1,300 acres of Guild Lake, the enlargement of Swan Island, and, in 1927 after Congress granted the Port Commission the authority, the joining of Swan Island to the mainland. An airport was constructed on Swan Island opening in 1928. By the fall of 1929, dredging of the west channel was essentially complete, and Swan Island was connected to the mainland.

**Downtown Waterfront.** The downtown waterfront underwent significant changes in 1929. Over the past decade, increased congestion due to the conflicting demand of automobiles, trolleys, interurbans, trucks, and freight railroads had largely destroyed the value of the old warehouses and office buildings along the waterfront.

In 1940, Portland voters passed a bond issue to improve Front Street. The plan called for the City to buy all land along the waterfront from Front Street to the Willamette River and from Glisan to Columbia Streets. Front Street was to be widened and serve as a feeder street and the rail line on Front Street removed. A six-lane express highway was to be constructed between Front Street and the river with connections to all the bridges, plus a narrow strip of parkland, and an esplanade along the top of the seawall. The project was completed in 1942, and required the demolition of 79 buildings and houses.

**The Depression and World War II.** By the end of the 1930's, growth along the waterfront was at a standstill. Lumber companies were gradually moving their mills upriver to be closer to the receding timber resources. The shipbuilding industry activity was very limited, consisting mostly of repair work.

The Portland economy received a boost during World War II. As in World War I, the war created a demand for new ships. Portland's shipyards were soon building new ships. In 1941, Henry Kaiser announced the purchase of 87 acres north of Terminal 4 for the creation of the Oregon Shipbuilding Corporation's yard. Development began immediately, and by May, the first ship was launched. By March 1942, Swan Island had been fully converted to shipbuilding. The yards produced 672 ships for the war effort. Almost all production ceased within a few years after the war, and Swan Island and Oregon Shipping ceased operations by 1948. Overall, the yards brought in over 70,000 new workers into Portland.

**Port of Portland Commission.** From 1920 onward, the Port of Portland has been concerned with developing needed industrial land. This has been accomplished primarily by filling in the lowlands along the river with material from channel dredging. The three principal areas are the Guild Lake area, Swan Island and Mock's Bottom, and Rivergate.

Guild Lake was filled in primarily between 1920 and 1928. Approximately 1,300 acres were filled in using material from the west channel dredging, with another 50 acres filled in with material re-
movest when the Tualatin Hills residential areas were terraced. Industry began expanding northward shortly afterward.

Swan Island was returned to the Port of Portland by 1950, after the closure of the Kaiser shipbuilding yard. The dry dock operations in St. Johns were moved to Swan Island, and have expanded over the years. The yard today occupies over 90 acres and includes four dry docks. In 1957, the Swan Island Industrial Park was opened and by 1975, approximately 300 acres were developed. The Port is currently marketing the remaining 300 acres, including 145 acres of filled land in Mock's Bottom.

The Port of Portland began acquiring land in the Rivergate area in 1941, and after subsequent filling, had its first tenant in 1962. Infilling has been an ongoing process; Ramsey Lake was filled in the late 70's. There are over 2,750 acres in the Rivergate Industrial Area, which covers most of the peninsula north of St. Johns and west of the SP&S Railway line. Kelley Point Park on the east bank at the confluence of the Willamette and Columbia Rivers was dedicated in 1973, and deeded to the City in 1984.

Riverfront Development (1950-Present)

East Bank. The East Bank Freeway (now Interstate 5) built in 1964 and located directly adjacent to the river, resulted in the demolition of at least nine wharfs and businesses including Municipal Terminal No. 2. A new Terminal No. 3 was subsequently built on the west bank just north of Terminal No. 1. The Freeway dominates the central east bank today, heavily impacting the pedestrian esplanade located between the freeway and the river from the Hawthorne Bridge to the Burnside Bridge.

In the 1980's and 90's, significant public developments were undertaken to improve I-5 and the Marquam Bridge (built in 1966). Debate over redevelopment of the Eastside Esplanade and moving the I-5 freeway east away from the river was intense. The final Esplanade plan remains under discussion but the freeway revisions are no longer in doubt; the freeway will remain, at least for the near term. During this period, the Oregon Convention Center was completed and a riverfront park connection constructed. Future plans call for water taxi access.

A new Oregon Museum of Science and Industry (OMSI) is now complete just south of the Marquam Bridge. Pedestrian riverfront trail and viewpoint access is planned from OMSI north to the Esplanade. A water taxi stop and maritime exhibits (including a retired submarine) are also anticipated.

Further south, the 160 acre Oaks Bottom wetland area became part of the Portland park system in 1950's. Sellwood Riverfront Park was developed in the late 1980's.

West Bank. The City purchased and demolished the Oregon Journal Building in 1968. With the purchase of this property, the City owned all of the downtown waterfront. The Planning Commission released the Downtown Waterfront Study (1967) and Downtown Waterfront Plan (1968), depicting the waterfront as an open space system with marinas, amphitheaters, restaurants, apartments, promenades and retail arcades.

With the Oregon Journal Building removed, the only remaining obstacle to the completion of such a system was Harbor Drive. Over the next few years, it was determined that with the completion of the I-405 freeway loop, there would be no need for Harbor Drive. When the Fremont Bridge was completed in 1973, Harbor Drive was closed and removed. Front Street was enlarged, and a long linear park (Governor Tom McCall Waterfront Park) constructed, with a side esplanade along the river. The McCall Waterfront Park receives heavy use, and is the central focus for the annual Rose Festival and other city-wide festival activities.
In 1982, the Portland Development Commission began redeveloping the southern end of the downtown waterfront. The 46 acre mixed-use development consists of a major hotel, 270 house units, 25,000 square feet of retail space, and a marina. A second phase included additional restaurants, housing units and an athletic club.

Other areas along the west bank have undergone transformation. The McCormick Pier housing development was constructed between the Steel and Broadway Bridges in 1979, and includes over 300 apartments, some retail and office space, a small athletic facility, and a temporary-berth marina.

The Johns Landing area has also undergone substantial re-development since 1950. Formerly, the area was dominated by building and salvage yards, and other similar heavy industrial uses. Today, all but the northern portion have transformed into integrated open space, residential, office, and commercial developments. This transformation has opened up much of the southwest waterfront, with large segments of Willamette Greenway Trail completed or in the planning stages.

In the 1980’s and early 1990’s, waterfront developments have improved public access via a pedestrian trail constructed in conjunction with private development. New commercial office complexes as Fremont Place and Albers Mill, near the Fremont and Broadway Bridges, included public river viewpoints and the Greenway Trail connections.

Ross Island. Ross, Hardtack, East, and Toe Islands are located in the southern stretches of the lower Willamette River. Initially privately owned, the City had an opportunity to develop them as a city park in 1912. The bond measure, however, was defeated by the voters. In 1924, a private group wanted to establish a tourist park and asked the City to purchase the islands. In 1926, a group of businessmen bought the islands, applying for and receiving a permit to dredge gravel from the Dock Commission. A lawsuit was filed to prevent the island from being used for commercial uses, but the courts ruled they had no authority on the matter. Production began shortly afterward and continues today. East and Toe Islands have been deeded to the Nature Conservancy.
HOLGATE SLOUGH AND WILLAMETTE RIVER; EAST ISLAND (CENTER); OREGON YACHT CLUB (RIGHT)

PART C

THE PLANNING PROCESS
THE PLANNING PROCESS

OVERVIEW

The development of the revised Lower Willamette River Management Plan (LWRMP) has been heavily-oriented toward public involvement through review and comment on each part of the Plan as it has been prepared. In addition, the capabilities of the Division of State Land’s (DSL) computer-based Geographic Information System were fully utilized to depict and analyze data and create maps. Figure 1 shows the planning process and public involvement opportunities.

PUBLIC AND AGENCY INVOLVEMENT

From the outset, the Division of State Lands has been determined to give ample opportunities for public and agency involvement in the development of the Plan. Two public workshops and an all-agency meeting designed to initiate the project were held in September/October 1990. Interested persons were asked to identify themselves at these events. Initially, a mailing list of 250 persons was compiled.

That group formed the nucleus of an ad hoc Technical Team that met 10 times over a 16 month period. Attendance varied from 15 to 27, as did representation. The Technical Team offered precise, in-depth review and discussion on key elements of the Plan right up to the draft final Plan.

Concurrently, a Policy Committee was formed of representatives from key local, State and Federal agency interests. Participants were appointed by each agency with the Director of the Division of State Lands serving as chair.

<table>
<thead>
<tr>
<th>POLICY COMMITTEE MEMBERS</th>
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<tbody>
<tr>
<td>Gary Gustafson</td>
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<tr>
<td>Paul Donhefner</td>
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<tr>
<td>Jill Zarnowitz</td>
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<td>Phil Thompson</td>
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<td>Robert Stacey</td>
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<td>Burt Paynter</td>
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<td>Paul Yarborough</td>
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<tr>
<td>Alan Willis</td>
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<tr>
<td>Neil Mullane</td>
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<td>Sen. Dick Springer</td>
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</table>

This group met six times prior to the release of the final Plan. During these meetings the group gave

PART C - 1
guidance on the overall policy and objectives of the Plan. They also identified solutions to issues with multi-agency impacts. The committee reviewed and commented on the work of staff and the Technical Team.

Considerable effort was made to talk to people one-on-one about the Plan. More than 35 personal and telephone interviews were conducted by staff in order to gather information about the Plan area. Presentations were made to three public and agency groups in association with other events (e.g., Country in the City IV river tour).

Important information about recreational use of the river was developed by the Recreation Focus Group, organized by staff with assistance from the Oregon State Marine Board (OSMB) and Oregon Department of Fish and Wildlife (ODFW). This ten member group included representatives of the recreational boating users of the river--power boating, jet skiing, boat racing, waterskiing, rowing, flatwater boating, sailing, warmwater fishing and anadromous fishing. Staff support came from DSL, OSMB, and ODFW.

The group assisted DSL in obtaining a better understanding of the recreational boating and fishing activities on the river. Topics explored included: location, season, and timing of each activity; activity operating requirements (e.g., turning radii); future use trends; facility needs; peak use periods; and problems and concerns associated with navigation and safety.

The group met three times in early 1991. A final report of their work and a list of the participants is in Section D of the Appendix.

During late April and May of 1991, DSL conducted a survey of seven barge companies believed to be the most frequent operators within the LWRMP. The mail-out survey was designed with the help of Dave Polland of Brix Maritime. It was designed to
gather information about trip origin and destinations, frequency and timing of trips, problems encountered, and hazardous operating areas.

Operators were asked to identify their three most frequent trips; how often per month these trips were taken; the time of day and day of week they were taken and which quarter of the year. On an aerial photograph of the LWRMP area, respondents were asked to: 1) chart their safest, most efficient course; 2) identify the location and type of hazards or areas where special caution is employed; and 3) note areas where new shoreline or in-water development would require a change in course or operation. Results of the Barge Operators Information Project is in Section E of the Appendix.

The State Land Board received three briefings on the status of the Plan--November 27, 1990; June 11, 1991; and November 12, 1991. At the June meeting, the Board reviewed and accepted the draft LWRMP Policy and Objectives.

**PUBLIC HEARING**

A public hearing to receive testimony on the final draft Plan was held in Portland on June 15, 1992. Of the five persons attending the hearing, four represented governmental concerns and one private interest. Comments were generally supportive of the Plan. The following major issues were identified:

1. Designation of T-1 and T-2 as Development Area rather than Open Water. (Port of Portland)

2. The amendment process needs to be clearer. (Port of Portland) (Oregon State Parks and Recreation Dept.)

3. In-water dredge material disposal should be allowed as Provisional. (Port of Portland)

4. Public Access is too narrow at the east end of the Burnside Bridge. (Portland Development Commission)

5. Acknowledge Eastside Esplanade Master Plan and allow for flexibility in the LWRMP to accommodate the Eastside Plan proposals. (Portland Development Commission)

In addition, letters were received from the following interests prior to the close of the hearing record on June 26:

1. Brix Maritime
2. Port of Portland
3. Philip Thompson
4. Oregon State Parks and Recreation Department
5. Portland Development Commission
6. Oregon State Marine Board
7. Portland Planning Bureau
8. Oregon Water Resources Department
9. Oregon Department of Environmental Quality
10. Tom Wright, McKenzie/Saito and Assoc., P.C.

Another six letters were received after the record closed from the following:

1. J.E. Bud Clark, (former) Mayor, City of Portland
2. U.S. Army Corps of Engineers, Portland District
3. Paul Fishman, Fishman Environmental Services
4. J.W. Buell, Buell and Associates
5. Oregon Department of Fish and Wildlife
6. U.S. Coast Guard, Port Operations, Portland
PLAN FINAL ADOPTION

The State Land Board adopted this plan as an administrative rule on September 14, 1992. The Plan went into effect on September 15, 1992, as OAR 141-80-105.

MAP ACCURACY, DATA COLLECTION, AND INVENTORY

This Plan used the data processing and mapping capabilities of DSL's ARCINFO Geographic Information System (GIS).

Every effort was made to accurately locate data on the maps including the Waterway Management Areas. Due to the scale of the final Plan maps, line width, and the generalized nature of some of the data, map accuracy is limited to ±50 feet. The waterline shown on each map is the upland boundary of the LWRMP and is the location of the bankfull stage level.

The bulk of the data has come from three major sources: DSL files, including aerial photography done in September, 1990; the 1985-86 Portland Willamette River Greenway Plan; and the original LWRMP. Other sources have included Port of Portland, Multnomah County, the Merchants Exchange of Portland, the U.S. Army Corps of Engineers, State Historic Preservation Office, Oregon Department of Fish and Wildlife, the Department of Environmental Quality, the Recreation Focus Group, Barge Operators Information Project, and personal interviews. Almost all of the data has been depicted on maps and includes tables that further explain the map features. For example, DSL lease areas are shown on a map along with a table defining the lessee, purpose, and size.

The inventories shown in Table A were completed and mapped. They are available on request from the Division of State Lands.
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<td>2. Easements</td>
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<td>3. Harborline</td>
<td>Port</td>
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<td>4. Hydrologic Conditions</td>
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<td>a. Shallows (&lt;15')</td>
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<td>b. Deep water (15' to 40'), (&gt;40')</td>
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<tr>
<td>b. Bridges</td>
<td>Portland/DEQ</td>
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<td>c. Pipeline crossings</td>
<td>Portland/ODOT/Mult. Co.</td>
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<tr>
<td>d. Cable crossings</td>
<td>Portland/DSL</td>
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<td>6. Water Uses</td>
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<td>Port/Corps of Engineers</td>
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<td>b. Commercial ship traffic</td>
<td>Merchant Exchange</td>
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<tr>
<td>c. Recreational boating and fishing area</td>
<td>OSMB/DSL/Rec.Focus Group</td>
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<tr>
<td>d. Boat launches, marinas, tie-ups</td>
<td>OSMB/Portland/DSL</td>
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<tr>
<td>e. Marine terminals, marine repair and construction</td>
<td>Port/DSL</td>
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<td>f. Areas used but not currently leased</td>
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<td>b. Central City Plan</td>
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<td>b. Beach areas</td>
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<td>12. Historical Perspective of Removal/Fill Activity</td>
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* Note: Available from DSL as required.
PART D
PLAN AREA DESCRIPTION
PLAN AREA DESCRIPTION

This part describes the segments comprising the plan area. The characteristics of each segment are summarized, followed by the highlights of its unique features. A map at the end of this part shows the location of the segments.

SEGMENT ONE

1. Sauvie Island/Belle Vue Point; Columbia River at right; Willamette River in foreground

Description

Sauvie Island. Belle Vue Point to the mouth of Multnomah Channel. About three miles along west bank. Riverbank is an earthen levee with variable width beaches, some natural vegetation, occasional riprap, small personal use boat docks (5), abandoned piling, and pile dikes. Mixture of large and small ownerships, farms, and suburban residences. Lumber mill (Alder Creek) at Multnomah Channel confluence. Log rafts on Multnomah Channel. River traffic includes recreational boats, ships, and barges. Deepwater channel (40 feet). No developed public access to river. Undeveloped Multnomah County park land (about 10 acres) at Belle Vue Point.

Unique Features/Opportunities

Rural character; beaches, vegetation. Salmon fishing at mouth of the Multnomah Channel.

SEGMENT TWO

2. Kelley Point Park (City of Portland); Columbia River in background; Willamette River in foreground

Description

Extends from Kelley Point Park to just south of the mouth of Columbia Slough. About one mile along
Lower Willamette River Management Plan

east bank. Largely natural-appearing with large cottonwood trees; popular Kelley Point Park, beach and shoreline. Park managed by City of Portland. River traffic same as Segment One. Excellent public access; heavy recreation use during warm weather (e.g., waterskiing, swimming). Deep water channel (40 feet).

Unique Features/Opportunities

Kelley Point Park and the visual interest of river traffic--barges and ships--passing near shore.

SEGMENT THREE

3.A. Port of Portland Terminal 5; Columbia Slough at left.


Description

Extends from just south of Columbia Slough to just north of Cathedral Park. About 5.8 bank miles along east bank. Includes a part of the industrialized Rivergate (Terminal 5) and Terminal 4 areas. Portion of Terminal 5 is currently not developed and includes the former coal loading facility (partially developed but never completed). Varying shoreline conditions ranging from some vegetation and beach to bulkheads. Major uses include Columbia Grain, STC Submarine Cable Systems, Oregon Steel Mills, Union Oil Company (Chemical Division), Ashgrove Cement, Western Transportation Terminal, Time Oil Company, Premier Edible Oil Company, NW Pipe and Casting, International Terminals, Terminal 4 (Cargill Grain, mineral bulk facility, liquid bulk facility, steel facility, and auto facility), and Nichols Marine (boat repair). Log storage adjacent to riverbank at south end of segment. In-water structures include wharfs, piers, bulkheads, dolphins needed for ship and barge moorage. River traffic same as Segments One and Two. No public access to river or the Greenway Trail. Deep water channel (40 feet).

Unique Features/Opportunities

"Working" harbor area with transportation facilities, deepwater navigation channel, utilities, and access.

SEGMENT FOUR

4. Mouth of Multnomah Channel; Willamette River in foreground; Sauvie Island at right. Harborton area is undeveloped tract.
Description

At confluence of Multnomah Channel includes about .5 bank miles along west side at Portland General Electric (PGE) Harborton site and Bonneville Power Administration (BPA) powerline easement. Shoreline is a combination of riprap and rubble overgrown with vegetation making it natural appearing. Some excellent wildlife habitat; the water depth opposite this area is 20'-30' or less; log rafts are stored along the bank into Multnomah Channel. No public riverbank access. River traffic same as Segment One, Two and Three. Popular salmon fishing area at confluence of Multnomah Channel and Willamette River.

Unique Features/Opportunities

Remaining natural-appearing shoreline; important wildlife habitat area.

SEGMENT FIVE

Description

West side area of about 2.25 bank miles interrupted by Linton (Segment Six) and extending from BPA easement south to just past the U.S. Army Corps of Engineers moorage. A mixture of land uses including: U.S. Army Corps of Engineers dredge maintenance facilities, Brix Maritime terminals, petroleum tank farms, Linton Plywood, and Georgia Pacific wood chip loading facility. Shoreline character is a mixture of natural-appearing and man-made conditions including riprap, rubble and piling structures. Existing in-water structures include piling, dolphins, dock and loading facilities associated with supporting upland uses (barges, tank farms, plywood mill, wood chips). Working harbor area. Deepwater channel. There is no the Greenway Trail or public recreation access. There are a number of vacant parcels in this zone. River traffic same as previously described segments.

Unique Features/Opportunities

Access to deepwater channel.

SEGMENT SIX

Description

Undeveloped area at Linton waterfront (about .3 bank miles). Natural-appearing riverbank and shoreline--cottonwoods and brush. De facto public recreation site. No in-water structures. Narrow beach area. Barge and ship traffic. Identified as potential public access site and viewpoint by the
City of Portland. Deepwater channel. Working harbor area.

Unique Features/Opportunities

Proximity to Linton, one of few sites on west side of lower river with potential for public access and mixed use development (e.g., commercial/residential). Views across to Terminal 4.

Description

About 1.1 bank miles along east side from Cathedral Park to railroad bridge. Entire frontage in public ownership by Portland Development Commission. Cathedral Park (including public boat ramp and fishing pier); swimming beach; undeveloped riverfront; some natural-appearing areas; abandoned hull at old St. John's shipyard site; abandoned piling; large undeveloped parcels. River traffic same as previous segments; boat ramp is popular launch location for winter/spring salmon fishing and warm weather boating. Future public access potential from Cathedral Park and extending south. Deepwater channel. Working harbor area.

Unique Features/Opportunities

Excellent public access; proximity to residential area of St. Johns; natural vegetation; beach; visual character; potential for commercial/residential/recreational development; historical interest (old St. John's shipyard site).

SEGMENT EIGHT

7.A. Cathedral Park (City of Portland); St. John's Bridge

7.B Railroad Bridge; undeveloped river frontage
(Portland Development Comm.)

8. Maritime construction storage
Description

About .75 bank miles on east side extending from the railroad bridge to the University of Portland and including McCormick-Baxter Creosoting plant (closed), and Reidel International construction storage and fabrication facility. Much of this area is filled land. Many deteriorating in-water structures including piling structures, docks, and miscellaneous man-made structures. A small area of natural-appearing shoreline vegetation adjacent to the railroad bridge; in-water uses include tug and barge storage, and log rafts. Potential problem with hazardous materials contamination of McCormick-Baxter site. Oregon Department of Environmental Quality monitoring site to determine extent of hazardous materials influence and methods for remediation. Deepwater channel. Working harbor area. No public access to river or the Greenway Trail. River traffic same as previous segments.

Unique Features/Opportunities

Potential for new uses once hazardous materials and financial failures of major landowners are resolved.

SEGMENT NINE

Description

About .5 bank miles on east side including the University of Portland frontage. Natural-appearing with brush and cottonwoods, man-altered by railroad; some in-water storage of construction equipment at north end. Steep riverbank. No public access or the Greenway Trail. River traffic same as previous segments. Deepwater channel. Across from Portland Ship Yard.

Unique Features/Opportunities

Views to Ship Repair Yard; deepwater channel; entrance to Swan Island lagoon.

SEGMENT TEN


Description

About 1.5 bank miles including the Willamette River side of Swan Island and the northern one-third of the west side of Swan Island lagoon. Deepwater channel. Portland Ship Repair Yard. Three dry docks including the largest floating dry dock in the Pacific Rim (87,000 tons); numerous ship repair berths; marine fabrication and equipment storage yards; support services for ship repair including employee parking facilities. No public access to river or the Greenway Trail. River traffic same as previous segments.

Unique Features/Opportunities

Only publicly-owned dry dock and ship repair facility on West Coast. Largest floating dry dock on Pacific Rim.

11. Swan Island Lagoon

Description

Swan Island lagoon. West side of lagoon used for ship tie-up for Ship Repair Yard; east side used for U.S. Coast Guard Base and Marine Inspection Office for naval and marine reserve training center; private seaplane and Life Flight helicopter base, lay berth for Maritime Administration (MARAD) Ready Reserve fleet vessels; south end of lagoon also available for ship lay berth. Shoreline character ranges from man-made (piling structures) to natural-appearing, though most is modified. Important wildlife habitat area along east side of lagoon. The extreme south end of the lagoon is currently undeveloped except for the public boat ramp. There has been considerable fill here. Public access to river limited to boat ramp; no the Greenway Trail. River traffic same as previous segments. Deepwater channel, working harbor.

Unique Features/Opportunities

Shipyard activity; boat ramp; important wildlife habitat area on southwest edge of lagoon.
SEGMENT TWELVE

Description
Extends from River Mile 9.2 to Columbia Aluminum terminal along the east bank. About one bank mile. All filled land; owned by Port of Portland; leased and developed as commercial office complexes with associated services (e.g., parking, restaurant); Greenway Trail and landscaped parkway, known as McCarthy Park (3.5 acres), parallels river; shoreline is riprap but public access is provided; attractive beach area. Some recreational use of beach. About one half of shoreline frontage is vacant awaiting upland development. Deepwater channel; working harbor area.

Unique Features/Opportunities
Sandy beach shoreline.

SEGMENT THIRTEEN

Description
Columbia Aluminum terminal to Steel Bridge. About 1.8 bank miles on east side. Steel Bridge is upstream end of deepwater channel (40'). Heavily modified shoreline (little natural vegetation but some beach) including Columbia Aluminum bulk loading facility; abandoned piling, concrete foundations, warehouse or piling, bulkheads; all in area between Columbia Aluminum bulk facility and the Fremont Bridge. Log raft storage in this area too. The Albina (Union Pacific) train yard dominates the upland use. Working harbor area.
Between the Fremont Bridge and the Steel Bridge the shoreline is heavily modified with riprap and barge and ship loading facilities for grain, (Dreyfus and Bunge), cement (Lone Star) and Ross Island Sand and Gravel. Throughout the entire segment vehicular access is poor and utilities are limited. A railroad parallels the river. Usable land is limited between river and railroad. The Coliseum Red Lion Inn overlooks the river between the Broadway and Steel Bridges. The railroad cuts off public access to the river from either the Inn or the Coliseum. No greenway trail at present, though the City of Portland calls for trail access in the future along the Albina yard frontage.

Unique Features/Opportunities

Deteriorated condition of the river shoreline between the Columbia Aluminum bulk facility and Fremont Bridge; lack of good vehicle access; lack of public access to river especially in Coliseum area and between Swan Island commercial area and the Fremont Bridge.

SEGMENT FOURTEEN

Extends along west side of river about 4.75 bank miles from just south of the railroad bridge to the Fremont Bridge. This is the heart of Portland’s industrial harbor. Major upland users include Atochem, Genstar, Union Oil Company, Texaco Oil Company, Chevron Oil Company, Shell Oil Company, McCall Oil Company, Shaver Transportation, Lone Star aggregate, Tricon Forest Products, Gunderson, American Ship Dismantling, Waterways Terminal, Port of Portland Terminal 1 & 2, James River, Sultzr-Bingham Steel, and the Portland Fire Boat Station. Existing floating facilities include wharfs, pilings and piers for handling cargo, boat construction, tug and barge moorage, and launching facilities. Deep water channel dredged to 40 feet. This area is well served by railroads, utilities, ground transportation, and has sufficient backup space for prime industrial maritime use. River uses include barge and log storage, ship berthing, fire boats, ship and barge construction. Shoreline conditions range from riprap and rubble to pier and pilings at Terminal 1 and 2, some isolated natural-appearing areas. Railroad bridge crosses river at River Mile 7. All trends indicate continued industrial activity in this area. Some
possibility for commercial use at Terminal 1 depending upon market environment. There is no public recreation access either along the shoreline or from the upland to the water due to the dominant private upland uses. River traffic similar to previous segments.

**Unique Features/Opportunities**

Central working harbor; deep water channel access; possible changes in area of Terminal 1 to residential/commercial/recreation uses as a result of redevelopment of Union Station area. The redevelopment of Terminal 1 will require a revision of the City’s Comprehensive Plan map to allow commercial and residential uses on this site.

**SEGMENT FIFTEEN**

![Image](image1)

15. McCormick Pier residential development; Steel Bridge; Union Station in background.

**Description**

West bank area from Fremont Bridge to Steel Bridge (about 1.5 bank miles). The shoreline consists of riprap along the entire segment. At several locations, bulkheads and piling have been extended beyond the riverbank. Existing in-water facilities/structures include piling/pier over water at McCormick Pier residential complex, Old Albers Mill office, Centennial Mills, Fremont Place office complex; floating structures include River Queen restaurant, McCormick Pier private marina, and Station “L” Rowing Club dock and barge. Upland uses includes multifamily residential (McCormick Pier), office complexes (Albers Mill and Fremont Place) and grain milling (Centennial Mills). Deepwater channel. River traffic same as previous segments.

The Union Station complex is nearby but does not currently have river frontage. Public access is available via the Greenway Trail from the Steel Bridge north to the River Queen; and fronting the Fremont Place complex. Public river viewing platforms are located at McCormick Pier and Fremont Place.

**Unique Features/Opportunities**

Proximity to Union Station redevelopment area.

**SEGMENT SIXTEEN**

![Image](image2)

16. Eastside Esplanade at old fireboat station; Hawthorne Bridge.

**Description**

Steel Bridge to Marquam Bridge (about 2 miles) along east side of Portland’s downtown water-
front; Eastbank Esplanade trail between Hawthorne and Burnside Bridges. Interstate 5 immediately adjacent to riverbank. Extremely heavy freeway traffic. Almost the entire river frontage is in public ownership (Oregon Department of Transportation, Multnomah County, City of Portland). Shoreline is heavily modified with riprap, rock, concrete bulkheads. Freeway support columns in water between the Steel and Burnside Bridges. Large eddy upstream of Steel Bridge forms well-known sturgeon fishing hole. Very little natural vegetation at shoreline. Eastbank trail currently not well-used due to access and security. Fire Bureau facility upstream of the Hawthorne Bridge extends beyond the riverbank and over the river. No greenway trail between the Hawthorne and Marquam or Burnside to Steel Bridge though future connections are planned. Short-term moorage (boat access only) operated by NGK Moorage available in-stream between the Hawthorne and Marquam Bridges. River traffic includes recreational boaters, barges, and log rafts. Future plans for this area calls for considerable redevelopment for public access and beautification. This area is a "key" connection between the Oregon Convention Center and the new Oregon Museum of Science and Industry (OMSI). Outstanding view of downtown Portland.

Unique Features/Opportunities

Backdrop to downtown; potential trail connection from Convention Center to OMSI; best view of downtown; sturgeon and salmon fishing. A master plan for the Eastbank now underway by the city.
SEGMENT EIGHTEEN

Description

West bank from the Marquam Bridge to Steel Bridge (1.5 miles); heart of Portland's downtown area. "Showpiece" urban riverfront. Almost entire area in public use as Tom McCall Waterfront Park. Heavy public recreation use for passive and active activities. Site of concerts, fairs, and festivals. Small boat marina, floating restaurant, retail/restaurant/hotel, and multifamily residential complex at south end (RiverPlace). Public access via the Greenway Trail available throughout segment. Shoreline has been sculpted/ improved using variety of treatments including seawall/bulkhead, grassy sloped banks and riprap to facilitate public use and access. Seawall is site of Rose Festival naval fleet moorage. Three other bridges (Hawthorne, Morrison, Burnside) cross the river in this segment (two have decorative night lighting). In-water development, in addition to the RiverPlace marina, includes a small public dock (Ankeny Dock) near the Burnside Bridge. River traffic includes barges and recreational boats. Tour boats originate from the seawall or the public RiverPlace dock.

Unique Features/Opportunities

Proximity to downtown; public access to river, public activity hub and attraction.

Description

East side between the Marquam and Ross Island Bridges (.5 bank miles); New Oregon Museum of Science and Industry (OMSI) site on the old PGE Station “L” location; Lone Star office and cement, sand, and gravel operations and Ross Island Sand and Gravel Company. Shoreline is steep, predominantly rubble with some piling structures; water uses include barge and tug storage and operations; river depths 20'-30' in this area; the Greenway Trail along OMSI frontage only.

Unique Features/Opportunities

New Oregon Museum of Science and Industry (OMSI); public attractions.
SEGMENT NINETEEN

Description

West bank from the Marquam Bridge to River Mile 14.8, about .8 bank miles. The shoreline has been altered with riprap, rubble and cement debris. There is little natural vegetation except blackberries and an occasional cottonwood tree. The upstream end of the segment possesses a more natural-appearing character than the remainder. Existing in-water facilities include an abandoned office building on piling; numerous dolphins and pilings; barge moorages. Upland uses include two office complexes, restaurant (south end), and warehouse, 30 plus acres of vacant land, barge construction with launching ramp access to river (Zidell Marine). Public access is limited to the Greenway Trail at the south end but future trail development is planned.

Unique Features Opportunities

Narrowness of river, proximity to Central Business District and large tracts of vacant land. Future development for this area is likely to include commercial/residential uses with riverfront beautification and public access.

SEGMENT TWENTY

Description

Holgate Slough area (about 2 bank miles), including Oaks Bottom Park and East Island. In-water log storage along this segment; predominately natural-appearing character of the shoreline dominates; shallow water; warm water fishery; Ross Island Sand and Gravel boathouse on eastern bank; city-owned abandoned railroad right-of-way parallels bank; excellent wildlife habitat values, highest species diversity in study area. Oaks Bottom is major wetland area managed as wildlife sanctuary by City. East Island in natural condition (9.75 acres). No public road or trail access, although trail is planned along railroad right-of-way in the future. Road access (private use) limited to Ross Island Sand and Gravel road and staging area. River traffic includes gravel barges, log rafts, rowers, fishermen, water-skiers, and jet-skiers.

Unique Features/Opportunities

Natural character; warm water fishery; highest wildlife species diversity in study area; largest remaining area of natural environment in Plan area; adjacent railroad right-of-way. Oaks Bottom, East Island.
SEGMENT TWENTY-ONE

21. Ross Island and lagoon (private) in background; Toe Island (The Nature Conservancy)

Description

Ross Island and Hard Tack Island (about 6 bank miles, 183± acres); interior of island under active gravel mining and reclamation (forming 140± acre lagoon). Exterior shoreline in natural condition. Heron rookery on northwest side. Log rafts along west side. High wildlife values; valuable gravel resource; warm water fishery. Mostly private; some public (Port of Portland) at downstream tip. No currently developed public access, although used as de facto public recreation site, especially the beach east of Toe Island. Future public ownership desirable. Toe Island owned by the Nature Conservancy (1± acres) in natural condition.

Unique Features/Opportunities

Natural environment; lagoon; gravel resource; warm water fishery; potential recreation area.

SEGMENT TWENTY-TWO

22. A. Office complexes; Greenway Trail

22. B. Willamette Park (City of Portland) at center and left; Willamette Sailing Club at right.
Willamette River in this segment.

Unique Features Opportunities

Recreational boating opportunity; narrowness of river at downstream end; the Greenway Trail access/public access at parks.

SEGMENT TWENTY-THREE

Description

West bank from river miles 14.8 (about 2.75 bank miles) to city limits. Entire area is commercial/recreational/residential. Boat repair/sales (Staff Jennings) and two restaurants are the only commercial uses; in addition, upland uses include Powers Marine Park, the Sellwood Bridge, 14 single family residences, Willamette Sailing Club, Willamette Park, and several multifamily residential complexes. In-water facilities include the Staff Jennings moorage, Macadam Bay floating home moorage (31 floating homes); five private docks/marinas (including Willamette Sailing Club) and one public dock at Willamette Park. Shoreline character includes beach areas and natural vegetation (i.e., willows and cottonwoods) from city limits south through Powers Marine Park to the middle of Willamette Park. The remainder is riprapped. The shoreline is irregular with a number of coves and inlets. A small wetland exists just south of Tequilla Willie’s restaurant. The Greenway Trail extends throughout the entire segment. Very heavy recreation use during warm weather and salmon fishing season (i.e., late winter, early spring). Dominant users are waterskiers, sailboaters, jet skiers, rowers, and fishermen. Barge and log raft traffic is common. Tanner Creek enters the

Description

East bank from Oregon Yacht Club (floating home moorage) to Portland city limits (about 2.1 bank
miles). From Oregon Yacht Club area (37 floating homes) to the Sellwood Bridge the shoreline is natural with many large cottonwoods. Some beach area at Oaks Amusement Park and Sellwood Riverfront Park. Greenway Trail runs from Sellwood Riverfront Park south nearly to city limits. Oak Parks area accessible to public. In-water development includes two floating home moorages (20 homes at Portland Rowing Club) and four existing private marinas. Upland development includes Oaks Amusement Park, PGE transmission line crossing, Sellwood Riverfront Park, commercial office building, the Sellwood Bridge, restaurant and multifamily residential structures. River traffic same as Segment Twenty-two.

Unique Features Opportunities

Natural character; sandy beach; floating homes; Oaks Amusement Park complex.
WILLAMETTE RIVER; INTERSTATE 84 AND 5 INTERCHANGE; OREGON CONVENTION CENTER; RIVER MILE 12.2

PART E

REGULATORY SETTING
INTRODUCTION

The Lower Willamette River Management Plan (LWRMP) area is governed by regulatory requirements that significantly constrain development. Federal, State, and local regulations and policies apply to the Plan area. The following tables (see Tables B, C, and D) illustrate in summary form how these regulations interrelate.

A primary objective of the LWRMP is the melding of these various regulations to create a complimentary set of guidelines. Such an approach offers consistency and predictability to regulators, landowners, and the public.

REGULATIONS AFFECTING THE PLAN AREA

Federal

The Clean Water Act of 1972 (as amended) requires permits (i.e., Section 404) for the "discharge of dredged or fill material" into waters of the United States. The U.S. Army Corps of Engineers (COE) administers this permit program over these waters, which includes wetlands. COE issues permits based on the demonstration of public need, lack of practicable alternatives, and minimization of adverse impacts.

Section 10 of the Rivers and Harbors Act of 1899 gave authority to the COE to regulate obstructions to navigable waters. "Navigable waters" under Section 10 include those subject to the ebb and flow of the tide and those used for interstate commerce in the past, in the present, or potentially in the future. Dredging and disposal, filling, placement of in-water structures, and bank stabilization are regulated in navigable waters up to the mean or ordinary high water (MHW or OHW) line. COE jointly administers this permit program with Section 404.

A number of other State and Federal agencies are involved in the review of Section 404 and Section 10 permit applications, including the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service, Oregon Department of Environmental Quality, Natural Marine Fisheries Service, and the Oregon Department of Fish and Wildlife (ODFW).

EPA has developed guidelines for authorizing filling under the Section 404 program. These guidelines (404(b)(1)) require demonstration of public need, evaluation of alternatives (there is a presumption that there are other alternatives to non-water dependent fills), and minimization of impacts. EPA has "veto" authority over 404 permits.

The U.S. Fish and Wildlife Service has reviewing authority over 404 permit applications under the Fish and Wildlife Coordination Act. The National Marine Fisheries Service has comparable reviewing authority for permit applications where commercial fishery resources may be affected. ODFW has similar responsibilities.
### TABLE B

**ACTIVITIES REGULATED BY PERMITS, LEASES, OR EASEMENTS**

<table>
<thead>
<tr>
<th>U.S. Coast Guard</th>
<th>COE Section 10</th>
<th>COE Section 404</th>
<th>DSL Fill</th>
<th>DSL Removal</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;bridges</td>
<td>&gt;mpiling supported buildings</td>
<td>&gt;fills: dikes and dams riprap gabions</td>
<td>(Any fill exceeding 50 cu. yards) riprap dredge material disposal bulkheads groins and jetties</td>
<td>(Any removal exceeding 50 cu. yds.) channel dredging aggregate removal maintenance dredging</td>
</tr>
<tr>
<td>&gt;overhead powerlines</td>
<td>&gt;docks</td>
<td>&gt;beach nourishment</td>
<td>bulkhead groins and jetties</td>
<td>&gt;pipeline crossing support structures</td>
</tr>
<tr>
<td>&gt;overhead pipelines</td>
<td>&gt;intake pipes, outfalls</td>
<td>&gt;boat ramp breakwater</td>
<td>&gt;pipeline crossing support structures</td>
<td></td>
</tr>
<tr>
<td>&gt;piers and wharfs</td>
<td>&gt;underwater cables and pipelines</td>
<td>&gt;bulkhead groins and jetties</td>
<td>&gt;pipeline crossing support structures</td>
<td></td>
</tr>
<tr>
<td>&gt;marinas</td>
<td>&gt;piers</td>
<td>&gt;bulkheads groins and jetties</td>
<td>&gt;pipeline crossing support structures</td>
<td></td>
</tr>
<tr>
<td>&gt;log booms</td>
<td>&gt;bulkhead groins and jetties</td>
<td>&gt;pipelines cable crossing bridges</td>
<td>&gt;pipeline crossing support structures</td>
<td></td>
</tr>
<tr>
<td>&gt;moorages</td>
<td>&gt;fills</td>
<td>&gt;pipeline crossing support structures</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DSL Lease</th>
<th>DSL Land Sale</th>
<th>DSL Easement</th>
<th>Multnomah Co. Greenway</th>
<th>Portland Greenway</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;marinas</td>
<td>&gt;mpiling below OLW to create land above OHW</td>
<td>&gt;fills</td>
<td>&gt;aggregate removal piles docks structures Bridges</td>
<td></td>
</tr>
<tr>
<td>&gt;moorages</td>
<td>&gt;pipeline crossing support structures</td>
<td>&gt;pipeline crossing support structures</td>
<td>&gt;pipeline crossing support structures</td>
<td></td>
</tr>
<tr>
<td>&gt;log rafts</td>
<td>&gt;docks</td>
<td>&gt;pipeline crossing support structures</td>
<td>&gt;pipeline crossing support structures</td>
<td></td>
</tr>
<tr>
<td>&gt;commercial facilities</td>
<td>&gt;docks or intakes</td>
<td>&gt;pipeline crossing support structures</td>
<td>&gt;pipeline crossing support structures</td>
<td></td>
</tr>
<tr>
<td>&gt;non-maritime over-water structures</td>
<td>&gt;vessel storage floating structures</td>
<td>&gt;pipeline crossing support structures</td>
<td>&gt;pipeline crossing support structures</td>
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<tr>
<td>&gt;vessel storage</td>
<td>&gt;floating structures</td>
<td>&gt;pipeline crossing support structures</td>
<td>&gt;pipeline crossing support structures</td>
<td></td>
</tr>
</tbody>
</table>

Not all projects require individual permit action by these agencies in order to comply with Federal laws and regulations. Some require notification to COE and are authorized under "Nationwide or Regional permits" (e.g., maintenance of structures and fills, mooring buoys, some boat ramps, and some bank stabilization).

Other statutes which affect COE regulatory policy are:

1. The National Environmental Policy Act of 1969. Defines the national policy for encouragement of productive harmony between man and his environment, as evaluated through Environmental Impact Statements or similar assessments.


The U.S. Coast Guard also reviews and approves bridges, overhead powerlines and overhead pipelines that span the river. The Coast Guard's chief concern is to prevent navigation hazards.

Legal jurisdiction over boating on the lower river is shared by the Coast Guard and the Oregon State Marine Board. The main objective of the Coast Guard is the maintenance of a navigable waterway for commercial shipping and other purposes. The Coast Guard enforces federal boating regulations, including equipment requirements, and can issue permits for special uses of the river, such as races, regattas, exhibitions, and the like. They also maintain navigation aids and lights marking the boating channel and are extensively involved in boating safety, education, and search and rescue. Daily Coast Guard patrols also monitor for pollution, harbor, and waterfront safety conditions, and commercial shipping activity.
TABLE C
PERMITS AND AGENCY REVIEW RESPONSIBILITY
WITH LOWER WILLAMETTE RIVER MANAGEMENT PLAN AREA

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>PERMIT REQUIRED</th>
<th>REVIEW COE PERMIT</th>
<th>REVIEW DSL PERMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Corps of Engineers (COE) (Federal)</td>
<td>1) Section 10 permit wetway structures 2) Section 404 permit wetway &amp; wetland fills</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Division of State Lands (State)</td>
<td>1) Fill permits 2) Removal permit 3) Submerged land lease 4) Royalty lease 5) Easements 6) Filled lands saises</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>US Fish and Wildlife Service (Federal)</td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>National Marine Fisheries (Federal)</td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Environmental Protection Agency (Federal)</td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>US Coast Guard (Federal)</td>
<td>1) Navigation hazards</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oregon Department of Fish and Wildlife (State)</td>
<td>1) Underwater blasting</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oregon Water Resources (State)</td>
<td>1) Water Right</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>State Parks and Recreation Department</td>
<td></td>
<td>Yes</td>
<td>Greenway review; effects on recreation and scenery; SHPO review</td>
</tr>
<tr>
<td>Dept of Environmental Quality (DEQ)</td>
<td>1) Water discharge permits EPA may &quot;veto&quot; DEQ permits</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>State Marine Board</td>
<td>1) Encapsulation of foam flotation 2) Water ski course/ marine events 3) Tilting and numbering of floating homes and buotheouses</td>
<td>Yes</td>
<td>Effects on recreational boating</td>
</tr>
<tr>
<td>Port of Portland</td>
<td>1) Port permit for waterfront development 2) Establishes harborline</td>
<td>Yes</td>
<td>Commercial navigation</td>
</tr>
<tr>
<td>Multnomah County</td>
<td>1) Greenway Development Permit</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>City of Portland</td>
<td>1) Greenway Development Permit</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

State

This Plan guides the Division of State Lands (DSL) programs—both permitting and ownership. Much like the COE 404 permit program, DSL requires permits for fill or removal in waters of the State, including wetlands (Fill and Removal Permit). In addition, DSL has a proprietary or ownership interest in the river. Such projects as marinas, boat ramps, pipelines, and bridges require an easement, lease or license in order to be located on State-owned submerged land within the LWRMP. A fee is paid for most DSL permits, leases, easements, or licenses.

The State and COE have a joint application for work regulated by these agencies.

Listed below are some of the State and local agencies that review and comment on DSL easement, permit and lease applications:

- Department of Environmental Quality
- Department of Fish and Wildlife
- Department of Land Conservation and Development
- State Parks and Recreation Department
- City of Portland
- Multnomah County

DSL must determine the appropriateness of the proposed action and decide whether to approve, modify,
or deny the project. The LWRMP and applicable DSL rules and policies guide the review and approval process.

Because of the large amount of filling that has occurred over the years within the LWRMP, the State has been active in resolving land title with riparian property owners. These "filled land" settlements result in the State receiving compensation for the land filled and now in private use, and the upland owner receiving clear title to the land. In the rare event submerged and submersible land is filled in the future for any public or private purpose, the State must be compensated.

The Oregon Department of Environmental Quality (DEQ) controls Section 401 of the Federal Clean Water Act of 1972 (as amended) and State laws protecting water quality. DEQ must certify that each federal permit or license complies with Oregon’s water quality standards. This project certification process occurs during the permit review for COE Section 404 permit applications. Section 401 certification requires the determination that the proposed project will not violate State water quality standards. DEQ approval is required before COE can issue a permit. For activities such as outfalls, DEQ requires a National Pollutant Discharge Elimination System (NPDES) permit. (See Table E)

DEQ is also responsible for the State’s Environmental Clean-up law (ORS 465) which established a framework for the discovery, investigation and clean-up of sites contaminated by releases of hazardous substances. There are a number of locations within or immediately adjacent to the LWRMP that are potential hazardous material sites (see Table F). A number of these are under study by the landowner; DEQ is conducting a study and clean-up plan for the McCormick-Baxter wood treatment plant site at River Mile 7.

The Oregon Water Resources Department (WRD): WRD is responsible for the management and allocation of the State’s water resources. A citizen body, the Water Resources Commission develops policy and has authority on various water related issues. These policies are included in basin programs. Sixteen of Oregon’s 18 river basins have a basin program that is periodically updated. Basin programs generally classify the streams and lakes. The classifications include domestic, livestock, municipal, irrigation, power, industrial, mining, recreation, wildlife and fish life uses. The programs are adopted as administrative rules which reflect how water is currently used, and its future use and allocation. The Water Resources Commission adopted the Willamette Basin Program on January 31, 1991.

WRD issues instream water rights to protect streamflows for public purposes. Instream water rights can be granted in two ways: (1) conversion from minimum perennial stream flows and (2) application from the three State agencies: Department of Fish and Wildlife, Parks and Recreation Department, and Department of Environmental Quality.

The Oregon Department of Fish and Wildlife requires a permit for in-water blasting within the LWRMP in order to protect fish and wildlife. In addition, ODFW is the lead State agency in protecting fish and wildlife habitat and regulating hunting and fishing.

The Marine Board is the State’s recreational boating agency. The Marine Board has the authority to regulate recreational boats and boating activities on the waters of the state. The Board contracts for boating safety, search and rescue, and law enforcement services with county sheriffs’ marine patrol units and the State Police fish and game division. Included in the regulatory tools of the agency are waterway closures, speed limits, directional controls, restrictions on times of use and/or operation, restrictions on motors, equipment requirements, and others.
<table>
<thead>
<tr>
<th>REGULATED ACTIVITY</th>
<th>Regulating Agency and Type of Permit or Other Requirement</th>
<th>Corps of Engrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Portland Multi-Co. Dept. Env. Quality Div. of State Lands</td>
<td>404 Permit 10 Permit</td>
</tr>
<tr>
<td>Greenway Permit</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Greenway Permit</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<td>Dredging - Maintenance</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<td>Dredging - Alter/Change Channel Alignment</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<td>New Navigation/Access Channel</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Aggregate (in-water) Mining</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>In-Water Filling</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Riverbank Excavation</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<td>In-Water Blasting 1</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Erosion Control - Re-vegetation, Re-grading</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Erosion Control - Riprap</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Erosion Control - Bulkheads</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Erosion Control - Maintenance</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Dredged Materials Disposal (in-water)</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Riparian Habitat Improvement</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Structures</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Maintenance of Existing Structures</td>
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<tr>
<td>Structures - New Construction</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Piles/Docks</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Docks</td>
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<tr>
<td>Floating Docks</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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</tr>
<tr>
<td>Mooring, Mooring Buoys</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
<td></td>
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<tr>
<td>Non-residential floating structures</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Floating Homes</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Misc., Logboats, Etc.</td>
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<tr>
<td>Outfalls</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Intakes</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Pipe and Cable Crossings 1</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<td>Bridges 1</td>
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<td>Temporary Storage</td>
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<td>Log Rafts</td>
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<td>Barges</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
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<tr>
<td>Ships/ Hulls, etc.</td>
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<tr>
<td>Misc. Equipment, Dredges, etc.</td>
<td>401 Cert. 404 Permit 10 Permit Royalty License Easement Submerged Land Lease Sale Agreement Plan Review</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**
1. DEQ 401 Certification for Corps of Engineers Permit J.
2. Water Discharge Permit
3. Removal/Fill Permit > 50 cu. yds.
4. Lower Willamette River Management Plan
5. Permit required if non-nuisance vegetation is removed or destroyed. (See Portland plant list)
6. Only if material enters water (e.g., painting)
7. If maintenance involves removal/fill.
8. Depends on type of work done.
10. Depend on length of time in storage.
11. Oregon Department of Fish and Wildlife - In-water blasting permit needed.
12. U.S. Coast Guard - Bridge and overhead lines and pipelines (permit needed for major repair or new construction)
### TABLE E
WASTEWATER DISCHARGE PERMITS
(Oregon Department of Environmental Quality)

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Permit Number</th>
<th>Permit Type</th>
<th>Source Name</th>
<th>Facility</th>
<th>Category</th>
<th>RM</th>
<th>Location</th>
<th>Outfall Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>100226</td>
<td>NPDES</td>
<td>Port of Portland</td>
<td>70613/A</td>
<td>Industrial</td>
<td>2</td>
<td>East Bank</td>
<td>R</td>
</tr>
<tr>
<td>2.</td>
<td>100303</td>
<td>NPDES</td>
<td>Ashgrove Cement W., Inc. Linton Plywood Assoc.</td>
<td>3690/A</td>
<td>Industrial</td>
<td>3</td>
<td>East Bank</td>
<td>R</td>
</tr>
<tr>
<td>3.</td>
<td>100097</td>
<td>NPDES</td>
<td></td>
<td>50782/A</td>
<td>Industrial</td>
<td>4.8</td>
<td>West Bank</td>
<td>R</td>
</tr>
<tr>
<td>4.</td>
<td>1300</td>
<td>GEN 13 Disc. of oily storm runoff</td>
<td>Atlantic Richfield Co.</td>
<td>4248/A</td>
<td>Industrial</td>
<td>5</td>
<td>West Bank</td>
<td>R</td>
</tr>
<tr>
<td>5.</td>
<td>1300</td>
<td>GEN 13 Disc. of oily storm runoff</td>
<td>Shell Oil Co.</td>
<td>80641/A</td>
<td>Industrial</td>
<td>5.4</td>
<td>West Bank</td>
<td>R</td>
</tr>
<tr>
<td>7.</td>
<td>100162</td>
<td>NPDES</td>
<td></td>
<td>68547/A</td>
<td>Industrial</td>
<td>7</td>
<td>West Bank</td>
<td>?</td>
</tr>
<tr>
<td>8.</td>
<td>2478</td>
<td>NPDES</td>
<td></td>
<td>50791/A</td>
<td>Industrial</td>
<td>7</td>
<td>W. Bank - No Front.</td>
<td>R</td>
</tr>
<tr>
<td>9.</td>
<td>100462</td>
<td>NPDES</td>
<td></td>
<td>74995/A</td>
<td>Industrial</td>
<td>7</td>
<td>W. Bank - No Front.</td>
<td>?</td>
</tr>
<tr>
<td>10.</td>
<td>100</td>
<td>GEN 01 Disch. of cool waters .5 mgd</td>
<td>Chevron, USA, Inc.</td>
<td>16055/A</td>
<td>Industrial</td>
<td>8</td>
<td>East Bank</td>
<td>R</td>
</tr>
<tr>
<td>11.</td>
<td>100250</td>
<td>NPDES</td>
<td>Chevron, USA, Inc. Port of Portland</td>
<td>100122/A</td>
<td>Industrial</td>
<td>8</td>
<td>East Bank</td>
<td>R</td>
</tr>
<tr>
<td>12.</td>
<td>100628</td>
<td>NPDES</td>
<td></td>
<td>70096/A</td>
<td>Industrial</td>
<td>8.5</td>
<td>Swan Island</td>
<td>R</td>
</tr>
<tr>
<td>13.</td>
<td>1300</td>
<td>GEN 13 Disc. of oily storm runoff</td>
<td>Maletis, Inc.</td>
<td>104250/A</td>
<td>Industrial</td>
<td>9</td>
<td>Swan Island</td>
<td>SS</td>
</tr>
<tr>
<td>14.</td>
<td>10075</td>
<td>NPDES</td>
<td>Acme Trading &amp; Supply Co.</td>
<td>460/A</td>
<td>Industrial</td>
<td>11</td>
<td>W. Bank - No. Front</td>
<td>SS</td>
</tr>
<tr>
<td>15.</td>
<td>1000</td>
<td>GEN 10 Disch. of cool waters .5 mgd</td>
<td>K.F. Jacobson &amp; Co., Inc.</td>
<td>105307A</td>
<td>Industrial</td>
<td>11</td>
<td>East Bank</td>
<td>None</td>
</tr>
<tr>
<td>16.</td>
<td>100</td>
<td>GEN 01 Disch. of oily storm runoff</td>
<td>Lone Star Industries, Inc.</td>
<td>44571/C</td>
<td>Industrial</td>
<td>11</td>
<td>East Bank</td>
<td>?</td>
</tr>
<tr>
<td>17.</td>
<td>100512</td>
<td>NPDES</td>
<td>Burlington Northern RR Co. Hercules, Inc. Lone Star Industries, Inc. Ross Is. Sand &amp; Gravel Co.</td>
<td>12374/A</td>
<td>Industrial</td>
<td>11.5</td>
<td>West Bank</td>
<td>SS</td>
</tr>
<tr>
<td>18.</td>
<td>100588</td>
<td>NPDES</td>
<td></td>
<td>38192/A</td>
<td>Industrial</td>
<td>12</td>
<td>West Bank</td>
<td>SS</td>
</tr>
<tr>
<td>19.</td>
<td>100177</td>
<td>NPDES</td>
<td></td>
<td>96118/C</td>
<td>Industrial</td>
<td>13.8</td>
<td>East Bank</td>
<td>R</td>
</tr>
<tr>
<td>20.</td>
<td>100045</td>
<td>NPDES</td>
<td></td>
<td>76844/A</td>
<td>Industrial</td>
<td>15</td>
<td>Ross Island</td>
<td>R</td>
</tr>
</tbody>
</table>

NOTES: SS = City Storm Sewer R = Outfall to River Source: ODEQ October 31, 1990

Special State boating restrictions currently in force on the lower Willamette River include:

- A five mile-per-hour limit within 200 feet of the west shore, as buoyed, between the southern boundary of the Willamette Park launch ramp and the northern boundary of the Willamette Sailing Club;
- A five mile-per-hour limit 200 feet of the Oregon Yacht Club floating home moorage, as buoyed (a distance of approximately 1,500 feet);
<table>
<thead>
<tr>
<th>SITE</th>
<th>NAME</th>
<th>LOCATION</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>141</td>
<td>Oregon Steel Mills - Rivergate</td>
<td>2.5E</td>
<td>P</td>
</tr>
<tr>
<td>329</td>
<td>Union Chemical Division</td>
<td>3.1E</td>
<td>O</td>
</tr>
<tr>
<td>1096</td>
<td>GATX</td>
<td>4.0W</td>
<td>P</td>
</tr>
<tr>
<td>272</td>
<td>Port of Portland - Terminal 4</td>
<td>4.5E</td>
<td>P</td>
</tr>
<tr>
<td>1036</td>
<td>Linnton Plywood</td>
<td>4.9W</td>
<td>P</td>
</tr>
<tr>
<td>137</td>
<td>Mobil Oil Company</td>
<td>5.3W</td>
<td>O</td>
</tr>
<tr>
<td>84</td>
<td>Northwest Natural Gas</td>
<td>6.4W</td>
<td>O</td>
</tr>
<tr>
<td>396</td>
<td>Pacific Northern Oil Company</td>
<td>6.4W</td>
<td>O</td>
</tr>
<tr>
<td>183</td>
<td>Wacker-Silitronic</td>
<td>6.8W</td>
<td>P</td>
</tr>
<tr>
<td>74</td>
<td>McCormick-Baxter</td>
<td>7.0W</td>
<td>P,R</td>
</tr>
<tr>
<td>36</td>
<td>Doane Lake Study (includes NW Natural Gas, Pacific Northern Oil Co., Schnitzer, Wacker, Atochem, et. al.)</td>
<td>7.3W</td>
<td>R</td>
</tr>
<tr>
<td>117</td>
<td>Genstar Roofing Products</td>
<td>7.3W</td>
<td>O</td>
</tr>
<tr>
<td>1155</td>
<td>Gunderson, Inc.</td>
<td>8.5W</td>
<td>O</td>
</tr>
<tr>
<td>398</td>
<td>Pennwalt Chemical Co.</td>
<td>7.3W</td>
<td>O</td>
</tr>
<tr>
<td>277</td>
<td>Riedel Environmental Services</td>
<td>7.5E</td>
<td>O</td>
</tr>
<tr>
<td>160</td>
<td>Shell Oil Company</td>
<td>7.7W</td>
<td>O</td>
</tr>
<tr>
<td>25</td>
<td>Chevron - Willbridge</td>
<td>7.8W</td>
<td>O</td>
</tr>
<tr>
<td>134</td>
<td>McCall Oil Company</td>
<td>7.8W</td>
<td>O</td>
</tr>
<tr>
<td>177</td>
<td>Union Oil - Willbridge</td>
<td>7.8W</td>
<td>O</td>
</tr>
<tr>
<td>395</td>
<td>Schnitzer Investment Corp. (Front St.)</td>
<td>8.3W</td>
<td>O</td>
</tr>
<tr>
<td>138</td>
<td>Portland Gas Manufacturing Site</td>
<td>12.2W</td>
<td>O</td>
</tr>
<tr>
<td>271</td>
<td>Portland Ship Repair Yard</td>
<td>8.5E</td>
<td>O</td>
</tr>
<tr>
<td>169</td>
<td>Texaco</td>
<td>8.7W</td>
<td>O</td>
</tr>
<tr>
<td>876</td>
<td>North Waterfront Park</td>
<td>12.3W</td>
<td>O</td>
</tr>
<tr>
<td>602</td>
<td>South Waterfront Redevelopment</td>
<td>13.5W</td>
<td>R</td>
</tr>
<tr>
<td>689</td>
<td>Zidell Exploration</td>
<td>13.7W</td>
<td>O</td>
</tr>
<tr>
<td>875</td>
<td>Schnitzer (Moody Avenue)</td>
<td>13.8W</td>
<td>R</td>
</tr>
</tbody>
</table>

Notes:

1. It is unknown to what extent, if any, the river or riverbank areas on these sites are involved in any hazardous materials assessments.
2. Source: Oregon Dept. of Environmental Quality, Environmental Cleanup Division, June 18, 1992
3. O = On database, no investigation complete; R = Clean-up study underway; P = Preliminary investigation complete or underway
• A five mile-per-hour limit within 100 feet of the Landing Boat Club at River Mile 15, as marked; and

• Designated racing motorboat testing area on the Willamette River in Swan Island Lagoon. Testing is limited to the hours 3-6 p.m. on Thursday, Fridays, and Saturdays.

The Marine Board also issues certificates of title and registration for floating homes and houseboats.

Oregon law requires all new polystyrene foam flotation to be encapsulated. A permit from the Marine Board is required for all newly constructed or replacement floats using polystyrene foam. Permits are also required from the Board for special events, boat races, and water ski courses in the river. By law, floating homes and boat houses are required to be titled and registered with the State. Registered structures must display a metal plate with identifying numbers supplied by the Board. The Board also reviews applications for permits to place structures in navigable waterways and applications to lease submerged and submersible lands to determine impacts to recreational boating activities. The Board has statewide responsibility for the placement of uniform waterway markers and navigational aids and is authorized to remove natural obstructions that may be an extraordinary hazard to boating safety or enjoin other unlawful obstructions impeding free navigation.

The State Parks and Recreation Department (Parks) administers the Greenway Program as its chief advocate. Parks reviews permits for consistency with established Greenway plans.

Local Government

Both the City of Portland and Multnomah County have State-approved land use zoning ordinances that guide development within the LWRMP. These agencies also implement the Willamette River Greenway Program through their land use plan and zoning codes. Generally, the Greenway allows only river-dependent and river-related development within the LWRMP. Non river-dependent or non river-related developments require an Exception to Statewide Land Use Goal 15 for the Willamette River Greenway in order to gain local approval.

Both local governments require most new developments and the expansion or alteration of existing developments to obtain a Willamette River Greenway development permit for those regulated activities occurring within the Greenway boundary. Building permits are required in many instances, too. Maintenance activities are usually exempt from Willamette River Greenway land use review. Permit applications are usually circulated to State and Federal regulatory and natural resource agencies for review and comment. In particular, State Parks reviews all Greenway permit actions.

The City (Chapter 33.440 Greenway Zone) further directs development on the river through its Willamette River Greenway overlay zone. One of four designations are applied to the base zone to set out the general types of uses/developments that are permitted. The designations are Recreation, General, Natural, and Industrial.

The purpose of each of the overlay zones is stated below.

River Natural. The River Natural zone protects, conserves, and enhances land of scenic quality or of significant importance as wildlife habitat.

River General. The River General zone allows for uses and development which are consistent with the base zoning, which allows for public use and enjoyment of the waterfront, and which enhances the river’s natural and scenic qualities.

Within River Natural and River General zones there are no special use restrictions.
River Recreational. The River Recreational zone encourages river-dependent and river-related recreational uses which provide a variety of types of public access to and along the river, and which enhance the river’s natural and scenic qualities. Primary uses in the River Recreational zone are limited to recreational uses which are river-dependent or river-related.

River Industrial. The River Industrial zone encourages and promotes the development of river-dependent and river-related industries which strengthen the economic viability of Portland as a marine shipping and industrial harbor, while preserving and enhancing the riparian habitat and providing public access where practical.

In the River Industrial zone, river-dependent and river-related primary uses are allowed on sites that front the river. Primary uses that are not river-dependent or river-related may be allowed on sites that front the river if they are approved through Greenway review.

The City Greenway approval criteria for projects within the LWRMP are as follows:

River Frontage Lots in the River Industrial Zone. In the River Industrial Zone, uses that are not river-dependent or river-related may locate on river frontage lots when the site is found to be unsuitable for river-dependent or river-related uses. Considerations include such constraints as the size or dimensions of the site, distance or isolation from other river-dependent or river-related uses, and inadequate river access for river-dependent uses.

Development Within the River Natural Zone. The applicant must show that the proposed development, excavation, or fill within the River Natural Zone will not have significant detrimental environmental impacts on the wildlife, wildlife habitat, and scenic qualities of the lands zoned River Natural. The criteria applies to the construction and long-range impacts of the proposal, and to any proposed mitigation measures. Excavations and fills are prohibited except in conjunction with approved development or for the purpose of wildlife habitat enhancement, riverbank enhancement, or mitigating significant riverbank erosion.

Development on Land Within 50 Feet of the River Natural Zone. The applicant must show that the proposed development or fill on land within 50 feet of the River Natural zone will not have a significant detrimental environmental impact on the land in the River Natural zone.

Development Riverward of the Greenway Setback. The applicant must show that the proposed development or fill riverward of the Greenway setback (25' landward of the top of the riverbank) will comply with all of the following criteria:

1. The project will not result in the significant loss of biological productivity in the river;
2. The riverbank will be protected from wave and wake damage.
3. The proposal will not:
   a. Restrict boat access to adjacent properties;
   b. Interfere with the commercial navigational use of the river, including transiting, turning, passing, and berthing movements;
   c. Interfere with fishing use of the river;
   d. Significantly add to recreational boating congestion; and
4. The request will not significantly interfere with beaches that are open to the public.

Title 19 (Harbors/Harbormaster) and (Title 28 Floating Structures) also control and direct the City’s regulatory efforts within the LWRMP.
Title 19 (Harbor/Harbormaster) primarily sets out vessel operating and repair safety, and fire prevention requirements; in addition, overwater structures are also included. The Harbormaster is an employee of the Portland Fire Bureau charged with administering the ordinance in close cooperation with other regulatory and emergency aid agencies and the shipping and ship repair business.

The purpose of Title 28 (Floating Structures) is to regulate the design, construction and site requirements of floating structures and appurtenances. These regulations recognize that waterborne structures by their very nature confront different environmental factors than do structures located on land. Furthermore, it is recognized that waterborne structures have distinctive design requirements such that strict adherence or application of the land-oriented Specialty Codes is not always appropriate and that modifications or exceptions should be made in appropriate circumstances in the application of those codes.

The Portland Bureau of Buildings administers the Title 28 requirements while the Harbormaster carries out the inspection of existing moorages and fire protection equipment.

Multnomah County Greenway approval criteria (MCC 11.15.6372) for projects within the LWRMP are as follows:

1. Reasonable public access to and along the river shall be provided by appropriate legal means to the greatest possible degree and with emphasis on urban and urbanizable areas.

2. Recreational needs shall be satisfied by public and private means in a manner consistent with the carrying capacity of the land and with minimum conflicts with farm uses.

3. Significant fish and wildlife habitats shall be protected.

4. Significant natural and scenic areas and viewpoints and vistas shall be preserved.

5. Maintenance of public safety and protection of public and private property, especially from vandalism and trespass, shall be provided to the maximum extent practicable.

6. The natural vegetation along the river, lakes, wetlands and streams shall be enhanced and protected to the maximum extent practicable to assure scenic quality, protection from erosion, screening of uses from the river, and continuous riparian corridors.

7. Extraction of known aggregate deposits may be permitted, pursuant to the provisions of MCC .7105 through .7640 when economically feasible and when conducted in a manner to minimize adverse effects on water quality, fish and wildlife, vegetation, bank stabilization, stream flow, visual quality, noise, safety, and to guarantee reclamation.

8. Areas of annual flooding, flood plains, water areas and wetlands shall be preserved in their natural state to the maximum possible extent to protect the water retention overflow and natural functions.

9. Significant wetland areas shall be protected as provided in MCC .6376

10. Areas of ecological, scientific, historical or archaeological significance shall be protected, preserved, restored, or enhanced to the maximum extent possible.

11. Areas of erosion or potential erosion shall be protected from loss by appropriate means which are compatible with the character of the Greenway.

12. The quality of air, water and land resources in and adjacent to the Greenway shall be preserved in development, change of use, or intensification.
Lower Willamette River Management Plan

of use of land designated Willamette River Greenway.

13. A building setback line of 150 feet from the ordinary low waterline of the Willamette River shall be provided in all rural and natural resource districts, except for non-dwellings provided in conjunction with farming and except for buildings and structures in conjunction with a water-related or a water-dependent use.

The responsibility for providing on-the-water boating safety and law enforcement on the lower Willamette River falls principally on the Multnomah County Sheriff. A river patrol unit is stationed at Terminal 2 and another on the Columbia River at 42nd Street. Specially trained deputies regularly patrol the river by boat and respond to emergency situations on the river. The patrol unit also engages in search and recovery when needed.

Port of Portland. The Port of Portland (the Port) is a public agency with special authority related to commercial river traffic. A regulatory feature of the Port is the ability to establish harbormines. These lines are mapped boundaries that run more or less parallel to the riverbank. Riverfront development should not extend beyond the harbormine.

In reviewing new projects within the LWRMP, encroachment beyond the harbormine is of primary concern to the Port. The Port began managing the harbormine in the late 1970’s. Changes are made to the line as necessary by action of the Port Commission; the last change being in 1984. Proposed changes are reviewed by the Columbia River Pilots, Multnomah County River Patrol of the Sheriff’s Office, and any other groups involved in river navigation.

The U.S. Army Corps of Engineers (COE) also has authority to establish and manage the harbormine, under Section 11 of the Rivers and Harbors Act of 1899. By regulation published in 1970, the COE required permits for activities shoreward of harbormines and relegated existing harbormines to be only guides for assessing impacts on navigation.

No new harbormines have been established since that time due to their primary use, as a regulatory streamlining tool, having been removed. No formal arrangement regarding the harbormine exists between the Port of Portland and the Corps.

SUMMARY

In evaluating the regulatory setting within the LWRMP, it is apparent that there are two roles for agencies—permit authority and consultation/advice. Those agencies with permit authority are of the greatest interest. Within this “set” are those agencies with focused, single interest permit authority (e.g., DEQ/EPA for water quality) and those with wide, more comprehensive environmental concerns (e.g., DSL/COE). In addition, DSL has a major “landowner” role within the LWRMP.

Of all the permitting agencies, only the local governments and DSL offer comprehensive, environmental, and public trust review of projects/activities on a case-by-case basis. And even this is not uniform among the agencies (e.g., neither Multnomah County or the city of Portland review dredging, channel maintenance, or the removal of gravel from the river).

COE has wide authority but chooses to limit its case-by-case review to significant projects by relying upon its Nationwide Permit Regulatory Program. These permits authorize minor projects that meet terms and conditions of the particular nationwide permit (e.g., certain types of bank stabilization, mooring buoys for single, non-commercial boats, or outfall/intake structures).

Any implementation plan for the LWRMP must take into account the need for consistency in project review criteria and the need to bring all activities affecting the resources of the area under review. In this way, conflicts between agencies can be avoided. In addition, clear, non-conflicting standards offer certainty to project applicants and may reduce overall development costs.
PART F
IMPLEMENTATION PLAN

ALBERS MILL (LEFT); RIVER QUEEN RESTAURANT; UNION STATION AREA; RIVER MILE 11.5
IMPLEMENTATION PLAN

SECTION ONE  • MANAGEMENT PLAN
GOALS AND OBJECTIVES

Introduction

This section describes the Management Goal and Objectives for the planning area. These elements set the tone and direction for the entire plan and its implementing measures.

The Goals and Objectives were developed after many hours of discussion by the Technical Team and the Policy Review Committee. The State Land Board reviewed these in June 1991.

Management Goals

The Lower Willamette River Management Plan (LWRMP) area lies within Oregon’s largest metropolitan area, encompassing a major portion of its busiest maritime center and one of its most popular boating areas. It contains a number of important urban fish and wildlife habitats, including a few remnant wetland areas.

The Plan’s overall management goals for the lower Willamette River are:

- to preserve the existing diversity of uses (commercial, industrial, residential, recreational, and open space);
- to actively enhance the planning area’s water quality, fish and wildlife habitat values, aesthetic appearance;
- to increase public access to the river as a gathering place for a wide range of recreational pursuits—active and passive, river-borne and shoreline; and
- encourage new developments which contribute to the furtherance of multiple public trust values.

All new and existing river developments and maintenance activities regulated by the Division shall fulfill these goals and the following objectives in a coordinated and harmonious manner, balancing all of the public benefits against the potential losses. The implementation section of this Plan allows for balancing on a project by project basis.

Objectives

These objectives of the Plan are designed to implement the overall management goals of the LWRMP.

1. Recognize that creative and innovative development projects may be needed to achieve these goals and objectives.

2. Protect the operational viability of the "working harbor," commonly identified as the area from the Columbia River to the Steel Bridge.

3. Assure that commercial navigation and on-water recreation activities can continue on the river unimpeded, efficiently, and safely.
4. Conserve the water surface for new river-dependent and river-related uses. Maintain options for future generations by limiting the permanent loss of water surface due to in-water fills. Require mitigation when filling is permitted.

5. Assure that existing water quality will be improved, as much as possible, in order to provide for safe recreation and healthy fish and wildlife populations.

6. Maintain the integrity and purpose of the Willamette River Greenway by:
   a. improving the overall resource health and appearance of the riverbank and the riparian area;
   b. increasing opportunities for the non-boating public to view, reach, and use the river (e.g., viewpoints, trails, and tour boats);
   c. maintaining and improving existing public access to the river;
   d. increasing public awareness of the river's natural and historical values;
   e. encouraging public developments that draw the public to the river; and
   f. maintaining the economic viability of Portland's maritime shipping facilities.

7. Protect, conserve, and enhance the remaining natural-appearing and rural areas along the river currently recognized by existing plans (e.g., Oaks Bottom, Holgate Slough, Ross Island, the undeveloped Harborton area, and Sauvie Island).

8. Require that all development include mitigation of adverse effects, and often enhancements, in order to maintain and improve fish and wildlife habitat. This applies especially to the riparian area where past development (i.e., since European settlement of the area) has degraded both the natural productivity and visual appearance of the shoreline.

9. Promote improved public service and resource protection by interagency cooperation through:
   a. adopting compatible management plans
   b. streamlining permit processes; and
   c. encouraging partnerships (e.g., public/private) to accomplish objectives.

SECTION TWO • WATERWAY MANAGEMENT AREAS

Introduction

Four different management designations (Waterway Management Areas) have been established for the study area (3420 acres of river and riverbank). Each area is classified based on various factors, including sensitivity to development of the natural resources, the adjacent area conditions, and existing public uses (e.g., recreational boating) (See maps on the following pages). These designations give policy guidance on the kinds of activities that are allowed within each area.

Various resources and uses of the lower Willamette River were inventoried and mapped utilizing the Division's computerized mapping system. The factors influencing the designation of each management area are as follows:

A. Development Areas are generally designated where:
   1) the upland is largely privately-owned;
   2) the upland and riverbank is intensively developed or highly altered;
Lower Willamette River Management Plan
Waterway Management Areas

Waterway Management Area Codes
- Development Areas
- Public Access Areas
- Conservancy Areas
- Open Water

Map 3 of 4

Scale in Feet

2000 0 2000 4000 6000 8000

Division of State Lands - January 1993

Note: This map is for planning purposes only. Precise site-specific interpretation may require greater detail. Contact the Division of State lands for more information.
Lower Willamette River Management Plan
Waterway Management Areas

Map 4 of 4

Waterway Management Area Codes
- Development Areas
- Public Access Areas
- Conservancy Areas
- Open Water

Note: This map is for planning purposes only. Precise site-specific interpretation may require greater detail. Contact the Division of State Lands for more information.

Division of State Lands - January 1993
3) water depth is usually greater than 15 feet (Columbia River datum);

4) there is no conflict with the authorized navigation channel;

5) there is little or no conflict with identified rowing courses (50 feet wide);

6) there is little or no conflict with the most popular sailboat use areas;

7) there is little or no conflict with major fishing areas; and

8) zoning allows residential, commercial, or industrial uses.

B. Public Access Areas are generally designated where:

1) the upland is largely public-owned;

2) there is public access to the river;

3) developments for public recreation use and access are present;

4) zoning is Open Space within Willamette Greenway River Recreation overlay zone (City of Portland);

5) public beaches of high suitability are found; and

6) river-related or river-dependent recreation use opportunities exist.

C. Conservancy Areas are generally designated where:

1) upland and riverbank are relatively undeveloped and natural (i.e., vegetated and in an untended state) or rural in appearance;

2) the zoning is Willamette River Greenway Natural overlay zone (within Portland) or resource protected (e.g., Exclusive Farm Use or Rural Residential) within Multnomah County; and

3) at least two of the following inventoried features are present:
   a) water depth is less than 15 feet (Columbia River datum)
   b) major fish food production areas
   c) high fish concentrations
   d) warmwater fish area

D. Open Water Areas are generally designated where:

1) the authorized navigation channel is located;

2) fishing areas (salmon, steelhead, sturgeon) are evident;

3) identified rowing courses (50 feet wide) are located;

4) the most important sailing courses are located; and

5) water depth is usually greater than 15 feet (Columbia River datum).

Development Areas

Development Areas are almost always privately-owned riverbank and water surface areas that are zoned and intensively developed for commercial, industrial or residential uses and can be developed within acceptable standards for the protection of public trust values as provided in this Plan.

These areas are to be managed to allow continuation of existing river-dependent and river-related uses while permitting new river-dependent and river-related uses compatible with local land use planning and zoning requirements, other regulatory agency requirements, and that adhere to spe-
specific siting standards of this Plan designed to minimize impacts to public trust values.

Public Access Areas

Public Access Areas are almost always publicly-owned riverbank and water surface locations which allow legal public access (both physical and visual) to the river. Typically, these are designated park sites and are zoned for park and recreation use.

These areas are managed to accommodate public access to the river including a wide range of river-dependent and river-related uses supportive of, or complementary to, public trust values, specifically fisheries and recreation.

Conservancy Areas

Conservancy Areas are riverbank and water surface areas that are largely undeveloped or rural and contain significant cultural, historical, visual, or natural features (e.g. wetlands).

These areas are managed to conserve and protect the inventoried significant values while allowing the continuance of existing uses provided those values are not significantly adversely affected. Allowable uses must be supportive of, or complementary to, the values present on the site as specified in this Plan.

Open Water Areas

Open Water Areas encompass that portion of the water surface and riverbank needed to meet the requirements of commercial navigation, recreational boating and fishing, and other river-dependent recreational activities.

These areas are to be managed to assure that commercial navigation and on-water recreational activities can occur efficiently, safely, and without impedance. New developments that promote or are compatible with this purpose shall be permitted as specified in this Plan.

Water Areas Covered by Structures on Piling

In a number of areas within the LWRMP, structures on pilings extend over the water (e.g., T-4, T-1, and T-2). For these water areas, the Waterway Management Area allocation shall be Development.

Ross Island Lagoon

Ross Island Lagoon is designated as a Development Area because of its current use for aggregate mining, processing and dredge materials disposal. In the future, as use of this area changes, the designation will be reevaluated and a more appropriate one applied (e.g., public recreational use).

SECTION THREE • WATERWAY MANAGEMENT AREA ACTIVITY MATRIX AND PROJECT APPLICATION PROCESS

Activity Matrix

Thirty activities (e.g., maintenance dredging, log rafts, marinas) are analyzed for their appropriateness within each Waterway Management Area and displayed in the following matrix (Table G, page Part F - 16). Allowable activities/projects must be river-dependent and/or river-related except for new floating homes which are permitted within existing moorages at Macadam Bay, Oregon Yacht Club and Portland Rowing Club.

Project Application Process

Upon application, each project/activity will be evaluated according to the process depicted in
Figure 2. Project/activities that are "OK" in the Activity matrix are designed to meet the GENERAL CONDITIONS. Others may require more time for evaluation, redesign to meet GENERAL or PROVISIONAL CONDITIONS, or more justification in order to qualify for an Exception (major or minor).

It is the responsibility of the applicant to provide adequate information to justify the activity.

SECTION FOUR • GENERAL CONDITIONS

Introduction

General Conditions apply whenever the activity(s) is allowed (either outright or provisionally). Changes to the conditions, including deletion, can only be authorized by the Director upon a finding that the change or suspension will not adversely affect the public trust values. Other conditions may be added if needed to protect resource values identified in the Plan.

A project involving multiple activity elements (e.g., fill and dock) must fulfill the standards and conditions applicable to each activity.

I. General Conditions Common To All Activities
   (except as noted)

A. Disturb only the minimum area needed to undertake the activity. Structures shall occupy the minimum amount of water surface and riverbank absolutely required for the intended use. Protect and retain, as much as possible, all existing streambank vegetation (other than those deemed nuisance plants, such as Himalayan blackberry), and revegetate wherever not precluded by development.

B. Schedule project development and maintenance to avoid peak public use periods for recreation activities present in the project area.

C. Schedule project development and maintenance to assure, as much as possible, that commercial navigational uses (barge, ship, tug traffic) remain unimpeded.

D. Strictly adhere to all public health, safety, and water quality standards, building and zoning codes required by the appropriate local government agencies, the Oregon Water Resources Department, the Oregon Department of Environmental Quality, and U.S. Environmental Protection Agency. Obtain all necessary permits and comply with all permit conditions.

E. For activities affecting the riverbank, rehabilitate the riverbank according to a plan, approved by the Director, including, but not limited to: removal of non-essential foreign material (e.g., wire, timbers, concrete debris); removal of derelict or abandoned ship hulls, piling or dolphins (unless needed for aquatic habitat); and establishment of native riparian plant materials.

F. All new leases (including lease renewals) shall provide public access to the river according to a plan consistent with one of the following options (except as noted in 1(e)):

1. Providing Access

a) A walkway from the established Greenway Trail to all or a portion of the primary structure (e.g., dock, marina) within the lease area; or

b) A walkway, stairway, or trail extending from the established Greenway Trail to the river's edge; or

c) A walkway from the established Greenway Trail to a float, pier, dock, or platform dedicated solely to public use; or

d) A float, pier, dock, buoy, or dolphin available for public use principally by recreational boaters as a temporary tie-up with no walkway
### TABLE G
**WATERWAY MANAGEMENT AREA ACTIVITIES MATRIX**

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>Development Area</th>
<th>Public Access Areas</th>
<th>Conservancy Area</th>
<th>Open Water Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maintenance dredging</td>
<td>OK</td>
<td>OK</td>
<td>P</td>
<td>OK</td>
</tr>
<tr>
<td>2. New access or navigation channel dredging</td>
<td>OK</td>
<td>OK</td>
<td>NO</td>
<td>OK</td>
</tr>
<tr>
<td>3. Aggregate mining</td>
<td>OK</td>
<td>OK</td>
<td>NO</td>
<td>OK</td>
</tr>
<tr>
<td>4. Borrow dredging</td>
<td>OK</td>
<td>OK</td>
<td>NO</td>
<td>OK</td>
</tr>
<tr>
<td>5. Filling to create upland for river-related river-dependent uses</td>
<td>P</td>
<td>P</td>
<td>NO</td>
<td>P</td>
</tr>
<tr>
<td>6. Riverbank excavation</td>
<td>OK</td>
<td>OK</td>
<td>P</td>
<td>OK</td>
</tr>
<tr>
<td>7. Dredge materials disposals</td>
<td>Ross Island Lagoon - OK</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>8. Riverbank revegetation</td>
<td>OK</td>
<td>OK</td>
<td>OK</td>
<td>OK</td>
</tr>
<tr>
<td>9. Riparian habitat improvements</td>
<td>OK</td>
<td>OK</td>
<td>OK</td>
<td>OK</td>
</tr>
<tr>
<td>10. Riverbank erosion control/treatments</td>
<td>OK</td>
<td>OK</td>
<td>P</td>
<td>OK</td>
</tr>
<tr>
<td>11. Piles/dolphins</td>
<td>OK</td>
<td>OK</td>
<td>P</td>
<td>NO</td>
</tr>
</tbody>
</table>

**KEY:**
- OK = Allowed Activity; refer to General Conditions
- P = Provisional Activity; requires compliance with Provisional Standards and approval of Director; also General Conditions
- NO = Activity not allowed

1. "Allowed activity" are those allowed outright without special DSL review other than for issuance of removal/fill permit, lease, license, or easement as appropriate and compliance with General Conditions; including those for specific activities.

2. "Provisional activity" are those subject to Provisional Standards (also General Conditions) and approval of the Director.

3. "Activity not allowed" are those inconsistent with the Waterway Management Area and deemed inappropriate or potentially too damaging to public trust values. Minor exceptions may be granted to allow these activities in special circumstances.
## TABLE G (Cont.)
### WATERWAY MANAGEMENT AREA ACTIVITIES MATRIX

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>Development Area</th>
<th>Public Access Areas</th>
<th>Conservancy Area</th>
<th>Open Water Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Pier/dock/wharf</td>
<td>OK</td>
<td>OK</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>13. Marinas/moorages, mooring buoys</td>
<td>P</td>
<td>P</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>14. Non-residential floating structures</td>
<td>OK</td>
<td>OK</td>
<td>NO</td>
<td>P</td>
</tr>
<tr>
<td>15. Log booming area</td>
<td>OK</td>
<td>P</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>16. Outfalls (sewer, combined sewer, industrial)</td>
<td>OK</td>
<td>P</td>
<td>NO</td>
<td>P</td>
</tr>
<tr>
<td>17. Outfalls (stormwater)</td>
<td>OK</td>
<td>P</td>
<td>P</td>
<td>OK</td>
</tr>
<tr>
<td>18. Intakes</td>
<td>OK</td>
<td>OK</td>
<td>P</td>
<td>OK</td>
</tr>
<tr>
<td>19. Pipe &amp; cable crossings submerged</td>
<td>OK</td>
<td>OK</td>
<td>P</td>
<td>OK</td>
</tr>
<tr>
<td>20. Log raft</td>
<td>OK</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
<tr>
<td>21. Log boom</td>
<td>OK</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>22. Beach nourishment</td>
<td>OK</td>
<td>OK</td>
<td>P</td>
<td>NO</td>
</tr>
<tr>
<td>23. Maintenance of existing structures and fills</td>
<td>OK</td>
<td>OK</td>
<td>OK</td>
<td>OK</td>
</tr>
<tr>
<td>24. Overhead cable crossing</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
<tr>
<td>25. Bridges</td>
<td>OK</td>
<td>P</td>
<td>NO</td>
<td>P</td>
</tr>
<tr>
<td>26. Temporary storage (barges, ships, etc.)</td>
<td>OK</td>
<td>P</td>
<td>NO</td>
<td>P</td>
</tr>
<tr>
<td>27. Navigation aids</td>
<td>OK</td>
<td>OK</td>
<td>OK</td>
<td>OK</td>
</tr>
<tr>
<td>28. Transportation structures on piers or piling (not bridges)</td>
<td>OK</td>
<td>P</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>29. Residential floating structures</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>30. Long term storage</td>
<td>OK</td>
<td>P</td>
<td>NO</td>
<td>P</td>
</tr>
</tbody>
</table>

* Note: New Residential Floating Structures shall be permitted only within the existing moorages located at Portland Rowing Club, Oregon Yacht Club and Macadam Bay. See General Conditions/Major Exceptions for more details.
connection to the upland; or

e) Any reasonable combination of (1) through (4) above that provides for physical and/or visual access to the river for the public.

The public access plan for each new lease shall be approved by the Director. The following conditions shall also apply:

2. Additional Conditions

a) Approved public access facilities shall be appropriately indicated by signs provided and maintained by the lessee consistent with the City of Portland’s Greenway sign-

b) Public access from upland to the river shall be required only in locations where the Greenway Trail has been established;

c) Access may be denied to any person who creates a nuisance or engages in illegal conduct within the lease area. The Director may allow public access to be temporarily or permanently closed to protect the public interest or maintain public safety. Such closures may be initiated, in writing, by the Division or the lessee according to procedures prescribed in the lease; and
d) The Director may not require public access as described above if the lease applicant demonstrates that:

1) Unavoidable hazards to the public exist at the site or in association with the proposed use; or

2) Security requirements of the use cannot be reasonably satisfied; or

3) Public access at the particular location cannot be reasonably designed or developed to provide a river view or recreational experience;

4) There is adequate public access to the river available within the immediate area (e.g., adjacent properties);

5) Public access at the particular location will have significant adverse effect on natural or cultural features present

G. There shall be no significant adverse effect to the riparian and aquatic life and habitat by any activity within shallow water (-15 feet Columbia River datum) or Rank 1 and 2 wildlife habitat areas as depicted in Section H of the Appendix.

This GENERAL CONDITION does not apply to Filling authorized as a Major or Minor Exception or under PROVISIONAL STANDARDS.

II. General Conditions for Specific Activities

A. MAINTENANCE DREDGING (new access or navigational channel change; aggregate mining or borrow dredging):

STANDARDS:

1) The area dredged shall be the minimum necessary to accomplish the intended use and comply with these standards;

2) For access dredging, normal removal shall be sufficient to provide access for a period no less than 24 months;

3) Levels of pollutants released into waters by dredging and disposal shall conform to standards approved by DEQ;

4) Sides of dredged channels and basins should be sloped to facilitate physical stabilization. Slopes shall be no steeper than 3:1;

5) Critical periods of fish and wildlife activity as determined by Oregon Department of Fish and Wildlife (ODFW) (spawning, passage, nesting, etc.) shall be avoided;

6) Dredging will not be allowed from public beach areas;

7) All dredging operations must use disposal sites acceptable to the U.S. Army Corps of Engineers, the Division of State Lands, and local land use regulations;

8) Dredging shall be timed so that equipment stays clear of recreational and commercial navigation users of the river, especially during the recreation use season (March-October).

B. FILLING to create upland:

STANDARDS:

1) Fill materials shall be placed in conformance with DEQ regulations (e.g., clean and free of contaminants) and may include dredged materials;

2) Where fill reduces or eliminates existing public access, suitable alternative public access shall be provided;
3) Critical periods of anadromous fish passage, as determined by ODFW, shall be avoided;

4) Sites shall be revegetated with native riparian vegetation and protected from surface erosion;

5) GENERAL CONDITION I(G) does not apply.

C. RIVERBANK EXCAVATION

STANDARDS:

1) No contaminated or hazardous materials or soil shall be allowed to enter the river;

2) Bare earth should be stabilized as soon as reasonably possible, preferably by revegetation; and

3) Revegetation consistent with the GENERAL CONDITIONS for Riverbank Revegetation is preferred.

D. RIVERBANK REVEGETATION

STANDARDS:

1) Native plants indigenous to the lower Willamette River shall be used; and

2) Plants shall be of sufficient size and number and planted under proper conditions to insure survival past the first three growing seasons after planting. Dead or severely damaged plants shall be replaced.

E. RIVERBANK EROSION CONTROL TREATMENT

TREATMENT TYPES

Treatment A
Natural angle of repose of slope with vegetative plantings on riverbank to ordinary high water line.

Treatment B
Riprap--clean, non-erodible material from an upland source; river run gravel is permitted if low erosion potential exists. Slopes shall not be steeper than 3:1, unless terraced.

Treatment C
Riprap--clean, non-erodible material from an upland source; angle of the slope shall not exceed 2:1.

Treatment D
Bulkhead--wood, concrete and/or steel construction.

Treatment E
Riprap as in Treatment C but only covering the lower half of the riverbank. The upper half is revegetated to promote soil retention during high streamflow events.

Treatment F
Bio-engineered treatments generally including massed vegetative matting.

STANDARDS:

1) All material shall conform with DEQ regulation (e.g., clean and free of contaminants) and may include dredged materials;

2) There must be evidence of recent active erosion (within the last five years) or a demonstrated need to alter the riverbank particularly if the treatment is B, C, or D;

3) The proposed erosion control treatment method must be consistent with the physical characteristics of the site (e.g., Treatment D along Sauvie Island would be inconsistent);
4) The treatment that provides adequate erosion control and the least site disturbance shall be preferred except for riverbank restoration areas;

5) The treatment shall be limited to the area of the active erosion (plus any additional area that is at immediate risk) or the area needed to insure the success of the overall treatment;

6) The treatment shall not extend the bankline riverward, thereby creating upland;

7) Impacts to fish and wildlife values shall be minimized by limiting the size of the treatment area, revegetating the site and selecting the treatment offering the least site disturbance;

8) Vegetative plantings consistent with the Standards for Riverbank Revegetation shall be provided on the riverbank. The planting plan shall be a part of the riverbank rehabilitation project referred to in the GENERAL CONDITIONS;

9) Broken concrete, asphalt, concrete block, tires, rubble or similar debris shall not be used in any treatment; and

10) The approved treatment for each Waterway Management Area will be as follows unless otherwise approved:

   a) Development Areas: Treatment A, B, C, D, E, F

   b) Public Access Areas: Treatment: A, B, D, (sculptured concrete or wooden terracing will be permitted as long as the design seeks to 'soften' the visual effect of the hard edges of these structures as much as possible), or E, F

   c) Conservancy Areas: Treatment A, F

   d) Open Water Areas: No preference identified.

F. RIPARIAN HABITAT IMPROVEMENT

STANDARDS:

1) Same as GENERAL CONDITIONS, except I(E)(F) and (G) do not apply.

G. DREDGE MATERIALS DISPOSAL

STANDARDS:

1) Allowed within Ross Island lagoon when conducted in accordance with the reclamation plan approved by the Division;

2) Dredged materials may be used for beach nourishment, fill, and riverbank erosion control treatment, but all GENERAL and PROVISIONAL STANDARDS for these activities must be met;

3) Meet in-water discharge standards for DEQ.

H. PIER/DOCK/WHARFS/PILES/DOLPHINS

STANDARDS:

1) Structural components containing concrete or wood preservatives shall be cured prior to placement in water;

2) The size and spatial configuration of the project shall be such that which will fulfill its essential purpose/function, while minimizing the consumption of water surface and shoreline length, and not interfering with navigation or other public trust values;
3) Individual personal use, residential area docks shall not exceed 400 square feet; individual docks, associated with non-river dependent or non-river related commercial uses (e.g., restaurants, offices, retail sales, etc.) shall not exceed 1000 square feet in surface area. These limitations shall not apply to tour boat or water taxi docks;

4) Be capable of withstanding wake wash from passing vessels;

5) Floating piers/docks shall be uncovered.

I. MARINAS/ MOORAGES/ MOORING BUOYS

STANDARDS:

1) Structural components containing concrete or wood preservatives shall be cured prior to placement in water;

2) The size and spatial configuration of the project shall be that which will fulfill its essential purpose/function while minimizing the consumption of water surface and shoreline length and not interfering with navigation or other public trust values;

3) The structure must be capable of withstanding wake wash from passing vessels and impact from floating debris; and

4) Mooring buoys must meet all GENERAL CONDITIONS except I(E)(F).

J. OUTFALLS (sewer, combined sewer, and stormwater only)

STANDARDS:

1) The riverbank will be protected from erosion in a manner consistent with Riverbank Erosion Control Treatment Standards; and

2) Structural components containing concrete or wood preservatives shall be cured prior to placement in water.

K. INTAKES

STANDARDS:

1) Same as Standards for Outfalls; and

2) Intake openings shall be screened to prevent fish entrainment and to protect fish from being trapped against the opening.

L. SUBMERGED PIPE AND CABLE CROSSINGS

STANDARDS:

1) When trenching is done, comply with Standards for Maintenance Dredging;

2) Pipelines and cables must be placed well below the potential scour level of the river bottom and be secured from movement;

3) All pipe and cable crossings shall be confined to existing cable crossing and pipeline rights-of-way;

4) Crossings will be perpendicular to the waterway, as much as possible; and

5) Any in-water blasting shall require a permit from ODFW and shall conform to ODFW blasting policies.

M. TEMPORARY STORAGE, LOG RAFTS, AND LOG BOOMING AREAS (log rafts, barges, ships, dredging and marine construction equipment)
STANDARDS:

1) Storage must be secured and able to withstand vessel wake wash; and

2) Storage must not intentionally rest or "ground out" on the river bank or bed at any time and storer must make all reasonable efforts to prevent any such "grounding out."

N. LONG TERM STORAGE

STANDARDS:

1) See Temporary Storage Standards.

O. NAVIGATION AIDS

STANDARDS:

1) Same as GENERAL CONDITIONS except I(E)(F) and (G) do not apply;

2) Approved by the U.S. Coast Guard and the Oregon State Marine Board.

P. RESIDENTIAL FLOATING STRUCTURE

STANDARDS:

1) New residential floating structures or floating homes shall be permitted only within the existing leasehold areas used for floating home moorage (Macadam Bay, Oregon Yacht Club, Portland Rowing Club) as constituted on the day of adoption of this Plan by the State Land Board. Areas within the leasehold used for marinas shall not be converted to floating home use;

2) Such leases shall be allowed to continue provided the lessee meets all GENERAL CONDITIONS of this Plan except I(E)(F) and (G), and all applicable rules and policies of the Division.

Q. NON-RESIDENTIAL FLOATING STRUCTURE

STANDARDS:

1) Structural components containing concrete or wood preservative shall be cured prior to placement in water;

2) The size and spatial configuration of the project shall be that which will fulfill its essential purpose/function while minimizing the consumption of water surface and shoreline length and not interfering with navigation or other public trust values; and

3) Be capable of withstanding wake wash from passing vessels.

R. BEACH NOURISHMENT

STANDARDS:

1) The volume and frequency of deposition shall maintain a stable beach profile;

2) Materials used for this purpose shall be clean and free of contaminants and may be dredged material;

3) Materials shall be graded and contoured to match the natural profile of adjacent areas;

4) Creation of new land or beaches where none previously existed shall be considered FILL to create upland.

S. MAINTENANCE OF EXISTING STRUCTURES AND FILLS

STANDARDS:

1) The repair or rehabilitation of any previously authorized, currently serviceable or
recently damaged structure or fill is allowable outright by the Plan, provided no leased area is to be put to uses differing from those uses specified in the original authorization without the written consent of the Director;

2) Minor deviations in the structure’s configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards, which are necessary to make repairs or rehabilitation, are allowed outright provided the resulting public trust value impacts are minimal;

3) If the repair or rehabilitation project requires the fill, removal, or movement of material in amounts greater than 50 cubic yards, a State removal/fill permit may be required;

4) All GENERAL CONDITIONS apply except, I(E)(F) and (G).

T. LOG DUMP

STANDARDS:

1) No free-fall log dumps shall be allowed;

2) Apply GENERAL CONDITIONS for Riverbank Excavation and/or Riverbank Erosion Control Treatment as appropriate.

SECTION FIVE • PROVISIONAL STANDARDS

Introduction

Provisional Standards are established for certain activities for each of the four Waterway Management Areas (Development Areas, Public Access Areas, Conservancy Areas, and Open Water Areas). These standards must be met before the Director can authorize the activity. Once authorized, the proposal is subject to the GENERAL CONDITIONS, and any other conditions imposed by the Director.

Provisional Standards are required in order to assure that certain uses that may degrade or conflict with public trust values are carefully evaluated before they are authorized. Certain activities are allowed within each Waterway Management Area without the Provisional review because they have been determined to have acceptable impacts if carried out in conformance with the GENERAL CONDITIONS.

I. Development Areas

Within these areas, as designated on the Plan maps, provisional activities are: filling, marina/moorages, and overhead cable crossing. These activities must be authorized in writing by the Director only if they meet the following requirements:

A. FILLING to create upland for river-dependent or river-related use will only be authorized when:

1) In the Director’s judgment no other reasonable alternative to accomplish the purposes of the project is available; and

2) One or a combination of the following public trust value mitigation strategies, carried out concurrently with the project, is proposed in total amounts (expressed in square feet) or values equivalent or greater to the area filled:

   a) Creation of new water surface area of equivalent or greater biological and recreational values than those at the project site;

   b) Removal of existing overwater structures in areas generally inaccessible or uninviting to public recreation and of
low biological productivity. These areas, after structure removal, must be accessible to public recreation and provide greater biological productivity;

Preferred sites for 2(a), 2(b), or 3 (below), in descending order of preference are: a) on the site of the project; b) adjacent to the project site; and c) within the LWRMP;

3) In lieu of 2(a) (first preference) and/or (b) (second preference), the third preference is to significantly enhance other public trust values (e.g., public access to the river) for the benefit of the general public on a site maintained for public uses and within the control of the applicant. This is to be done concurrent with the project.

B. MARINAS/MOORAGES AND MOORING BUOYS (including major expansions and improvements) will only be authorized when:

1) The applicant demonstrates that the project will minimize additional river traffic congestion and river user conflicts during peak use periods.

In order to assist the Director in evaluating the project’s ability to meet this siting standard, the applicant shall provide a written analysis, (supported by maps, plan drawing, photographs, etc.) of the following factors:

a) A description of the location and physical characteristics of the site, including any special natural features present (e.g., important wildlife habitat, shallow water);

b) A description of the purpose of the facility (e.g., transient moorage, long term recreational boat moorage, water taxi terminal);

c) A description of the overall design of the facility including: features to reduce wave action from passing watercraft, protection from floating debris, efforts to conserve water surface area used, efforts to create new water surface by excavation into upland or by removal of existing over-water structures, and the proximity to the authorized navigation channel;

d) A description of the operating characteristics of the facility, including days and hours of operation, types of watercraft to be served, and anticipated usage;

e) For proposed facilities within the “working harbor” (below the Steel Bridge):

(i) Identify current commercial and recreational river traffic patterns and users in the Working Harbor; season of use; and any unsafe or hazardous conditions contributed to, caused, or mitigated by the proposed facility;

(ii) Identify potential conflicts between the facility’s users and other users of the river and riverbank and any features of the proposal designed to minimize these conflicts;

f) A description of the land and water uses adjacent to the proposal and the proposal’s compatibility with them;

g) For proposed facilities above the Steel Bridge:

(i) Identify the current commercial and recreational river traffic patterns within a mile upstream and downstream of the proposed facility. Describe the season
of use and any unsafe hazardous conditions contributed to, caused, or mitigated by the proposed facility;

(ii) Identify potential conflicts between the facility's users and other users of the river and riverbank and any features of the proposal designed to minimize these conflicts;

h) Explain how the proposed facility meets needs not currently met by others in the LWRMP,

2) New marina and moorage berths located above the Steel Bridge are to be uncovered and unenclosed.

C. OVERHEAD CABLE CROSSINGS will only be authorized where they:

1) Make shortest distance crossing as possible;

2) Use existing rights-of-way to the greatest extent possible;

3) Provide adequate clearance above water surface level of 100 year flood for the passage of ship, barge and recreational traffic in accordance with U.S. Coast Guard requirements; and

4) Provide safety warning devices as required by the Federal Aviation Administration or appropriate authority.

II. Public Access Area

Within these areas, as designated on the Plan maps, provisional activities are: filling, marinas and moorages, log booming areas, overhead cable crossings, bridges, temporary storage, all outfalls, long term storage, transportation structures on piers or pilings, and mooring buoys. These activities may be authorized by the Director if they meet or exceed the following standards:

A. FILLING will only be authorized where it meets the:

1) PROVISIONAL STANDARDS for Development Areas;

2) Public access to the water is maintained from the fill.

B. MARINAS AND MOORAGES will only be authorized when they meet the:

1) PROVISIONAL STANDARDS for Development Areas.

C. OVERHEAD CABLE CROSSINGS will only be authorized when they meet the:

1) PROVISIONAL STANDARDS for Development Areas.

D. TEMPORARY STORAGE, LOG RAFTS AND LOG BOOMING AREAS will only be authorized when:

1) The use is approved by the upland land owner, and

2) The use will not adversely affect the use of the river or riverbank for public recreation use or fisheries.

E. LONG TERM STORAGE will only be authorized where:

1) Storage shall be for the purpose of public recreation or education (e.g., historical ships).

F. BRIDGES AND TRANSPORTATION STRUCTURES ON PIERS OR PILING will only be authorized when:
1) Public access to and use of the river will not be degraded and, if so, will be enhanced or replaced at another location nearby by offering access equivalent to that lost or degraded.

G. OUTFALLS (sewer, combined sewer, and stormwater) will only be authorized when:

1) Located 200 feet or more from any beach, boat ramp, or designated swimming area.

III. Conservancy Areas

A. Within these areas, as designated on the Plan maps, provisional activities are: maintenance dredging, beach nourishment, riverbank excavation, piles/dolphins, intakes, stormwater outfalls, submerged/overhead pipe and cable crossings, log rafts, riverbank excavation, and riverbank erosion control.

These activities will not be authorized under permit, lease, license or easement, unless they can be carried out without adverse affect on the public trust value(s) inventoried for each area.

The Director may approve an application based on a finding of "no adverse effect" and include conditions designed to protect and enhance the public trust values identified for each area.

B. It is rebuttably presumed that the following activities have an adverse effect on public trust values such as, but not limited to, fisheries, water quality, recreation, and navigation:

1) Riverbank excavation except: a) removal and/or demolition of riverbank structures or similar activities carried out to enhance fish, wildlife, or other natural values; b) for the repair of the Sauvie Island dike; or c) work associated with intakes or stormwater outfalls.

2) New submerged pipe and cable crossing except in existing rights-of-way;

3) New riverbank erosion control measures utilizing riprap covering the entire bank, or concrete, wood or steel bulkheads;

4) Beach nourishment, except in existing public swimming areas; and

5) Intakes, unless no suitable location outside a Conservancy Area is available. The invert shall be at or deeper than -15 CRD.

IV. Open Water Area

Within these areas, as designated on the Plan maps, provisional activities are: filling to create upland, overhead cable crossings, bridges, non-residential floating structures, log booming areas, log rafts, and temporary storage. These activities may be authorized in writing by the Director if they meet or exceed the following standards:

A. FILLING to create upland will be authorized only when it meets the:

1) PROVISIONAL STANDARDS for Development Areas.

B. OVERHEAD CABLE CROSSINGS will be authorized only when they meet the:

1) PROVISIONAL STANDARDS for Development Areas.

C. BRIDGES will be authorized only when they meet the:

1) PROVISIONAL STANDARDS under Overhead Cable Crossings for Development Areas.

D. LONG TERM AND TEMPORARY STORAGE, LOG RAFTS AND LOG BOOMING areas will be authorized only when the:

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1) Use is along the west bank of the river between about river mile 9.5 and river mile 11.5 in the vicinity of Terminals 1 and 2; and

2) Storage shall not obstruct navigation or project more than 125 feet riverward from edge of dock or top of bank at any time.

E. NON-RESIDENTIAL FLOATING STRUCTURES will be authorized only when the structure:

1) Is associated with recreation use of the river (e.g., water ski course buoys, water ski jump ramps, swim area marker buoys);

2) Is located outside of the authorized navigation channel; and

3) Complies with requirements of Oregon State Marine Board permit.

SECTION SIX • MAJOR AND MINOR EXCEPTIONS

Major Exceptions for Non River-Dependent or Non River-Related Activities

The State Land Board may grant a Major Exception for non river-dependent and non river-related projects/activities when the applicant convincingly demonstrates the following conditions are met:

a) The proposed activity is generally consistent with the purposes of the Waterway Management Area encompassing the affected site.

b) The proposed activity is allowed in the base City of Portland or Multnomah County land use zone by right, with limitations, as a conditional use or by Goal Exception;

c) The proposal will not have a significant adverse effect on the inventoried natural, cultural, or recreational values of the site or on abutting water areas;

d) The proposal will not significantly reduce the water surface area available for river-dependent or river-related uses;

e) The proposal, or any associated mitigation, will provide a significant public benefit;

f) The impact area is limited to the greatest possible degree, so that the new use will be compatible with the preservation of the natural, scenic, historical, and recreational qualities of the affected area;

g) The proposal cannot reasonably be accommodated in a location which does not require this Exception;

h) Of all other potential locations within the Plan area, none would result in significantly better long-term recreational, fishery, and navigational impacts after mitigation measures are taken;

i) The proposal is compatible with other adjacent waterway uses, or will be compatible through measures designed to reduce adverse impacts; and

j) The proposal must show that there are no practical on-site alternatives which will achieve the same level of public benefit.

"Exception" activities that satisfactorily meet the above-described requirements will be subject to all GENERAL CONDITIONS, in addition to any others the Board deem necessary to protect public trust values at the affected site.

Minor Exceptions for Activities Not Allowed in Certain Waterway Management Areas

Some river-dependent and river-related activities/projects are not allowed in particular Waterway Management Areas (see Table G), or may not have been identified during Plan development.
In order to allow these projects/activities as a Minor Exception (granted by the Director), the applicant must convincingly demonstrate that the following conditions are met:

a) The activity is consistent with the Plan Goals and Objectives;

b) The activity will not materially detract from the general purposes of the affected Waterway Management Area nor interfere with the public trust values at the site;

c) The design and use of the project/activity will be compatible with other adjacent activities within the affected Waterway Management Area;

d) The activity meets all applicable GENERAL CONDITIONS.

The Director must make written findings that the project/activity meets the criteria for granting a Minor Exception (see a, b, c, and d, above) and may set forth further conditions appropriate to protect public trust values at the affected site.

**Floating Structures Waiver**

Residential floating structures (i.e., floating homes) are not river-dependent or river-related uses. For the purposes of this Plan, however, NO EXCEPTION is required to site additional individual floating homes in existing moorages--Macadam Bay, Portland Rowing Club, Oregon Yacht Club--so long as all other provisions of this Plan are met.

Lease renewals for the above mentioned moorages or other existing leased non river-dependent or non river-related uses (e.g., River Queen Restaurant, Newport Bay Restaurant) shall not require an Exception analysis.

**Hazardous Materials Clean-up Waiver**

No Exception is required when a non river-dependent or non river-related activity is needed to investigate or remediate a hazardous material site according to an Environmental Clean-up Plan (ECP) developed in consultation with the Division and approved by the Oregon Department of Environmental Quality and the Director. Such ECPs shall, to the greatest extent possible, seek to achieve the management goals and objectives of the Plan. All GENERAL CONDITIONS and PROVISIONAL requirements of this Plan are waived. The Director may, however, impose such conditions as are deemed necessary to protect public trust values at the affected site.

In addition, no hazardous waste removed as part of an ECP shall be deposited or stored on State-owned submerged and submersible lands unless approved by the Board and recommended by the Director as a plan amendment.

The temporary storage of barges engaged in the drilling or testing of contaminated river sediments shall be allowable in all Waterway Management Areas.

**SECTION SEVEN • PLAN REVIEW, AMENDMENTS, INTERPRETATION, EXISTING LEASES AND USES, CHANGE OF USE, IMPROVEMENT OF EXISTING FACILITIES AND USES, PROJECT APPLICATION AND PROCESSING, PUBLIC INFORMATIONAL HEARINGS AND APPEALS, AND CONFORMANCE WITH OTHER POLICIES, RULES AND PLANS**

**Plan Review and Amendment**

Review. The Plan will be reviewed by the Division of State Lands every five years to determine if revisions are necessary.
Plan. Waterway Management Area designations, goals and objectives, and other implementation actions of this Plan may be changed by the State Land Board. The Plan will be updated periodically as new data becomes available, and as changing social or economic conditions place different demands on public trust interests within the planning area.

Plan Amendment. An amendment is a Plan revision and/or Plan change. Amendments include any changes to: the Waterway Management Area designations; the Allowable Activities; General Conditions; Provisional Standards; Definitions; and Goals and Objectives.

All amendments will be processed through the Administrative Practices Act rulemaking process (ORS 183) and require State Land Board approval.

Plan Interpretation

From time to time, situations will arise that require interpretation of various elements of the Plan including maps, inventories, definitions, standards, conditions, goals and objectives. The Director shall make the final determination in instances of Plan interpretation. Such final decisions shall provide the maximum protection to public trust values and be consistent with the overall management intent of the Plan as revealed by the goals and objectives.

The Director may decide that an issue is beyond simple interpretation and initiate a Plan amendment or Exception (Major or Minor).

Existing State Leases, Permits, and Uses.

All existing uses not requiring a lease or state permit, easement or license may continue. Existing leases may continue unaffected by the LWRMP during the remainder of their term. Lease and removal/fill permit renewals are subject to the provisions of this Plan. (See Floating Structures Waiver.)

Change of Use of Leased Area. A lease, easement or license area shall not be used for any purpose by the grantee other than that allowed by the lease agreement without the prior written consent of the Land Board or the Director.

Replacement, Improvements, or Expansion of Existing Structures and Fills. Replacement, improvement or expansion of existing structures and fills shall be treated as a new activity and are subject to the provisions of the Plan.

Project/Activity Applications and Processing. All proposals must be submitted to and approved by the Division prior to the commencement of construction or initiation of the activity.

Proposals shall be submitted on the joint U.S. Army Corps of Engineers/Division of State Lands "JOINT PERMIT APPLICATION FORM." Additional background material and data needed to determine conformance with this Plan shall be attached to the "JOINT PERMIT APPLICATION FORM."

Application processing shall be done in accordance with the Division's State Agency Coordination Plan and all applicable policies and rules. For example, comments on each proposal will be solicited from local government, State and Federal natural resource agencies, and other interested parties.

Public Informational Hearings

The Director may hold a public informational hearing prior to a final decision on any Division permit or lease, easement, or license. In determining if a hearing should be held, the Director shall consider the level of public interest, as evidenced by, but not limited to, petitions and letters from affected parties (e.g., upland property owners, river users).
The public hearing shall be for the purpose of gathering public testimony on the following:

a) The purposed activity and its impact on public trust values (i.e., navigation, fisheries, commerce, and recreation);

b) How well the proposed activity conforms to the applicable provisions of the Plan;

c) Recommendations for modifications to the proposed activity designed to lessen its impact on public trust values and or promote its conformity to the Plan.

In the event the project requires a removal/fill permit, the public informational hearing shall be held in accord with OAR 141-85-075(1)(a)(b)(c).

Appeals

An applicant or other persons aggrieved or adversely affected by issuance or denial of a permit, lease, easement, or license by the Director, may appeal the decision in the following manner:

a) For removal/fill permit decisions, appeals shall follow the process provided in OAR 141-54-075(2);

b) For leases or licenses, two processes are available:

1. **Informal Review.** An informal review of the decision by the Director may be arranged by making a request, in writing, within 15 calendar days of notice of the decision. The request shall state the reasons for the review. The Director may meet with the requestor or review the written material and respond promptly; and

2. **Formal Review.** A decision of the Director or State Land Board may be appealed to circuit court.

c) For easements, decisions may be appealed as in b(1) or as provided in OAR 141-65-600.

Conformance with Other Policies, Rules and Plans

This Plan is compatible with land use plans of the City of Portland and Multnomah County. In addition, it is consistent with policies and guidelines of the U.S. Army Corps of Engineers.

All the Division’s rules and policies affecting the Management Plan area including, but not limited to, removal/fill permits, easements, waterway leases and licenses shall apply except where this Plan is more specific.

SECTION EIGHT • DEFINITIONS

1. **ACCESS DREDGING.** Mechanically deepening the riverbed by removal or movement of river materials for the purpose of providing free movement of vessels from a facility to deep water or to prevent floating structures from going aground at low water.

2. **ACTIVITY/PROJECT/PROPOSAL.** Any action requiring a removal and/or fill permit, lease, easement, license or combination thereof in the LWRMP area that is regulated by the Division. Activities at more than one location for a related purpose by the same applicant/person shall be treated as a single project.

3. **ACTIVITY NOT ALLOWED.** An activity that is inappropriate or potentially too damaging to the public trust values to be permitted within a Waterway Management Area.

4. **ADVERSE EFFECT.** A reasonable likelihood of more than moderate negative impact to public trust values (i.e., fisheries, commer-
cial navigation, public recreation) of the LWRMP area, the determination of which is based on:

a) The location of a proposed activity;

b) The intensity of a proposed activity, including the magnitude and duration of an impact and the likelihood of its occurrence;

c) The relationship between the proposed activity and other similar activities which are individually insignificant but which may have cumulatively significant impacts; and

d) Proven mitigation measures which the proponent of an activity will implement as part of the proposal to reduce otherwise significant effects to an insignificant level.

5. AGGREGATE MINING. The removal of sand, gravel, or similar river substrate materials for commercial use or sale.

6. ALLOWABLE ACTIVITIES/ALLOWED ACTIVITY. Activities that support river-dependent or river-related uses and can be designed to meet all General Conditions and Provisional Standards.

7. APPLICANT/PERSON. Natural person, corporations, associations, firms, partnerships, joint stock companies, and governmental bodies.

8. AUTHORIZED NAVIGATION CHANNEL. The area of the river defined by Congress for the purpose of allowing vessel access.

9. BANKFULL STAGE. The stage or elevation at which water overflows the natural banks of streams or other waters of this state and begins to inundate the upland. In the absence of physical evidence, the two-year recurrence interval flood elevation may be used to approximate the bankfull stage.

10. BEACH NOURISHMENT. Depositing dredged materials onto actively eroding shorelines to prevent further loss of shoreline materials or to maintain greater material depth.

11. BEDS OR BANKS. The physical container of the waters of this state lying below bankfull stage.

12. BERTH. A place where a vessel lies at anchor or at a wharf or dock or pier.

13. BOARD/LAND BOARD. The Oregon State Land Board made up of the Governor, Secretary of State, and the State Treasurer. The Board is the policy making body for the Division of State Lands and the public trust holder of submerged and submersible lands.

14. BORROW DREDGING. Removal of river materials for construction uses (e.g., upland filling).

15. BRIDGES. A structure designed for railroad, pedestrians or automobiles crossing over the river or waterbody and linking one riverbank with the other.

16. CONSERVANCY AREA. A designated Waterway Management Area including riverbank and water surface locations that are relatively undeveloped and contain a significant cultural, historical, visual or natural feature (e.g., wetland), or other public use value.

These areas are administered to accommodate a wide range of river-dependent and river-related uses that are supportive of or complimentary to public use values, specifically fisheries and recreation.

17. CRD. Columbia River datum.
18. COMMERCIAL USE. Uses involved in the sale, rent or lease of new or used products, not manufacturing. Includes uses providing services.

19. CURRENTLY SERVICEABLE. Means usable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

20. DEMONSTRATED NEED/CONVINCINGLY DEMONSTRATE. To describe a situation/condition utilizing physical evidence and/or professional testimony in such a persuasive manner as meet the applicable Plan criteria for an activity under consideration.

21. DEQ. The Oregon Department of Environmental Quality.

22. DEVELOPMENT AREA. A designated Waterway Management Area including riverbank and water surface areas that generally are intensively developed and used for commercial, industrial or residential uses, or are zoned for these uses by local government and can be developed within acceptable standards for the protection of public use values.

23. DIRECTOR. The Director of the Oregon Division of State Lands or the Director's designee.

24. DIVISION. The Oregon Division of State Lands.

25. DOLPHIN. A cluster of piles bound together, often serving the same purpose as a single pile but used where more strength/stability is needed.

26. DREDGE MATERIALS DISPOSAL. The placement in the river of rock, soil, sediments, or other materials excavated from the river for the purpose of wasting or stockpiling the material, or utilizing the material for an approved beneficial purpose such as beach nourishment, fill, or riverbank erosion control treatment.

27. EASEMENT. A property right granted by the Division to use State land. The Division may grant easements over State-owned submerged and submerged lands.

28. ENCLOSED MOORAGE. A moorage that has completely enclosed roof, side and end walls similar to a car garage, (i.e., boat house).

29. ENHANCE. To modify a natural or recreational resource(s) to improve the quality or quantity of the resource and resource values. It can include actions that result in increased public access, animal and plant species, recreation opportunity, increased numbers of types of natural habitat, and/or increased amount of area devoted to natural habitat. It may also include improvements in scenic views and sites or public education opportunities.

30. EXISTING USE. A lawful use that is being made of the LWRMP area at the time of the adoption of this Plan.

31. FILL. The total deposit, by artificial means, equal to or exceeding 50 cubic yards or more of material, at one location in any waters of the LWRMP area.

32. FILLING TO CREATE UPLAND. The placement of material in the river or on the bank below bankfull stage, with the purpose of displacing the water to create more upland; to change the configuration of the existing beds and banks within the project area.

33. GENERAL CONDITIONS. The baseline requirement all activities must meet in order to be allowed.
34. GOAL. A statement of basic intent or general condition desired in the long term. Goals usually are not quantifiable and do not have specified dates for achievement.

35. HARBORLINE. An imaginary line established by the Port of Portland and the U.S. Army Corps of Engineers that provides guidance as to the maximum riverward extension of structures and fills. The harborlines run more or less parallel to each side of the riverbank but vary in distance riverward of the bank. Harborlines may be changed by the Port Commission when there is no adverse impact on navigation.

36. INTAKES. Any structure, usually a pipe, used to remove or divert water from the river.

37. LEASE. A conveyance of an interest in State land for a specific period of time, subject to specified terms and conditions. The Division requires a lease for some uses of State-owned submerged and submersible lands.

38. LICENSE. Temporary authorization from the Division for a particular use or activity on State land.

39. LOG BOOMING AREA. A water surface area bounded by floating, connected logs or other devices and used for confining loose logs, grading and sorting logs, assembly of log rafts; or to feed whole or partially processed log products into the mill.

40. LOG DUMP. A permanent facility located along the river bank where logs are deposited from the land into the water, usually by crane. The resulting log rafts floating in the water area not considered part of the log dump as defined elsewhere in this Plan.

41. LOG RAFT. A group of loose or bundled logs surrounded by boom logs which can be stored or moved on water as needed. A bundled log raft is comprised of a number of logs held together by metal straps and enclosed with boom logs which can be stored or moved on water as needed. A log raft is usually moored to piles of dolphins. A raft shall not be considered a structure.

42. LONG TERM STORAGE. Same as Temporary Storage but for periods extending beyond six (6) months at the same location with the same vessel or product lot.

43. LWRMP AREA/LOWER WILLAMETTE RIVER MANAGEMENT PLAN. The Division of State Lands and Oregon State Land Board's policy guidance for the discharge of its duties—waterway leasing, removal/fill, etc.—encompassing the Willamette River within the City of Portland (and including part of Sauvie Island and Multnomah Channel) from its confluence with the Columbia River at Kelley Point Park approximately 18 miles upstream to just above the Sellwood Bridge up to bankfull stage on each riverbank.

44. MAINTENANCE. The repair or rehabilitation of any previously authorized, currently serviceable structure or fill.

45. MAINTENANCE DREDGING. The periodic mechanical removal of sediments or other materials from the river for the purpose of providing sufficient depth to allow unencumbered movement of ships, barges, or other watercraft up and down the river within the existing navigation channel, to existing marinas, or berthing repair or terminal facilities (e.g., docks, piers, wharfs).

46. MAJOR EXCEPTION. A decision of the Board to allow a non river-dependent or non river-related use based on the criteria set out in the LWRMP.

47. MARINAS/MOORAGES. Terms often used interchangeably to describe a system of docks, piers, and walkways with connection to the riverbank that offer long or short term (trav-
sient) in-water storage for numerous vessels (commercial and/or recreational) or floating homes. Publicly-owned/operated marinas or moorages tend to cater to transient recreational boaters.

48. MATERIAL. Rock, gravel, sand, silt, and other inorganic substances removed from the waters of the LWRMP area and any materials, organic or inorganic, used to fill waters of this state.

49. MINOR EXCEPTION. A decision of the Director to allow a river-dependent or river-related use not allowed in a Waterway Management Area (Table G) or not identified during plan amendment.

50. MOORING OR ANCHOR BUOYS. A float securely attached to the riverbed by lines or chains used for securing a vessel.

51. NAVIGATION AIDS. Structures or devices such as buoys, channel markers, beacons, etc., placed in or along the river by or with the consent of appropriate State and Federal authorities to aid a person engaged in navigation.

52. NEW ACCESS OR CHANGE IN NAVIGATION CHANNEL DREDGING. The removal of sediments or other material from the river for the purpose of providing sufficient depth to allow unencumbered movement of ships, barges, or watercraft up and down the river within a new or revised navigation channel for access to new marina, berthing, repair or terminal facilities (e.g., docks, piers, wharfs).

53. NON-RESIDENTIAL FLOATING STRUCTURES. These are river-dependent or river-related structures, usually made of wood or concrete and containing a flotation system of polystyrene or similar materials, that ride on the river surface anchored either by a cable to the riverbed, to piling, or to the riverbank for uses including, but not limited to: public walks or river access not associated with a marina or moorage; water ski jumps; swimmer's resting platform; storage of marine-related equipment or boat storage; or boat fueling facility. Sometimes fully enclosed buildings are situated atop the floating structure. Restaurants, snack bars, and the like are not included in this definition.

54. ODFW. The Oregon Department of Fish and Wildlife.

55. OPEN WATER AREAS. A designated Waterway Management Area including water surface areas needed to meet the requirements of commercial navigation, recreation boating and fishing and other water-dependent recreation activities.

These areas are to be administered to assure that commercial navigation and on-water recreation activities can occur efficiently, safely and without impedance. New developments that promote, or are compatible with this purpose shall be permitted.

56. ORDINARY HIGH WATER LINE. The line on the bank or shore to which the water ordinarily rises annually. Ordinary high water shall be established by the Division with reference to historical data, vegetation, field observations, survey, or other generally accepted methods.

57. ORDINARY LOW WATERLINE. The line on the bank or shore to which the water ordinarily recedes annually. Ordinary low water shall be established by the Division with reference to historical data, field observations, survey, or other generally accepted methods.

58. OUTFALLS. A pipe-line structure usually made of concrete extending from the riverbank
to the river and used to discharge municipal or industrial wastewater, stormwater, or treated sewage or a combination. The pipe may extend into the river or spill at the water’s edge. Typically, an outfall is surrounded by riprap or a concrete bulkhead. They range in diameter from six inches to several feet.

59. OVERHEAD CABLE CROSSINGS. Electrical or telecommunications lines that cross above a waterway, supported either by shore-based towers or by poles on an existing waterway-crossing structure (e.g., highway or railroad).

60. PERMIT. A written instrument issued by the Division, which by its conditions may authorize the permittee to construct, install, modify or operate specified facilities or conduct specified activities not forbidden by law, but otherwise not allowable. The Division requires a permit for all activities involving removal and/or fill within the LWRMP area.

61. PERSONAL USE. Any use the purpose of which is personal enjoyment.

62. PIER/DOCK. Terms, often used interchangeably, to describe a single wood, concrete, or metal structure extending from the riverbank on or over the water for such purposes as: land and mooring vessels and float planes; supporting intake or discharge facilities; providing public access to the river often in association with a boat ramp, moorage or marina; or supporting machinery needed to load, unload, repair, or refuel vessels. These structures may be supported by piling or similar structures or float on the river surface; similar to a wharf.

63. PILE. A wood, steel, or concrete beam driven or jetted vertically into the river bed to secure a floating structure, log raft, or vessel.

64. POLICY. An intended course of action or a principle for guiding actions. In this Plan, Division policies for the LWRMP area management include goals, objectives, implementation plans and procedures.

65. PROVISIONAL ACTIVITY. An activity that must meet specific conditions before it will be permitted. Provisional activities may vary from one Waterway Management Area to another. The conditions are designed to protect public trust values.

66. PROVISIONAL STANDARDS. Criteria set forth for certain activities within each Waterway Management Area designed to assure that public trust values are protected or enhanced.

67. PUBLIC ACCESS. Facilities that enable the public to safely make physical and/or visual contact with the river and its environs as described in the GENERAL CONDITIONS (F) in this Plan.

68. PUBLIC ACCESS AREAS. A designated Waterway Management Area including publicly-owned riverbank and water surface locations developed to allow legal public access (both physical and visual) to the river. Typically these are designated park sites and are zoned for parks and recreation use.

These areas are administered to conserve and protect the identified significant public use values while allowing the continuance of existing uses so long as those values are not adversely affected. Allowable uses must be supportive of or complementary to the public use values present on the site.

69. PUBLIC BENEFIT. All citizens of the state may derive a direct benefit from Division actions in the form of environmental protection; energy and mineral production; the utilization of renewable resources; the promo-
tion of navigation and commerce by fostering water-dependent uses; encouraging direct public use and access; and generating revenue for the Common School Fund in a manner consistent with Article VIII, Section 5 of the Oregon Constitution.

70. PUBLIC TRUST AND PUBLIC TRUST VALUES. The State-owned bed and banks of the LWRMP area are held in trust by the State for all citizens with each citizen having an equal and undivided interest in the land. The Division has the responsibility to manage these lands in the best interest of the general public with special attention to such values as, but not limited, to public recreation, commercial navigation, and fisheries.

71. REMOVAL. The taking of more than 50 cubic yards or the equivalent weight in tons of material, in any waters of the LWRMP area in any calendar year, or the movement by artificial means of an equivalent amount of material on or within the bed of such waters, including channel relocation.

72. REMOVAL-FILL LAW. The statutes ORS 196.800 to 196.990 and rules adopted thereunder, relating to the filling, removal or movement of material in the waters of this state.

73. RESIDENTIAL FLOATING STRUCTURE (often referred to as houseboat or floating home). Single or multiple family dwellings supported on the river by a flotation system. This is not a river-dependent or river-related use. A system of piles, berths, walkways, and ramps also associated with floating home moorages.

74. RIPARIAN. Related to, living, or located on the bank of a waterway.

75. RIPARIAN HABITAT IMPROVEMENT. Actions other than Riverbank Excavation and Riverbank Revegetation designed to improve the quality of fish and wildlife habitat along the riverbank (e.g., placement of nesting boxes, perches).

76. RIVER-DEPENDENT. A use or activity which can be carried out only on, in, or adjacent to water areas because the use requires access to the water body for waterborne transportation, recreation, energy production, or source of water. River-dependent uses include, but are not limited to, the following:

a) River Industrial Uses
   1) Terminal and transfer facilities for transport of passengers or goods over water;
   2) Moorage, fueling and servicing of commercial vessels;
   3) Industries which receive or ship goods or materials by water as an essential part of their operation;
   4) Major marine construction, dismantling and repair; and
   5) Fishing and pleasure boat construction, repair and outfitting.

b) River Commercial, Recreation Uses and Services
   1) Pleasure boat moorage and marinas, including fueling and servicing facilities;
   2) Boat launch and haul out facilities (public and private);
   3) Courtesy docks, boarding floats
   4) Ship or large vessel building/repairs except trailerable boats;
   5) Boat rental or charter if boats are on premises; and
   6) Tour boat or water taxi loading, unloading and docking facilities

c) Riverbank Recreation
   1) Fishing piers; and
2) Boating clubs, rowing, canoeing, and instructional and storage facilities;  

    d) Intakes, Outfalls, Pipe and Cable Crossings (submerged and overhead)  

    e) Riverbank Erosion Control—structures, such as but not limited to bulkheads and fixed or floating breakwaters for natural beach protection used when necessary to protect against erosion.  

    f) Navigation Aids  

77. RIVER-RELATED. Uses which are not directly dependent upon access to a water body, but which provide goods or services that are directly associated with water-dependent land or waterway use, and which, if not located adjacent to water, would result in a public loss of quality in the goods or services offered. Except as necessary for water-dependent or water-related uses or facilities, residences, parking lots, spoil and dump sites, roads and highways, restaurants, businesses, factories, and trailer parks are not generally considered dependent on or related to water location needs. River-related uses include, but are not limited to, the following:  

    a) River Commercial/Recreation Uses and Services—boat sales if boats are displayed in the water.  

    b) Riverbank Recreation  

       1) Parks and accessory uses (not including non-water oriented park facilities such as playgrounds playgrounds);  

       2) Bicycle and walking trails;  

       3) Beaches, public or group facilities at river-oriented parks; and  

       4) River-oriented viewpoints.  

    c) Transportation Structures on Piers or Pilinggs  

78. RIVERBANK EROSION CONTROL TREATMENT. The construction and placement along a riverbank of hardened structures made of rocks and/or concrete, or riverbank regrading and planting designed to retard the river’s force and current from damaging newly developed or constructed filled land, bridges, outfalls, dikes, buildings, railroads, highways, homes, or earthen riverbanks. If 50 cubic yards of material is involved, these activities require a State removal-fill permit.  

79. RIVERBANK EXCAVATION. The mechanical removal or rearrangement of the riverbank (up to ordinary high water) for purposes including, but not limited to, the following: levee or dike repair or construction, creating new water surface area from upland, removal and/or demolition of riverbank structures (e.g., bulkheads); regrading the riverbank slope and constructing public access (including stairways and boat launch ramps) and riparian vegetation planting. If 50 cubic yards or more of riverbank material is removed or moved, a State removal/fill permit is required.  

80. RIVERBANK REVEGETATION. The planting of grass, brush, and tree species between ordinary low water (OLW) and ordinary high water (OHW) for the purpose of improving the visual, recreation, fish and wildlife values, and water and air quality.  

81. SIGNIFICANT. A noticeably or measurably large amount.  

82. SLIP. A ship or boat’s berth between two piers.  

83. STRUCTURE. Anything constructed or erected, the use of which requires location on the riverbed or banks, or attachment to something having location on the riverbed or bank. This definition does not include log rafts.
84. **SUBMERGED LAND.** Lands lying below the line of ordinary low water of all navigable waters within the boundaries of this state as heretofore or hereafter established, whether such waters are tidal or nontidal.

85. **SUBMERGED PIPE AND CABLE CROSSING.** Underwater crossings of the river of pipe, wire, or cable on or under the river bed. Gas, sewer, water, electric, or telephone utilities are often placed in this way.

86. **SUBMERSIBLE LAND.** Lands lying between the line of ordinary high water and the line of ordinary low water of all navigable waters and all islands, shore lands or other such lands held by or granted to this State by virtue of her sovereignty, wherever applicable, within the boundaries of this state as heretofore or hereafter established, whether such waters or lands are tidal or nontidal.

87. **TEMPORARY STORAGE.** Parking or storing for more than 15 days and less than six months, of vessels, equipment, or materials which are in transit or are on public display for less than 6 months (i.e., barges, ships, dredging and marine construction equipment). It does not include the long term storage (more than 6 months) of such objects at the same location. Dolphins and/or piling are often used to secure stored vessels or equipment.

88. **TERMINAL.** A point of interchange between land and water carrier, such as a pier, wharf, or group of such, equipped with facilities for care and handling of cargo and/or passengers.

89. **TOWBOAT.** A vessel normally and regularly engaged in pushing or towing other vessels, barges, log, and lumber rafts and booms, and like objects.

90. **TRANSIENT DOCK.** A small dock, not necessarily secured to the riverbank, but anchored or secured to piling for the purpose of providing recreational boaters a safe, secure, out-of-channel temporary stopping point.

91. **TRANSPORTATION STRUCTURES ON PIERS OR PILINGS.** Railroad or highway wood, concrete, or metal structures that are situated in the river or on the riverbank but do not cross the river (e.g., freeway ramps).

92. **USE.** The purpose for which land or a building is designed, arranged or intended, for which it is occupied or maintained, let or leased.

93. **VESSEL.** Any type of watercraft including float planes.

94. **WAIVER.** A decision of the Director to suspend, alter, modify or otherwise change a standard or condition applicable to an activity based upon criteria set out in the LWRMP.

95. **WATERS OF THE STATE.** Natural waterways including all tidal and nontidal bays, intermittent streams, constantly flowing streams, lakes, wetlands and other bodies of water in this state, navigable and non-navigable, including that portion of the Pacific Ocean which is in the boundaries of this state.

96. **WATERWAY MANAGEMENT AREA.** A designation (there are four possible--Development Area, Public Access Area, Conservancy Area, and Open Water Area) assigned to a specific portion of the river that gives policy guidance on the kinds of permitted activities and specific conditions that apply to those activities.

97. **WHARF.** Similar in construction to pier/dock. It is used and/or accommodates ships, boats or vessels engaged exclusively in the receipt and discharge of goods or merchandise or in the performance of governmental functions on the river.
PART G
PUBLIC TRUST VALUES
PUBLIC TRUST VALUES

INTRODUCTION

This part of the Lower Willamette River Management Plan (LWRMP) examines the Public Trust values of the study area and explains how this Plan provides for their protection and enhancement.

The Division of State Lands has special management responsibilities for State-owned land underlying navigable waters arising from the Oregon Constitution and Oregon law. Each contain provisions embracing principles commonly known as the Public Trust Doctrine.

The Public Trust Doctrine is remarkable both for its age and for its vigor. Rooted in the customs of the seafaring Greeks and Romans, it has evolved to become one of the most effective safeguards of public rights. Basically, the trust reflects the ancient concept that navigable waters and their bed and banks should be enjoyed by all the people because they are too important to be reserved solely for private use.

In America, the concept of public rights to public waters was recognized since the early days of the Massachusetts Bay Colony where the Great Pond Ordinance of 1641 guaranteed the right to fish and fowl in ponds greater than ten acres, along with the freedom to pass through private property to do so.

By 1821, American courts were pronouncing the law of public trust as we know it today. This does not mean that private water-dependent/related development is prohibited. The Public Trust Doctrine allows the State to permit waterway improvements, including such things as ports, docks and wharves, thus furthering the purpose of the trust, provided that public use is not alienated.

In the 19th century, the purposes of the trust were generally described as “commerce, navigation and fishery.” This was logical because the major waterways were essential highways of commerce. But as other values have become increasingly important, courts have recognized recreation and environmental protection among the purposes for which the trust exists.

A working definition of the public trust is... a doctrine that requires the Division of State Lands to manage State-owned submerged and submersible lands for the benefit of the people so they can engage in such activities as commerce, navigation, fishing, and recreation.

When private or other exclusive uses are authorized (e.g., marinas, docks, log rafts) for these submerged and/or submersible lands, the users pay fair compensation for their use. All income from those uses is currently deposited in the State’s Common School Fund.

In order to protect and enhance the public trust the LWRMP focuses on...

(a) protecting and conserving shallow water (less than 15' deep/Columbia River datum) for its
high value for fish food production and aquatic habitat for warm water fish, yearling chinook salmon and juvenile steelhead. Shallow water habitat is a term used to describe shoreline areas that are often more biologically productive than other areas. Depth is used as a general indicator for areas that receive more effective light penetration, have higher primary productivity (phytoplankton, emergent, submerged and riparian vegetation), have stable substrates, have sites for periphyton, etc., and that lead to greater value for aquatic life in the lower Willamette River. It is recognized that not all shallow water habitat areas are, in fact, biologically active or uniformly biologically important. Rather, these areas are typically more valuable than deeper areas. Shallow water habitat is arbitrarily defined as areas less than 15' CRD;

(b) preserving and protecting water surface commonly used by recreational boaters (including fishermen), barges, tugs, and deep draft ships to allow continued relatively unencumbered use of the waterway now and in the future;

(c) protecting the existing navigation channel from encroachment by development and allowing for its continued maintenance;

(d) preserving and protecting designated water surface areas for existing and future river-dependent and river-related development;

(e) providing for public access and riverbank rehabilitation when new activities are undertaken;

(f) recognizing the harborline as a tool for protecting the river channel from development encroachment;

(g) preserving and protecting designated water surface areas for their natural appearance and condition;

(h) recognizing that improving water quality has beneficial effects on fisheries and recreation; and

(i) requiring equal replacement or gain of public trust values lost by filling to create new upland.

BACKGROUND

Recreational Boating

The Willamette River is a significant boating resource. On any relatively warm, clear day, people and boats rush to the river’s shoreline and into its currents. At times, especially during the summer, the river seems full, if not over-flowing, with activity. Barges, yachts, ski boats, ships, and rowing shells routinely coexist on a waterway that can be, in different locations, both highly urbanized and seemingly natural in appearance. The diverse setting and mixture of boating that takes place on the Willamette River give it a unique character and contribute to its overall appeal.

The popularity of the Willamette is a statistical fact as well. According to responses to the Oregon State Marine Board’s (OSMB) 1990 survey of randomly selected registered boaters, a total of 645,173 boat use days took place on the Willamette River in the nine counties through which it flows. This comprises over 17 percent of the 3,728,918 boating days logged in Oregon throughout 1989. Only the Columbia River surpasses the Willamette in boating significance statewide.

Over half (53%) of all recreational boating on the Willamette is concentrated in Multnomah County, along the lower section of the river form its confluence with the Columbia at Kelley Point, upstream to just above Sellwood Bridge. In 1989, a total of 342,314 boat use days were reported on this relatively short 18-mile stretch of river. Thus, the Willamette River in Multnomah County alone accounts for nearly ten percent of all boat use days in Oregon.
Use of the river by recreational boaters has risen dramatically, increasing by 150 percent between 1978 and 1989.

Use of the Lower Willamette is seasonal with the heaviest activity occurring during the warmer summer months. Unofficially, the boating season kicks off on Memorial Day weekend, is well underway by the Rose Festival in June, and runs through the end of September. In any year, the actual beginning and end of the season are more dependent on weather conditions, water levels, and the spring/fall salmon run than the calendar.

Usage peaks on weekends and holidays throughout the summer when all types of water-related activities vie for available facilities and surface water. A significant amount of fishing takes place from boats, in conjunction with the spring salmon run. Weekend activity is much more intense than during the week in all seasons. In general, the amount of boating during the shoulder months (i.e. before and after the high months) of the season has been observed to be on the rise over the last five years.

Boating activity on the lower Willamette is extremely diverse. In general, traffic on this stretch of the river normally includes barges, yachts, sailcraft, rowing shells and sculls, canoes, ski boats and runabouts, fishing boats, jet boats, personal watercraft (jet skis, etc.), and even “cigarette” boats. This diversity is not typical of all Oregon waterways.

Certain watercraft types can be characterized as using some segments of the river more than others. The following descriptions exemplify this point:

- Fishing boats tend to be both a seasonal and localized phenomena. During the spring salmon run, anglers take to the water in sizable numbers, congregating in the lowest section of the river from Cathedral Park downstream to Kelley Point. Prime locations tend to be near the confluence of the Willamette and Columbia, at the upper end of Multnomah Channel, and the Sellwood Bridge. Anglers follow the fish up and down the river wherever they are biting.

- Deep draft commercial vessels are generally restricted to the harbor below the Broadway Bridge while barge traffic extends up to and beyond Ross Island.

- Personal watercraft use is generally heaviest in the area between RiverPlace Marina and Willamette Park, although activity can also be heavy above the Sellwood Bridge and in the Multnomah Channel.

- Waterskiing tends to be the heaviest around Ross Island and Willamette Park. A slalom course and jump ramp are located in the main channel off the south end of Ross Island. A number of competitive events and waterskiing promotions take place around the slalom run each summer.

- Sailing is generally limited to smaller craft (smaller than 26') that moor at local yacht clubs and other moorages. The main river from Ross Island and up tends to receive more sailing use than the lower river. Larger sailcraft (over 26') and more experienced sailors may cruise the lower river under power but tend to prefer to sail on the Columbia River between the I-5 and I-205 bridges. Several sailing schools offer classes and rent sailcraft in the area above RiverPlace Marina and local sailing clubs frequently stage events in the vicinity of Ross Island.

- Canoes and rowed craft also tend to congregate above the Ross Island Bridge. Several rowing clubs are located along this stretch of the river. One of the most popular areas for rowing is in Holgate Slough at Ross Island. Rowing activity also is present at RiverPlace and the Station “L” Rowing Club near the Fremont Bridge.
In comparison with the mix of activity types engaged in by registered watercraft statewide, the lower Willamette appears to be less dominated by fishing and more popular for cruising and sailing according to the OSMB survey. In fact, nearly 20 percent of all sailing reported in Oregon during 1989 was recorded on the Multnomah County portion of the Willamette River. This represents a significant shift in the historical use of the river. This data does not include the observed boom in non-motorized boating use, particularly in the more sheltered backwaters of the river or in the RiverPlace area.

With a multiplicity of boating uses occurring within a relatively short, narrow, and fairly unregulated waterway, conflicts and problems are bound to happen. Listed below are a number of frequently cited boating conflicts:

- Commercial river traffic vs. anglers throughout the river and most notably from Kelley Point upriver to Cathedral Park.

- Waterskiers and motorized cruisers vs. non-motorized watercraft particularly in Holgate Slough/Ross Island area.

- Floating home owners vs. all wake-producing watercraft particularly in Holgate Slough, around Sellwood Bridge.

- Anglers vs. wake-and-noise-producing craft during the salmon runs.

- Rowers, paddlers, sailcraft, and floating home owners vs. "noisy and recklessly operated" personal watercraft.

- Sailcraft vs. motorized activities in the Ross Island area during regatta events.

- Commercial and recreational river traffic vs. shoreline users and swimmers at Kelley Point Park.

- Commercial vessels vs. slow, non-motorized watercraft in the navigational channel.

Conflicts between users can take place at any time and at any place along the river. Most clashes, however, both figuratively and literally, happen during the peak use periods on summer weekends and spring/fall salmon runs. Accident statistics do not support the classification of the lower Willamette as a perilous river for boating. Since 1987, when 22 boating accidents resulted in nine injuries and one death, the number of incidents reported have declined dramatically. Accidents in 1988 totaled 14 including four injuries and no deaths, while 1989 statistics reveal only 11 reported accidents resulting in three injuries and no deaths.

It should be pointed out that while boating fatality statistics are accurate, accidents are known to be widely under-reported. Boating on the Willamette River should be taken very seriously by the boating public. Caution is particularly advised during peak use times when low and/or high water conditions accentuate navigational hazards and whenever commercial vessels are on the waterway. The lower river cannot be viewed as an isolated waterway. Boating is a fluid activity, generally spreading out over all available water surface. Although it is difficult to quantify, some of the boat use originates at access points and boating facilities located outside the boundaries of the LWRMP study area--from Oregon City to Vancouver, Washington. Public use areas in Multnomah Channel, Hayden Island, and other Columbia River sites, and Clackamette Park, and other upstream parks along the river, certainly contribute to the boating milieu on the lower Willamette River.

Privately-owned and operated facilities are also important pieces of the boating puzzle. Above RiverPlace Marina there are eight private marinas and/or moorages, including about 88 registered floating homes, all of which add boating traffic to the river. A variety of private facilities located in the Multnomah Channel and on the Columbia River.

PART G - 4
send boats to the lower Willamette River boating scene as well.

By looking at several different scenarios, an estimate of future recreational boating use on the river can be developed. These scenarios investigate boater registration and population growth trends, actual boating use trends, and boating use projections based on the Statewide Comprehensive Outdoor Recreation Plan (SCORP). OSMB's analysis of these methods yield estimates of increase in recreational boating use by the year 2000 to range from a high of 31 percent to a low of 9.5 percent.

Fisheries

The lower Willamette River serves not only as an important fish production, rearing, and harvest area, but also as a critical link for the migratory fish resources to and from the upper Willamette River basin and tributaries.

Adult anadromous fish (migratory fish) can be found in the deeper main channel of the river throughout much of the year. The salmon "run" in the spring and fall, and the steelhead "run" in the summer and winter. Adults use the river only for passage in their upstream migratory run to spawn (summer steelhead and spring chinook travel as far upriver as the McKenzie River). Juvenile anadromous fish also use the river throughout most of the year, particularly the near shore, shallow areas, for resting, loafing and feeding during their downstream migration. Numbers of juvenile anadromous fish that migrate through the lower Willamette River varies annually depending on numbers of hatchery fish released and success of those fish that spawned in the wild. In 1990, the number of juvenile anadromous fish (spring and fall chinook; summer and winter steelhead) released from ODFW hatcheries was 13.2 million.

Spring chinook bound for the Willamette River annually begin entering the Columbia River about the first of January, increasing to peak numbers in late March, and tapering off into May. This run of salmon contributes substantially to the mainstem Columbia River commercial and sport fisheries, and supports a choice recreational fishery in the lower Willamette River that has few equals for attraction and intensity. Contribution of Willamette spring chinook to the ocean troll catch is also important, primarily off Canada and southeast Alaska. The lower Willamette recreational fishery peaks in April and the run passes over Willamette Falls, primarily in May and June, returning to upriver tributaries and hatcheries to await spawning.

The total Willamette River-bound spring chinook that entered the Columbia River in 1990 was 130,600. The 1990 run was a recent year record high. The 1990 winter gillnet season on the lower Columbia River below the Willamette River mouth (Kelley Point) was 20 days, February 11 through March 9, the longest season since 1958. Of 18,300 spring chinook caught, 15,500 or 85% were estimated to be Willamette River fish.

The 1990 total spring chinook recreational catch in the lower Columbia River below the Willamette River mouth was 12,200 from 85,461 angler trips during February and March, April 1-4 extension, and April 5-15 Multnomah Channel terminal fishery. This was the largest main-stem catch since 1977. Willamette fish numbered 8,800 (72%) in this catch, based upon visual stock identification.

The total spring chinook catch in the lower Willamette River in 1990 was 23,000 chinook (fourth highest on record) from 200,300 angler trips (second highest on record). Estimates in 1990 for the LWRMP area was 6,800 (30%) chinook from 66,600 (33%) angler days. In the lower Clackamas River in 1990, 4,700 chinook (record high) were caught for 22,100 angler trips (record high). The portion of Clackamas River-bound spring chinook that entered the Willamette River in 1990 was estimated to number 11,400, a record high. The total lower Willamette and lower Clackamas catch of 27,700 chinook was a record
was G-6

high, and the angler trip total of 222,400 was second highest on record.

Three species of salmon (including two races of chinook) and two races of steelhead were counted at Willamette Falls in 1990. All of the fish passing Willamette Falls fishway pass through the LWRMP area.

Passage of spring chinook is considered to be complete on July 31. The 1990 count of 71,300 at Willamette Falls was the largest count since the record count of 76,400 in 1953.

Fall chinook pass Willamette Falls from mid-August through late September with peak passage from early to mid-September. The 1990 total count of fall chinook over Willamette Falls was 4,912. The adult count of 4,490 was 70% below the 10-year (1980-89) average of 14,871 and the lowest since 1968.

Coho passes Willamette Falls from late August through early November with peak numbers passing in middle to late September. During 1990, 2,718 (adults and jacks) coho passed Willamette Falls. This combined adult and jack count was 43% below the 10-year (1980-89) average of 4,772. The 1990 total count was the second lowest since 1965.

Winter steelhead pass Willamette Falls from November 1 through May 15. The 1990 total count of 11,107 winter steelhead was composed of 1,878 early-run (November 1 through February 15) and 9,229 late-run (February 16 through May 15) winters. The 1990 total count is the sixth lowest since 1971. The early-run count was the lowest, and the late-run count was the eighth highest since 1971.

Summer steelhead pass Willamette Falls starting in early March and continue through the end of October. Peak migration occurs from mid-May through June. The 1990 total count of 23,428 summer steelhead was the fourth highest count on record and 17% above the 10-year (1980-89) average of 19,979.

Sockeye salmon was not indigenous to the Willamette River. Sockeye pass Willamette Falls July through September. The total 1990 count of 57 was the second lowest since 1982. Based on the Willamette Basin Fish Management Plan, the sockeye run is being eliminated from the Willamette River.

Warmwater fish (i.e., bass, catfish, perch, crappies, and others) populate areas which provide a degree of shelter or a change in waterflow. Inlets, sloughs, and backwaters, in addition to areas around or under man-made structures, serve these purposes (e.g., log rafts, piers, piling). In particular, the warmer shallow water areas (less than 15 feet in depth CRD) are important warmwater fish habitat protection areas for fish feeding and spawning.

Data was collected on fish species present in the lower Willamette River, as part of a cooperative study by the Oregon Department of Fish and Wildlife and the Port of Portland, to evaluate the effects of waterway developments on fish populations.

Fish were collected in the Willamette River from its confluence with the Columbia River upstream to river kilometer (RKm) 27. Most sampling was conducted from RKm 19. Most development within Portland Harbor lies between RKm 5 and RKm 17.

The study identified 39 fish species from 17 families (see Tables H, I, and J). A general description of distribution and relative abundance of individual species follows.

Acipenseridae White sturgeon were caught in bottom gillnets throughout the study area (Table I). Catch rates were highest at RKm 0.3 and RKm 15.8, two sites characterized by a sandy beach shoreline with no structures present.
TABLE H


<table>
<thead>
<tr>
<th>FAMILY</th>
<th>SPECIES (Common Name)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petromyzontidae</td>
<td>Pacific lamprey</td>
</tr>
<tr>
<td>Acipenseridae</td>
<td>white sturgeon</td>
</tr>
<tr>
<td>Clupeidae</td>
<td>* American shad</td>
</tr>
<tr>
<td>Salmonidae</td>
<td>coho salmon, chinook salmon, steelhead trout (rainbow trout), *sockeye salmon, cutthroat trout, mountain whitefish</td>
</tr>
<tr>
<td>Osmeridae</td>
<td>eulachon</td>
</tr>
<tr>
<td>Cyprinidae</td>
<td>northern squawfish, peamouth, chiselmouth, *common carp, *goldfish redside shiner, longnose dace</td>
</tr>
<tr>
<td>Catostomidae</td>
<td>largescale sucker, mountain sucker</td>
</tr>
<tr>
<td>Ictaluridae</td>
<td>*yellow bullhead, *brown bullhead, *channel catfish</td>
</tr>
<tr>
<td>Gasterosteidae</td>
<td>threespine stickleback</td>
</tr>
<tr>
<td>Percopsidae</td>
<td>sand roller</td>
</tr>
<tr>
<td>Percichthyidae</td>
<td>*hybrid bass (white bass, striped bass)</td>
</tr>
<tr>
<td>Cyprinodontidae</td>
<td>*banded killifish</td>
</tr>
<tr>
<td>Percidae</td>
<td>*walleye, *yellow perch</td>
</tr>
<tr>
<td>Cottidae</td>
<td>prickly sculpin, reticulate sculpin</td>
</tr>
<tr>
<td>Characidae</td>
<td>*pirapatinga</td>
</tr>
<tr>
<td>Pleuronectidae</td>
<td>starry flounder</td>
</tr>
</tbody>
</table>

**PART G - 7**
TABLE I
Catch in bottom gillnets at nine sites in the Lower Willamette River, March - June, 1987-1990; number of 1-hour sets at each site is given in parentheses. Carp were common, but not counted.

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>Sampling Sites (river kilometer)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>(75)</td>
</tr>
<tr>
<td>White Sturgeon</td>
<td>157</td>
</tr>
<tr>
<td>American shad</td>
<td>9</td>
</tr>
<tr>
<td>Chinook salmon*</td>
<td>9</td>
</tr>
<tr>
<td>Steelhead*</td>
<td>13</td>
</tr>
<tr>
<td>Northern squawfish*</td>
<td>114</td>
</tr>
<tr>
<td>Peamouth</td>
<td>298</td>
</tr>
<tr>
<td>Largescale sucker</td>
<td>369</td>
</tr>
<tr>
<td>Yellow bullhead</td>
<td>0</td>
</tr>
<tr>
<td>Brown bullhead</td>
<td>1</td>
</tr>
<tr>
<td>White crappie</td>
<td>0</td>
</tr>
<tr>
<td>Black crappie</td>
<td>2</td>
</tr>
<tr>
<td>Bluegill</td>
<td>0</td>
</tr>
<tr>
<td>Pumpkinseed</td>
<td>0</td>
</tr>
<tr>
<td>Walleye</td>
<td>5</td>
</tr>
<tr>
<td>Yellow perch</td>
<td>3</td>
</tr>
<tr>
<td>Starry flounder*</td>
<td>4</td>
</tr>
</tbody>
</table>

a: Adult fish only
b: Fish >/= 200 mm.
c: Juvenile fish only
TABLE J

Electrofishing catch at nine sites in the Lower Willamette River, March - June 1987-1990; number of 15-min shocking units at each site is given in parentheses. All northern squawfish (>/>=200 mm fork length), centrarchids, walleye, and yellow perch (>/>=200 mm fork length) were counted. Many other species were encountered but not always counted.

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>0.3 (42)</th>
<th>1.9 (45)</th>
<th>8.0 (42)</th>
<th>8.2 (43)</th>
<th>10.9 (43)</th>
<th>12.2 (43)</th>
<th>15.8 (43)</th>
<th>15.9 (43)</th>
<th>27.0 (43)</th>
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</thead>
<tbody>
<tr>
<td>Northern squawfish*</td>
<td>14</td>
<td>33</td>
<td>24</td>
<td>22</td>
<td>18</td>
<td>15</td>
<td>25</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>White crappie</td>
<td>0</td>
<td>2</td>
<td>7</td>
<td>0</td>
<td>12</td>
<td>4</td>
<td>2</td>
<td>69</td>
<td>1</td>
</tr>
<tr>
<td>Black crappie</td>
<td>12</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>19</td>
<td>4</td>
<td>4</td>
<td>133</td>
<td>4</td>
</tr>
<tr>
<td>Bluegill</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>49</td>
<td>2</td>
</tr>
<tr>
<td>Pumpkinseed</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Smallmouth bass</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>1</td>
<td>13</td>
<td>12</td>
<td>5</td>
<td>40</td>
<td>13</td>
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<tr>
<td>Largemouth bass</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>14</td>
<td>5</td>
<td>2</td>
<td>115</td>
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</tr>
<tr>
<td>Walleye</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Yellow perch*</td>
<td>3</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>7</td>
<td>8</td>
<td>7</td>
<td>22</td>
<td>11</td>
</tr>
</tbody>
</table>

a: Fish >/= 200 mm; many fish < 200 mm were encountered but not counted

Salmonidae Adult and juvenile anadromous salmonids were common in the Willamette River during various times of the year. There appears to be some overwintering of juvenile chinook salmon in the lower river. Very few coastal cutthroat trout, resident rainbow trout, or mountain whitefish were collected.

Cyprinidae Northern squawfish were common throughout the study area, especially at sites with no structure present (Tables I and J). Peamouth and carp were also abundant and distributed throughout the study area (Table I).

Less abundant cyprinids included chiselmouth, goldfish, redside shiner, and longnose dace. Redside shiner were rare but caught all sampling sites.

Catostomidae Largescale suckers dominated the catch of catostomids, and comprised 40% of the total bottom-gillnet catch (Table I). Largescale suckers were distributed throughout the study area. Very few mountain suckers were collected and most were juveniles.

Centrarchidae Black crappie, white crappie and largemouth bass were the most abundant centrarchids in the lower Willamette River (Tables I and J). All three species were most abundant at RKm 15.9, an area characterized by a wharf with
closely-spaced pilings, a completely riprapped shoreline, and a shallow backwater area immediately downstream from the wharf.

Other centrarchids collected included smallmouth bass, bluegill, pumpkinseed, and warmouth. Most smallmouth bass and bluegill were caught at RKm 15.9 (Table J). Pumpkinseed and warmouth were relatively rare.

**Percidae** Although relative uncommon, walleye were caught throughout the study area (Tables I and J). Catch was highest at RKm 10.9. Yellow perch were abundant and evenly distributed throughout the study area (Table J).

**Others** Fish species that were observed but from which little information was collected were Pacific lamprey (Petromyzontidae), American shad (Clupeidae), eulachon (Osmeridae), yellow and brown bullheads and channel catfish (Ictaluridae), three-spine stickleback (Gasterosteidae), and sand roller (Percopsidae), banded killifish (Cyprinodontidae), prickly and reticulate sculpin (Cottidae), and starry flounder (Pleuronectidae). One eulachon (smelt) was caught in a gillnet. Ictalurid catches were low and only one channel catfish was caught. A few banded killifish were collected at RKm 27.0. Sculpin were common throughout the study area. Prickly sculpin comprised about 85% of the sculpins identified to species. Starry flounder juveniles were occasionally caught through the study area, primarily at sites with no development.

It is apparent that the relative abundance of various fish species differs among sites in the lower Willamette River. White sturgeon, important to both sport and commercial fisheries in the Columbia River system and found through the study area, were most abundant at two undeveloped sites with respect to the study. It is not known if white sturgeon actively avoid areas that have undergone significant habitat alterations, for the study results indicate the possibility of adverse affects of development on white sturgeon populations.

White sturgeon are also known to be found in abundance in three other areas of the lower Willamette River within the LWRMP with respect to recreational angling. The three areas are near Rivergate, Sellwood Riverfront Park, and in the deep water upstream of the Steel bridge.

**Commercial River Traffic**

Commercial vessel movements within the LWRMP include both oceangoing ships, and river tug and barge traffic. A 40-foot deep navigational channel is maintained between Portland and the lower Columbia River to accommodate oceangoing vessels. In the LWRMP the authorized channel width is from harborline to harborline.

The Port of Portland has the responsibility to maintain the navigation channel from the Broadway Bridge to the Ross Island Bridge.

Above the Ross Island Bridge, the channel is no longer maintained. The Corps has the responsibility to maintain the Federal navigation channel between the ocean and Willamette River Mile 11.7 (Broadway Bridge). To accomplish this task, the Corps uses hired labor dredges or contract dredges. As a condition of the local cooperation agreement with the federal government, the Port of Portland makes a pipeline dredge available to the Corps on a cost reimbursable basis. The Port of Portland’s pipeline dredge OREGON fulfills their obligation. Maintenance dredging of the navigation channel in the lower Willamette River is generally accomplished by a contract clamshell dredge, although the Port of Portland may use other means for maintaining the terminal areas outside of the channel.

The Port of Portland is Oregon’s largest and most diversified port. It exports a larger volume of goods than any other port on the West Coast and ranks third in total waterborne commerce behind Long Beach and Los Angeles. Portland is the fifth largest auto import center in the country handling
almost 12 percent of all import cars entering the United States.

In addition to five marine terminals, the Port of Portland manages the Portland Ship Repair Yard. The Portland Ship Repair Yard handles more than 45 percent of all commercial repair work done on the West Coast including the world’s largest oil tankers, cruise ships, military vessels, tugs, barges, dredges, and a variety of special-use ships. The 125-acre yard is unique as the only publicly-owned, privately-operated major shipyard in the United States.

In addition to the Port’s terminal facilities and ship repair yard, there are about 38 other private terminals handling such diverse products as paper goods, grain, palm oil, petroleum fertilizer, steel, and chemicals. This “working harbor” part of the river from Kelley Point Park to the Steel Bridge is the most industrialized area of Oregon and offers work to a large percentage of the state’s work force.

The Port estimates annual average growth in its cargo handling to range from 2 percent to 4.6 percent over the next 20 years (see discussion of the Port’s 1991 Marine Terminals Master Plan in Part H—Relationship of LWRMP to Other Agency Plans). Some improvements at Terminal 4 are anticipated.

Ocean-going and river tugs move barges and log rafts around the Portland Harbor, and to and from Lake Oswego, Oregon City, Milwaukie, and West Linn, and into the Columbia River (see Barge Operator’s Information Project Report in Appendix).

Cargo includes paper goods, wood chips, lumber, petroleum products, sand and gravel, and logs. Barges may be enclosed or flat; may range in length from 30 feet to 200 feet; and width to around 40 feet. While in transit several barges may be lashed together. Barges draft 10-15 feet of water; tugs push these barges. Log raft may be several hundred feet long and 100 to 150 feet wide; tugs tow log rafts.

Barges and log rafts are difficult to maneuver. Controlling the “tow” requires considerable skill and experience, particularly in confined areas or when the channel is shared with other (e.g., recreational boaters, swimmers, waterfowl) water users.

Like deep draft vessels, safe and efficient movement on the river is affected by the location of in-water developments, shoreline uses, and rational and other commercial boating traffic.

Barge traffic is heaviest in the LWRMP area below the Steel Bridge. Trips also occur upriver particularly around Ross Island and to West Linn or City and Lake Oswego. Traffic is expected to remain more constant in the future within “working harbor” and around Ross Island. Up trips to the Oregon City paper mills and operators may decline slightly. Log raft traffic may decrease considerably depending on timber supply and demand and the needs of Lin Plywood, and public policy dealing with restricted log imports.

Barges are daily users of the river, year around, any time of the day or week. It appears with the exception of major public use facilities (Kelley Point Park and River Place) there is a river area and few obstructions to hamper efficient barge movement. At Holgate Slough in the spring chinook boat fishing areas there are hazards or conditions which cause operators to slow down and operate more cautiously. Generally, these hazards include small boats, swimmers, waterskiers, fishermen, floating docks or float home moorages. The preferred course of the river through the LWRMP is well within the existing harborline and recognized channel area.

New in-water developments will likely not interfere with barge movement if kept out of the channel and landward of the harborline. Increasing water dependent recreation activities (swimming, boating, etc.) along the river, however, may increase conflicts and result in barge traffic delays.
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Barges and log rafts are difficult to maneuver and stop. Controlling the “tow” requires considerable skill and experience, particularly in confined river areas or when the channel is shared with other users (e.g., recreational boaters, swimmers, waterskiers, etc.).

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New in-water developments will likely not interfere with barge movement if kept out of the channel and landward of the harborline. Increasing water-dependent recreation activities (swimming, boating, etc.) along the river, however, may increase conflicts and result in barge traffic delays.
In recent years there has been an increase in tourboats within the LWRMP. The Columbia River Sternwheeler from the Port of Cascade Locks operates in the area during the winter as does Yachts of Fun, The Portland Rose, and others. Conventions and tourists particularly enjoy these tours. In addition, water taxi service is just beginning to be available. A major component of the City's Central City Plan envisions a network of water taxi stops between the Albina railroad yard area and Sellwood, with stops at the Convention Center downtown, Oaks Amusement Park, RiverPlace, and the new Oregon Museum of Science and Industry.

Other River Uses

Although not strictly watercraft, seaplanes land and take off from the water surface within the LWRMP. There are an estimated 30 seaplanes in the metropolitan area, generally based either on Oregon Slough or on the Willamette between the Sellwood Bridge and Lake Oswego. There are seaplanes moored at Swan Island Lagoon. Seaplanes are not registered as watercraft by the Oregon State Marine Board.

The Federal Aviation Administration has identified two sites within the LWRMP for seaplane use—the River Queen restaurant area near the Broadway Bridge and RiverPlace.

Water Quality/Sediments

Water quality conditions are an issue for the public trust because the quality of the water within the LWRMP directly influences the health of the fishery and ability of the public to safely use the river for recreation.

A 1990 Department of Environmental Quality (DEQ) report issued under Section 305(b) of the federal Clean Water Act identified water quality problems within the LWRMP. The data in the report classifies uses of each stream as "supported," "not-supported," or "partially supported."

Within the LWRMP, water contact usage (e.g., swimming) is only "partially supported" due to excessive bacteria, aquatic life; fishing is "partially supported" due to toxic organics, metals and pesticides. Sources of the pollution include urban runoff, combined sewer overflows, municipal and industrial point sources, agricultural runoff, and septic tanks. A TMDL (Total Maximum Daily Load) for bacteria may need to be established in the future although one has not been imposed to date.

The Willamette River has been designated as a Water Quality Limited Stream due to toxic pollutants. Copper, chromium, lead, zinc, and DDT in the sediments exceed guidelines on the first eight river miles. The first 13 river miles exceed the standard for arsenic, and for the dioxin 2,3,7,8-TCDD.

DEQ has embarked upon a multi-year water quality study of the entire Willamette River. Problems with water quality within LWRMP can be traced at least in part to the City's combined sewer outfalls (CSO) that allow untreated sewage to enter the river at any time rainfall amounts exceed .15 inches. There are 56 CSO's within the LWRMP as well as a number of authorized industrial waste outfalls.

The City is currently considering alternatives to CSO's, although relief is not expected for some time.
PART H
RELATIONSHIP TO OTHER PLANS
RELATIONSHIP OF
LOWER WILLAMETTE RIVER
MANAGEMENT PLAN
TO OTHER AGENCY PLANS

A number of plans from other agencies were evaluated for their compatibility with the management direction proposed in the Lower Willamette River Management Plan (LWRMP). Those plans most strongly influencing development and public use activities within the study area are:

1) Willamette River Greenway Plan (State Parks and Recreation Department)

2) Regional Urban Growth Goals and Objectives (Metropolitan Service District)

3) Central City Plan (City of Portland)

4) Willamette River Greenway Plan (City of Portland)

5) Eastbank Master Plan (City of Portland, in process)

6) River Access and Transportation Study (City of Portland)

7) Comprehensive Land Use Plan (Multnomah County)

8) Marine Terminals Master Plan (Port of Portland)

9) Columbia River Maintenance Disposal Plan (U.S. Army Corps of Engineers)

1. WILLAMETTE RIVER GREENWAY PLAN (State Parks and Recreation Dept. 1976.)

Legislation in 1973 authorized the State Parks and Recreation Department (then an agency of the Oregon Department of Transportation) to develop a plan for the Willamette River Greenway. The law--ORS 390.318, and later the Land Conservation and Development Commission’s (LCDC) Willamette River Greenway Goal 15 set the framework for the plan. Accordingly, the plan completed in 1976 (and not revised since) includes:

1) The boundaries of the Willamette River Greenway.

2) The boundaries of the lands acquired or to be acquired as state parks and recreation areas under ORS 390.338.
3) The lands and interests in lands acquired, or to be acquired, by units of local government under ORS 390.330 to 390.360.

4) Lands within the Willamette River Greenway for which acquisition of a scenic easement, as provided in ORS 390.332, is sufficient for the purposes of each greenway.

5) The location of all known sub-surface mineral aggregate deposits situated on lands within the boundaries of the Willamette River Greenway.

LCDC Goal 15 required that the plan also include:

6) The general public purposes of each area which may be acquired;

7) The conditions under which acquisitions may occur;

8) Intensity classifications for the areas acquired by the State for Greenway purposes; and

9) The locations of public access, already existing or which may be acquired.

As anticipated, the Willamette River Greenway Plans for both Portland and Multnomah County have superceded this plan.

2. REGIONAL URBAN GROWTH GOALS AND OBJECTIVES (RUGGO) (METRO-1991)

The Regional Urban Growth Goals and Objectives (RUGGO) were developed to:

1) Respond to the direction given to METRO by the legislature through ORS chapter 268.380 to develop land use goals and objectives for the region which would replace those adopted by the Columbia Region Association of Governments;

2) Provide a policy framework for guiding METRO's regional planning program, principally its development of functional plans and management of the region's urban growth boundary; and

3) Provide a process for coordinating planning in the metropolitan area to maintain metropolitan livability.

This plan includes several objectives that directly relate to the LWRMP:

Goal I Regional Planning Process

Objective 4.5. Role of the State of Oregon. Advise METRO regarding the identification of areas and activities of metropolitan significance and the development of strategies to address them, and participate in the review and refinement of these goals and objectives.

Goal II Urban Form

The livability of the urban region should be maintained and enhanced through initiatives which:

II.i preserve environmental quality; and

II.ii. coordinate the development of jobs, housing, and public services and facilities.

Objective 9. Natural Parks and Wildlife Habitat. Sufficient open space in the urban region shall be acquired, or otherwise protected, and managed to provide reasonable and convenient access to sites for passive and active recreation. An open space system capable of sustaining or enhancing native wildlife and plant populations should be established.

9.2.3 A Willamette River Greenway Plan for the region should be implemented by the turn of the century.

16.2 Portland Central City. The Central City area of Portland is an area of regional and state significance for commercial, economic, cultural, tourism, government and transportation functions. State and regional policy and public investment should continue to recognize this special significance.

Objective 18. Urban Design. The identity and functioning of communities in the region shall be supported through:

18.i. the recognition and protection of critical open space features in the region;

18.ii. public policies which encourage diversity and excellence in the design and development of settlement patterns, landscapes, and structures.

3. CENTRAL CITY PLAN (City of Portland-1988)

This plan was adopted in March, 1988, as an amendment to the Comprehensive Plan. It encompasses the LWRMP from the Fremont Bridge south to the Ross Island Bridge on the east bank and includes the North Macadam district. The river is the most significant geographic feature and occupies 13% of the plan area and eight miles of shoreline.

Central City Plan Goal:

Encourage continued investment within Portland’s Central City while enhancing its attractiveness for work, recreation, and living. Through the implementation of the Central City Plan, coordinate development, provide aid and protection to Portland’s citizens, and enhance the Central City’s special natural, cultural, and aesthetic features.

Of the 13 Functional Policies, four (Willamette Riverfront, Natural Environment, Parks and Open Spaces, and Urban Design) directly relate to the LWRMP.

Policy 2 Willamette Riverfront

Enhance the Willamette River as the focal point for view, public activities, and development which knit the City together.

FURTHER:

A. Recapture the east bank of the Willamette Riverfront between the Marquam and Steel Bridges by expanding and enhancing the space available for non-vehicular uses.

B. Locate a wide range of affordable and attractive public activities and attractors along the riverbank and create frequent pedestrian access to the water’s edge.

C. Encourage a mixture of land uses along the river, while protecting opportunities for water-dependent uses, especially north of the Broadway Bridge.

D. Maintain and improve public views to and from the river.

E. Improve the Central City’s bridges for pedestrians and bicyclists and enhance the bridges’ role as connections between the two sides of the Willamette.

F. Encourage development of facilities that provide access to and from the water’s surface throughout the Central City.

G. Foster opportunities for touching and entering the Willamette River.
Policy 7 Natural Environment

*Improve the Central City’s environment by reducing pollution, keeping the Central City clean and green, and providing opportunities to enjoy nature.*

**FURTHER:**

A. *Reduce air pollution in the Central City*

B. *Improve water quality in the Willamette River.*

C. *Reduce noise and create areas of quiet in the Central City.*

D. *Create programs which discourage littering and provide increased litter removal.*

E. *Enhance urban wildlife habitat areas and create opportunities to enjoy them and to use them for educational purposes.*

Policy 8 Parks and Open Spaces

*Build a park and open space system of linked facilities that tie the Central City districts together and to the surrounding community.*

**FURTHER:**

A. *Create greenbelts that tie existing open spaces together using street trees, plazas, bicycle and pedestrian ways, recreational trails and new parks.*

B. *Meet the open space and recreation needs of each of the Central City districts.*

C. *Establish public transportation connections among major recreational facilities on land and water.*

D. *Ensure that a balance of passive and active parks and open space is provided.*

Policy 12 Urban Design

*Enhance the Central City as a livable, walkable area which focuses on the river and captures the glitter and excitement of city living.*

Of the eight districts that are included in the Central City Plan, five (Downtown, Northwest Triangle, Lower Albina, Central Eastside, and North Macadam) include policies and/or proposals for action that affect the river.

Policy 14 Downtown

*Strengthen the downtown as the heart of the region, maintain its role as the preeminent business location in the region, expand its role in retailing, entertainment, and governmental and ceremonial activities.*

**Proposal for Action:**

*Extend Waterfront Park to the west under the Morrison Bridge and establish a botanical garden, conservatory or aviary; study removing Front Avenue ramps, lowering/bridging over Front Avenue with open space.*

Policy 17 Northwest Triangle

*Preserve the district’s character and architectural heritage while encouraging both industrial activity and mixed use development.*

**Proposal for Action:**

*Develop a major public open space where the North Park Blocks extension meet the river. Build a public aquarium as a major attractor on or near the waterfront. Extend the North Park Blocks to the Willamette River. Investigate the feasibility of creating a water feature to focus the development in the rail yards area.*

Policy 18 Lower Albina

*Strengthen the economic development of the district as an industrial employment area while pre-
serving its historic buildings and providing a connection for pedestrians to the Willamette River.

FURTHER:

A. Preserve the riverbank for water-dependent industrial uses.

B. While preserving the cluster of historical buildings along Russell Street, allow a mix of uses which promote the economic health of the district.

C. Provide improvements which attract industry to the district.

D. Provide a connection for the adjacent neighborhoods to the district and river.

Proposals for Action:
Establish riverbank access on publicly-owned property north of the Fremont Bridge; include a fishing pier and a river taxi stop. Encourage water-dependent uses to locate on the riverfront.

Policy 20 Central Eastside

Preserve the Central Eastside as an industrial sanctuary while improving freeway access and expanding the area devoted to the Eastbank Esplanade.

Proposals for Action:
Develop a park at the east end of the Hawthorne Bridge. Consider using a part of this park for waterfront recreation for handicapped people and their families.

Preserve the publicly-held land and right-of-way from the riverbank to Water Avenue to ensure this land is not sold for private use. City will have the first right of refusal on an option to purchase this property.

Policy 21 North Macadam

Develop the district as a mixed-use neighborhood with significant residential development along the riverbank and commercial development along Macadam and the Jefferson Street light rail line.

FURTHER:

A. Orient new development to pedestrians and provide frequent links to the river.

B. Keep waterfront development low rise and allow taller buildings along the light rail corridor.

C. Complete the Willamette River Greenway Trail riverbank connection between John's Landing and River Place.

D. Improve road access and transit service within the district.

4. WILLAMETTE RIVER GREENWAY PLAN (City of Portland-1987)

The Greenway Plan was first adopted in the early 1980's and has been twice revised since then, the latest in November 1987. Required by state-wide Land Use Planning Goal 15, the plan identifies Goals and Objectives; delineates the Greenway boundary on the upland; establishes land use allocations, public access, development setback and public acquisition areas; and specifies conditions for development, intensification and change of use permits that are included in the zoning code. In addition, Willamette Greenway development design guidelines are also described.

The City's plan has seven primary objectives which it carries out through its land use regulation and permitting program.
Lower Willamette River Management Plan

1. To restore the Willamette River and its banks as a central axis and focus for the City and its neighborhoods and residents by coordinating public investment and private development and by establishing a program of land use, design, and public access requirements that maximize public use and appreciation of this diverse urban waterway.

2. To increase public access along the Willamette River.

3. To conserve and enhance the remaining natural riverbanks and riparian habitat along the river.

4. To provide an attractive quality environment along the Willamette River.

5. To maintain the economic viability of Portland’s maritime shipping facilities, based on the overall economic importance of deep-channel shipping to Portland’s and Oregon’s economy.

6. To reserve land within the Greenway for river-dependent and river-related recreation uses.

7. To meet the statutory requirement of Statewide Planning Goal 15, Willamette River Greenway.

See Part E--Regulatory Setting of the LWRMP for a detailed description of the Zoning Code requirement.

5. EASTBANK MASTERPLAN (City of Portland, in process)

The master plan for the Eastbank areas between the Steel and Ross Island Bridges is currently underway and expected to be complete in 1993. According to City Council Resolution 34936, “it is desirable to create a Master Plan to provide a vision and framework to guide both public and private investment in the Eastbank area.” The plan is likely to have a strong public access component to it. The City’s planning process (adopted January 1992) anticipates a comprehensive citizen and agency involvement process.

6. RIVER ACCESS AND TRANSPORTATION STUDY (City of Portland, 1992)

The Portland Office of Transportation recently completed a draft study exploring the possibilities of a River Taxi system in the urban core. As a follow-up to the Department’s efforts in the Oregon Convention Center enhancement program, improvements examined in this study are focused on the Steel Bridge and River Overlook, both adjacent to the Oregon Convention Center. A pedestrian crossing on the lower span of the Steel Bridge and pedestrian connections over the railroad and up to the Overlook are proposed, among other things. Information generated by this new study will be incorporated into this master plan effort.

7. COMPREHENSIVE LAND USE PLAN (Multnomah County)

The Multnomah County Plan includes its State-required Willamette River Greenway element. The area of the county within the LWRMP is all on Sauvie Island and is zoned either Exclusive Farm Use (EFU) or Multiple Use Agricultural District with a minimum lot size of 20 acres (MUA-20). The Greenway Special District zone encompasses all riverfront properties within the LWRMP as well as flood plain district designations.

The purposes of the Willamette River Greenway are to protect, conserve, enhance, and maintain the natural, scenic, historical, agricultural, economic, and recreational qualities of lands along the Willamette River; to implement the County’s responsibilities under ORS 390.310 to 390.368; to establish Greenway Compatibility Review Areas; and to establish criteria, standards and procedures.
for the intensification of uses, change of uses, or the development of lands within the Greenway.

See the Part E--Regulatory Setting of the LWRMP for a description of the county's Willamette River Greenway Special District.

8. MARINE TERMINALS MASTER PLAN
(Port of Portland-1991)

This document presents a master plan for the Port of Portland marine facilities. The Marine Termi-
nals Master Plan Update (MTMP) is a long-range look with a 20-year horizon. The objectives of this plan are the following:

- Identify the long-term land and facility requirements to meet regional marine cargo needs;
- Identify the best alternatives for meeting those needs; and
- Prepare cost estimates for principal improvements and identify the phasing of future projects.

The Port has four terminals directly involved in marine cargo handling within the LWRMP. The Port’s role in the operation of the facilities varies from a simple landlord-tenant relationship with the operators, to direct operations and management.

The plan also addresses infrastructure improvements needed to support the marine terminals and long-term waterfront needed for marine cargo uses within the scope of the entire Portland harbor area.

Other Port-owned waterfront property, either industrial, commercial, or at the Portland Ship Yard, is not addressed in the plan.

The Port estimates an annual average growth of 2% to 4.6% in its cargo base over the next 20 years.

It also observes that ship size is increasing, triggering the need to deepen the channel and the need for improvements in the facilities needed to handle cargo.

Cargo Terminal Summaries:

Terminal 1: T-1 is currently leased to Western Transportation and used as a barge-related distri-
bution site. The 19 acre redevelopment site at the south end of T-1 at the foot of the Fremont Bridge is not considered in this MTMP.

Terminal 2: T-2 is a 49 acre general cargo terminal operated by Stevedoring Services of America (SSA) under management agreement with the Port.

Terminal 4: T-4 is a 245 acre terminal in St. Johns leased or operated by several tenants. Autos, grain, mineral bulks, and breakbulk cargoes are handled at T-4.

Terminal 5: T-5 is a 185 acre terminal in South Rivergate. A grain facility and a leased manufac-
turing plan are located there. The balance of the site (116 acres) contains a partially completed rail-loop track, dock, and equipment for a coal facility.

Facility Recommendation Summaries:

Terminal 1: Keep in river-related distribution use.

Terminal 2: Maintain and enhance general cargo use.

Terminal 4: Keep in mixed-marine cargo use. Rehab to address age-related facility needs. Consider eventual relocation of bulks.

Terminal 5: Develop for bulk uses.

The improvements called for at T-4 include: filling in Wheeler Bay; demolition of overwater ware-
houses (Houses 1, 2, 3, and 4; Warehouses 1 and 2); construction of two floating docks at Berths 415 and 416; a new 800 foot extension of Berth 414, either as fill or wharf structure; and demolition of Berth 412.
9. COLUMBIA RIVER MAINTENANCE DISPOSAL PLAN (U.S. Army Corps of Engineers)

This plan describes the present maintenance practices for the existing Federal navigation project in the LWRMP area.

10. OTHER PLANS

Other plans having a lesser, but important, influence on the study are described below.


The Oaks Bottom Wildlife Refuge is a 160 acre city park situated on the east bank of the Willamette River. It is predominantly a riverine floodplain wetland system consisting of several vegetation communities. The bottoms have been cut off from the natural water flow of the Willamette by the Portland Traction railroad berm. Water currently enters and leaves the bottom via a five-foot culvert under the railway berm.

The bottom's natural source of fresh water is from a series of small springs, located at the base of a large escarpment on the east border of the park. These springs form perennial streams, outleting to the Willamette via the culvert. Most stormwater from the urbanized area above the wetland is cut off and routed through a storm drainage system.

The area is natural, with a few major man-made intrusions (railroad berm, powerline rights-of-way, landfills).

The objective of the plan was to:

1. Formally redesignate Oaks Pioneer Park as Oaks Bottom Wildlife Refuge.

2. Develop a general management direction for Oaks Bottom Wildlife Refuge which is compatible with the goal of maintaining this 160 acre park for wildlife and passive recreational uses.

3. Give direction for future educational and public uses of the park.

The plan describes actions to be undertaken by various groups and agencies to provide for public use and education. In addition, actions needed to maintain the wetland function and values are also described.

B. Brooklyn Neighborhood Plan
(City of Portland)

The document reviewed was the January 1991 report to the Planning Commission. Brooklyn Neighborhood includes Holgate Slough and the LWRMP from the Ross Island Bridge to Holgate Boulevard.

This preliminary plan calls for: improved access to Holgate Slough and the river near the Ross Island Bridge; reclamation of Ross Island lagoon after mining is completed and re-use as a park and natural area (without bridge access); development of water taxi stops and marinas at the Ross Island Sand and Gravel dock and at the river's edge below Haig Park; and the elimination of waterskiing and motorboats from Holgate Slough.

C. Oaks Park Master Plan (The Oaks Park Association-1986)

The Oaks Park (The Oaks) represents a unique cultural, historical and recreational resource in the City of Portland. The park was originally established in 1905 by the Oregon Water Power and Navigation Company as an amusement park (just prior to the Lewis and Clark Exposition) and has remained one of the most popular recreational attractions in the City for picnics, roller skating, amusement rides and the spectacular July 4th fire-
works display. Continuously operated as an amusement park since its opening, The Oaks has been modified over time. In January 1985, The Oaks Park was turned over to a non-profit corporation, the Oaks Park Association.

Presently, the Willamette River is a pleasant backdrop to the park, but does little to welcome park users. To capitalize on the visual quality, the Site Master Plan addresses a variety of activities from strolling, eating, sunning, wading, fireworks, and boat parade watching, roller skating and bicycling near the water’s edge. In addition, boat landings provide another recreational facility and element of visual interests.

The plan provides for landings for tour boats such as the Sternwheeler Portland, smaller private craft, as well as recontouring the riverfront, removing brushy vegetation and creating a flat sandy cove beach. Associated with that work are stairways over the bank to the cove and the stabilization of erosion-prone riverbank areas with piles of boulders.

The overall park goal is to: “Restore The Oaks as an historic Portland, family oriented, waterfront park open to the public.”

D. Willamette River Basin Program (Oregon Water Resources Department)

This 1991 program sets policy for the allocation and use of water resources within the Willamette Basin.

EVALUATION

The LWRMP as presented in this document is entirely compatible with the RUGGO and the City of Portland and Multnomah County Comprehensive Land Use Plans. In addition, the LWRMP is supportive of and compatible with the Central City Plan, the Oaks Bottom Management Plan and with most elements of the Port’s Marine Terminal Master Plan, the Brooklyn Neighborhood Plan (Draft January 1991), and the Oaks Park Master Plan.

Full implementation of these later three plans, however, may be difficult. The Port will experience rigorous regulatory review in order to accomplish the Wheeler Bay fill—though not prohibited by the LWRMP, extensive mitigation is required; the Holgate Slough marina development contemplated by the Brooklyn Neighborhood Plan is not an allowed use within a Conservancy Waterway Management Area; and the boat landing and moorage planned for Oaks Park will have to be carefully designed in order to avoid encroaching into the Open Water Waterway Management Area.
PART I
OTHER RECOMMENDATIONS
In the process of revising the Lower Willamette River Management Plan (LWRMP), a number of “good ideas” or recommendations emerged. Some of them transcend the authority of the Division of State Lands (DSL), require multi-agency handling, or further study. The following list contains those recommendations and the agency/entity most likely to follow-up on them.

1. Restrict the speed or prohibit motorized boats and personal watercraft within Holgate Slough. Allow continued motorized boat use by Ross Island Sand and Gravel, and other leases (e.g., Brix Maritime) and similar entities for activities associated with aggregate mining operations, mined land reclamation, and log rafts in accordance with approved permits and leases. (Oregon State Marine Board, U.S. Coast Guard)

2. Initiate a detailed study to locate suitable dredge materials disposal sites within the Portland area. Consider in-water disposal options, particularly as needed for disposal of hazardous wastes. Amend the 1992 LWRMP to reflect the results of this study. (Port of Portland, U.S. Corps of Engineers, Department of Environmental Quality, Division of State Lands)

3. Investigate the installation of a physical barrier at Kelley Point Park to prevent swimmers from entering the navigation channel. (City of Portland)

4. Develop an overall recreational boating management plan for the LWRMP. This effort should address the following:
   - Recreational boating trends; original/destination activities; needs.
   - Recreational use conflicts and solutions to congestion; and
   - Law enforcement, boater education, and regulatory and user management actions required to resolve existing conflicts. (Oregon State Marine Board, City of Portland, Multnomah County Sheriff, Oregon State Parks and Recreation Department)

5. Revise the harborline location. (Port of Portland)

6. Identify a site to test the survival of cottonwoods and willows in riprap areas. (City of Portland)

7. Use native riparian plant species to revegetate the riverfront at Willamette Park. (City of Portland)

8. Review the Willamette River Greenway Goal, particularly its treatment of urban areas. (Department of Land Conservation and Development, Oregon State Parks and Recreation Department)
9. Investigate the possibility of developing an abbreviated U.S. Army Corps of Engineers permit review process or Regional permit based on this Plan (1992 LWRMP, U.S. Army Corps of Engineers)

10. Organize volunteers to monitor combined sewer outfalls and riverbank conditions for litter and water quality problems. (Oregon Department of Environmental Quality, City of Portland)

11. Review the effectiveness of the Environmental Quality Commission policy on log handling in public waters. (Oregon Department of Environmental Quality)

12. Develop procedures to coordinate the staging of aquatic events (e.g., Rose Festival dragon boat races) with all affected agencies, including DSL. (Division of State Lands, City of Portland, Oregon State Marine Board, U.S. Coast Guard, Multnomah County Sheriff)
SECTION A

PLAN PARTICIPANTS

The following people were involved in the planning process. The Division of State Lands and the State Land Board sincerely thank all of them for their interest and participation in the 1992 LWRMP.

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4. Lloyd Anderson, Oregon Yacht Club
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10. Don Bennett, Oregon Dept. of Fish and Wildlife, Clackamas
11. Mike Beyerle, Oregon Dept. of Forestry
12. Ken Bierly, Division of State Lands
13. Steve Branch, Brix Maritime
14. Tami Burness, Division of State Lands
15. Brian Campbell, Port of Portland
16. Bruce Carroll, concerned citizen--Portland
17. Sheryl Carubba, Corps of Engineers
18. Charles Ciecko, Multnomah County Planning
19. Bob Cieloha, concerned citizen--Sauvie Island
20. Leon Cieloha, concerned citizen--Sauvie Island
21. Yvonne Cieloha, concerned citizen--Sauvie Island
22. Glen Comstock, Brix Maritime
23. Phil Davis, Willamette Sailing Club
24. Henry Day, Oregon Ocean Paddling Society
25. Sebastian Degens, Port of Portland
26. Mike Delashmitt, Time Oil Company
27. Jack Devine, concerned citizen--Portland
28. Linda Dobson, Commissioner Michael Lindberg’s Office, Portland
29. Paul Donheffner, Oregon State Marine Board
30. Renee Dowlin, Port of Portland
31. Angela Dreher, concerned citizen--non-power boating
32. Dennis Elliot, concerned citizen, Portland
33. Robert Elliott, Willamette Sailing Club
34. Ron Elsner, Linnton Plywood
35. Emily Erzen, Port of Portland
36. Bob Friedenwald, Port of Portland
37. Sheila Frugoli, Portland Planning Bureau
38. Peter Fry, Central Eastside Development Council
39. Richard Gebhart, Corps of Engineers
40. Robert Goldie, Portland Planning Bureau
41. Mike Gordon, concerned citizen--Portland
42. John Gray, Grayco, Inc.
43. Gary Gustafson, Division of State Lands
44. Mary Halliburton, Oregon Dept. of Environmental Quality
45. Dave Halmagyi, Columbia River Pilots
46. Dan Hancock, Port of Portland
47. Sgt. Curt Hansen, Multnomah County Sheriff, River Patrol
49. Skip Hart, Tidewater
50. Bud Hartman, concerned citizen--warmwater fishing
51. Jerry Hedrick, Division of State Lands
52. Petty Officer Herrera, U.S. Coast Guard, Portland
53. Mark Hess, Multnomah County Planning
54. Ken Heuvel, Columbia Seaplane Pilots Association
55. Mike Houck, Portland Audubon Society
56. Leo Huff, Oregon Dept. of Transportation
57. Mel Huie, METRO
58. Glen Hurn, Columbia River Pilots
<table>
<thead>
<tr>
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<th>Name and Affiliation</th>
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<tr>
<td>59.</td>
<td>Dean Ivey, Oregon Museum of Science and Industry</td>
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<td>60.</td>
<td>Clyde Jacobsen, Oregon Yacht Club</td>
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<td>61.</td>
<td>Barbara Jacobson, Caffall Brothers</td>
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<td>62.</td>
<td>Earle Johnson, Division of State Lands</td>
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<td>63.</td>
<td>Nina Johnson, Secretary of State's Office</td>
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<td>64.</td>
<td>Greg Jones, Portland Dept. of Transportation</td>
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<td>65.</td>
<td>Todd Jones, Secretary of State's Office</td>
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<td>66.</td>
<td>Randy Jungwirth, concerned citizen--jet skiing</td>
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<td>67.</td>
<td>Jef Kaiser, Oregon Dept. of Transportation</td>
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<td>68.</td>
<td>Pat Keeley, Oregon Dept. of Fish and Wildlife, Clackamas</td>
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<td>69.</td>
<td>David Kliwer, Portland Bureau of Environment</td>
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<td>Sue Knight, Western Transportation</td>
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<td>71.</td>
<td>Clarence Koennecke, concerned citizen, Sauvie Island</td>
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<td>72.</td>
<td>Dave Koennecke, Alder Creek Lumber Company</td>
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<td>73.</td>
<td>Dan Kramer, Multnomah County Parks</td>
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<td>74.</td>
<td>Linda Kruger, concerned citizen--Portland</td>
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<td>75.</td>
<td>Gary Krum, concerned citizen--salmon fishing</td>
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<td>76.</td>
<td>Susie Lahsene, Multnomah County Environmental Services</td>
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<td>77.</td>
<td>Tom Lakin, Oregon Yacht Club</td>
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<td>78.</td>
<td>Ken Larson, Larson's Marine Services</td>
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<td>79.</td>
<td>Karen Larson, concerned citizen--Sauvie Island</td>
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<td>80.</td>
<td>Louis Larson, concerned citizen--Sauvie Island</td>
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<td>81.</td>
<td>Patrick Lee, METRO</td>
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<td>82.</td>
<td>Mark Liefke, Lone Star Northwest</td>
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<td>83.</td>
<td>Perry Lumley, Division of State Lands</td>
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<td>84.</td>
<td>James Lyle, Macadam Bay, Inc.</td>
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<td>85.</td>
<td>D.R. Maciejewski, concerned citizen, Portland</td>
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<td>88.</td>
<td>Jay Massey, Oregon Dept. of Fish and Wildlife, Clackamas</td>
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<td>89.</td>
<td>Matt Matsushima, Willamette Sailing Club</td>
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<td>90.</td>
<td>Michael Matteucci, Peninsula Neighbors</td>
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<td>91.</td>
<td>Robin McArthur-Phillips, Portland Dept. of Transportation</td>
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<td>92.</td>
<td>Durham McCormick, McCormick-Baxter Company</td>
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<td>94.</td>
<td>Tom Miller, Oregon Dept. of Environmental Quality</td>
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<td>95.</td>
<td>Captain Karl Miller, U.S. Navy, Portland</td>
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<td>96.</td>
<td>Teena Monical, Corps of Engineers</td>
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<td>97.</td>
<td>Rollie Montagne, Port of Portland</td>
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<td>98.</td>
<td>Lauren Moughen, Senator Dick Springer's office</td>
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<td>99.</td>
<td>Neil Mullane, Oregon Dept. of Environmental Quality</td>
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<td>100.</td>
<td>Ed Murrell, National Marine Fisheries Service</td>
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<td>101.</td>
<td>Marguerite Nabeta, Oregon State Parks and Recreation</td>
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<td>102.</td>
<td>Robert Naito, H. Naito Properties</td>
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<td>103.</td>
<td>Janet Neuman, Division of State Lands</td>
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<td>104.</td>
<td>Elmer Nofziger, Oregon Yacht Club</td>
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<td>105.</td>
<td>Pansy Nofziger, Oregon Yacht Club</td>
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<td>106.</td>
<td>Dave Obern, Oregon State Marine Board</td>
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<td>107.</td>
<td>Martha Pagel, Governor's Office and Division of State Lands</td>
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<td>108.</td>
<td>Dean Pape, concerned citizen--Portland</td>
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<td>Shirley Pape, concerned citizen--Portland</td>
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<td>Greg Parker, Schnitzer Investment Co.</td>
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<td>William Parks, Division of State Lands</td>
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<td>David Patterson, concerned citizen Clackamas County</td>
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<td>113.</td>
<td>Burt Paynter, Corps of Engineers</td>
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<td>114.</td>
<td>Elizabeth Pitzer, Oregon Yacht Club</td>
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<td>Dave Polland, Brix Maritime</td>
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<td>Les Prentice, Portland Development Commission</td>
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<td>Sally Puente, Oregon Dept. of Environmental Quality</td>
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<td>118.</td>
<td>Steve Purchase, Division of State Lands</td>
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<td>Stewart Reif, concerned citizen, Portland</td>
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<td>Mike Rike, Shaver</td>
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<td>Tom Robertson, Environmental Protection Agency</td>
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<td>Ralph Roger, Environmental Protection Agency</td>
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<td>Emily Roth, Division of State Lands</td>
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<td>124.</td>
<td>Rollie Rousseau, Oregon Dept. of Fish and Wildlife, Portland</td>
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<td>125.</td>
<td>Don Rueppell, MAST</td>
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<td>126.</td>
<td>Michael Ryan, State Treasurer's Office</td>
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127. Zari Santner, Portland Parks Bureau
128. John Schenk, Riedel International
129. Jim Schwitter, Columbia River Yacht Club
130. Steve Shain, ZRZ Company
131. Wayne Shuyler, Oregon State Marine Board
132. Lt. Russ Sill, Harbormaster
133. Dixie Simms, concerned citizen—boat racing
134. Christina Simon, concerned citizen—Vancouver
135. Terry Simontch, Oregon Yacht Club
136. Jim Sitzman, Oregon Dept. of Land Conservation and Development
137. Don Slaybough, Portland General Electric
138. John Smith, Division of State Lands
139. Patty Snow, Oregon Dept. of Fish and Wildlife, Portland
140. Senator Dick Springer
141. Robert Stacy, Portland Planning Bureau
142. Nick Steffanoff, concerned citizen, Portland
143. Lorna Stickel, Multnomah County Planning
144. Marty Stiven, concerned citizen—Lake Oswego
145. Ken Swan, Portland Development Commission
146. Webb Terwilliger, Oregon State Marine Board
147. Phil Thompson, Mayor Bud Clark’s Office
148. Felicia Trader, Portland Dept. of Transportation
149. Pat Vinyard, Portland Rowing Club
150. Dave Ward, Oregon Dept. of Fish and Wildlife, Clackamas
151. Keith Warner, Northwest Environmental Advocates
152. Don Waterman, concerned citizen—Sauvie Island
153. Vicki Waterman, concerned citizen—Sauvie Island
154. Gary Wheeler, concerned citizen—Scappoose
155. Pam Wiley, Division of State Lands
156. Jacquie Williams, Oregon Yacht Club
157. Alan Willis, Port of Portland
158. Mary Beth Wilson, Oaks Park Association
159. Bob Wright, concerned citizen—waterskiing
160. Patrick Wright, U.S. Fish and Wildlife Service
161. Tom Wright, concerned citizen, Portland
162. David Yamashita, METRO
163. Paul Yarborough, Multnomah County Environmental Services
164. Jill Zarnowitz, Oregon Dept. of Fish and Wildlife, Portland
165. Tom Zelenka, Schnitzer Industries

SECTION A-3
SECTION B

BIBLIOGRAPHY

The following documents were used to compile this management plan.

7. City of Portland, Bureau of Planning, 1986 Lower Willamette River Wildlife Habitat Inventory and Data Sheets.


19. City of Seattle, Department of Community Development, *1979 Proposed Reenactment of the Seattle Shoreline Master Program*.


37. Division of State Lands, Chapter 141, Oregon Administrative Rules.


SECTION D

RECREATION FOCUS GROUP REPORT

The Division of State Lands acknowledges the assistance of the citizens and agency staff who assisted in the completion of this report.

LOWER WILLAMETTE RIVER MANAGEMENT PLAN
RECREATION FOCUS GROUP

<table>
<thead>
<tr>
<th>Member</th>
<th>City</th>
<th>Recreation Activity</th>
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<tr>
<td>1. Jim Adam</td>
<td>Portland, OR</td>
<td>Power Boating</td>
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<tr>
<td>2. Bob Wright</td>
<td>Newberg, OR</td>
<td>Waterskiing</td>
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<td>3. Dixie Sims</td>
<td>Portland, OR</td>
<td>Boat Racing</td>
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<td>4. Matt Matsushima</td>
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<td>Sailing</td>
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<td>5. Randy Jungwirth</td>
<td>Portland, OR</td>
<td>Jet Skiing</td>
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<td>6. Jim Schwitter</td>
<td>Portland, OR</td>
<td>Power Boating</td>
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<tr>
<td>7. Ian Townsend</td>
<td>Portland, OR</td>
<td>Rowing</td>
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<tr>
<td>8. Angela Dreher</td>
<td>West Linn, OR</td>
<td>Flatwater Boating</td>
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<tr>
<td>9. Bud Hartman</td>
<td>Portland, OR</td>
<td>Warmwater Fishing</td>
</tr>
<tr>
<td>10. Gary Krum</td>
<td>Bay City, OR</td>
<td>Anadromous Fishing</td>
</tr>
</tbody>
</table>

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John Lilly
Waterway Planner
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Salem, OR 97310
LOWER WILLAMETTE RIVER MANAGEMENT PLAN (LWRMP) UPDATE
RECREATION FOCUS GROUP

PURPOSE

The Recreation Focus Group was formed by the Division of State Lands (DSL) as a part of the 1990-91 Lower Willamette River Management Plan Update. Recreation is one of three major public trust values on the river; the others being fisheries and navigation. Interests representing these later values have been well involved in the LWRMP Update process. The State Land Board urged staff to insure that recreation interests were consulted during the development of the updated plan.

As a result, DSL, Oregon State Marine Board (OSMB), and Oregon Department of Fish and Wildlife (ODFW) staff identified experts in the various water-dependent recreation activity users groups. Wayne Shuyler of OSMB and Don Bennett of ODFW were particularly helpful.

The Focus Group was formed of ten experts (see prior page) along with staff from the ODFW and the Multnomah County Sheriff’s River Patrol.

The Group’s purpose was to assist DSL in obtaining a better understanding of the recreational boating and fishing activities on the river. Topics explored included: location, season, and timing of each activity; activity operating requirements (e.g. turning radii); future use trends; facility needs; peak use periods; and problems and concerns associated with navigation and safety.

The Group met three times—February 19, March 12, and May 15. Major products included: (1) a compilation of information about each activity (Exhibit 1A-1C); (2) determination of each activity’s minimum turning radii (Exhibit 2); (3) a river mile by river mile analysis of use by each activity, usable width, and shoreline development (Exhibit 3); and (4) a river mile by river mile “impacts to recreation” analysis (Exhibit 4). All of these products are included in this summary.

Data Collection

Members of the Recreation Focus Group were asked to complete a questionnaire and map prior to the first meeting on February 19, 1991. The response to each question is shown here as Exhibit 1A-1C.

Responses from rowers came from input solicited from four major rowing organizations/businesses (Exhibit 1B). In addition, 14 individuals from the Station “L” Rowing Club also responded (Exhibit 1C).

This information enabled the Group and agency staff to obtain an accurate picture of water dependent recreation activity within the LWRMP.

Impacts Analysis

The impacts analysis (Exhibit 4) consists of a rating for each river mile of the potential impacts to recreation values that may be expected by new in-water development. The final “impact rating” is based on a total point score from two major elements: River Conditions (development, usable width, and commercial activity) and Recreation Factors (amount of use, diversity of use, [i.e., motorized, non-motorized], and multiple activities [i.e., the number of different recreation activities]). These elements were established based on the following assumptions:
1) The narrower the river area, the greater the potential for conflict, hazardous conditions, and loss of public access.

2) The more in-water shoreline development, the greater the potential for conflict, hazardous conditions and loss of freedom of movement.

3) The greater the diversity and amount of recreational use, the greater the need to conserve the existing water surface for that public interest.

4) The greater the commercial navigation activity, the greater the potential for conflict with recreational boating and the need to conserve the existing water surface.

A full explanation of the impacts analysis can be found in Exhibit 3.

Not surprisingly, the results indicate that the greatest potential for impact to recreation are around the Cathedral Park area and the entire river upstream of the Steel Bridge (except for Holgate Slough which has a "moderate" rating).
1990-91 LOWER WILLAMETTE RIVER MANAGEMENT PLAN UPDATE
RECREATION FOCUS GROUP
Worksheet Tally
(For all recreation activities except rowing)

LOCATION

**Question 1:** Where does the activity take place?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Waterskiing</td>
<td>Milwaukie Ramp or Willamette Park Ramp, behind Ross Island, RiverPlace to Burnside Bridge and St. John's Bridge.</td>
</tr>
<tr>
<td>Warmwater Fishing:</td>
<td>Ross Island to St. John's Bridge.</td>
</tr>
<tr>
<td>Salmon/Steelhead Fishing:</td>
<td>Along west bank RM 0 to 3; mouth of Multnomah Channel; along east and west banks between Harborton and T-1; between Marquam and Hawthorne Bridges; Ross Is. Bridge to Sellwood Bridge; along east and west bank to Milwaukie.</td>
</tr>
<tr>
<td>Sailing:</td>
<td>Between Marquam and Hawthorne Bridges; River Forum to Dunthorpe.</td>
</tr>
<tr>
<td>Power Boating:</td>
<td>Fishing--Mouth of the Willamette, mouth of the Multnomah Channel, around Swan Island, the Hawthorne Bridge, launch areas; St. Johns, Swan Island, Willamette Marine, Staff Jennings.</td>
</tr>
<tr>
<td></td>
<td>Cruising--Mouth to RiverPlace; pass through these areas</td>
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<td></td>
<td>Overnight--RiverPlace, Salty's, Hadleys Landing on Multnomah Channel (outside of LWRMP)</td>
</tr>
<tr>
<td></td>
<td>Day Cruising--Mouth of Willamette to Sellwood Bridge</td>
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<tr>
<td></td>
<td>Waterskiing--Kelly Point, Willamette Park, Private Docks</td>
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<td></td>
<td>Personal Watercraft-- Cove area(?), Willamette Park area</td>
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<tr>
<td>Power Boating Racing:</td>
<td>Between Morrison Bridge and Ross Island Bridge (maximum area).</td>
</tr>
<tr>
<td>Personal Watercraft:</td>
<td>Ross Island Bridge to Dunthorpe area.</td>
</tr>
<tr>
<td>Trailered Power Boats:</td>
<td>Thru to up river (Oregon City, Cedar Island, etc.).</td>
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</tbody>
</table>

Worksheet Tally-(Rowing Excepted)  SECTION D-1A-1  Exhibit 1A
Recreation Focus Group Report-FINAL
### Lower Willamette River Management Plan

#### Question 2: Are there areas that are more popular than others?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Popular Areas</th>
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<tbody>
<tr>
<td>Waterskiing</td>
<td>Willamette Park &amp; Milwaukie Ramp and behind Ross Island.</td>
</tr>
<tr>
<td>Warmwater Fishing</td>
<td>Ross Island--lower harbor (Swan Island/St. Johns).</td>
</tr>
<tr>
<td>Salmon/Steelhead Fishing</td>
<td>Kelley Point area; mouth of Multnomah Channel; Ross Is. Bridge area; RiverPlace marina area; Sellwood Bridge area; River Forum to Willamette Park area.</td>
</tr>
<tr>
<td>Sailing</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Boating</td>
<td>Recreational--Kelley Point and Sea wall--Rose Festival and special events.</td>
</tr>
<tr>
<td></td>
<td>Fishing--Mouth of River, Multnomah Channel, and Sellwood area.</td>
</tr>
<tr>
<td>Power Boat Racing</td>
<td>Same as Question 1.</td>
</tr>
<tr>
<td>Personal Watercraft</td>
<td>Sellwood Bridge area.</td>
</tr>
<tr>
<td>Trailered Power Boats</td>
<td>No, except RiverPlace.</td>
</tr>
</tbody>
</table>

### TIMING

#### Question 1: Is this a year round activity?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Year Round</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterskiing</td>
<td>No</td>
</tr>
<tr>
<td>Warmwater Fishing</td>
<td>No</td>
</tr>
<tr>
<td>Salmon/Steelhead Fishing</td>
<td>No</td>
</tr>
<tr>
<td>Sailing</td>
<td>Yes</td>
</tr>
<tr>
<td>Power Boating</td>
<td>Yes</td>
</tr>
<tr>
<td>Power Boat Racing</td>
<td>No (Specific use/specific event[s].)</td>
</tr>
<tr>
<td>Personal Watercraft</td>
<td>Yes</td>
</tr>
<tr>
<td>Trailered Power Boats</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Question 2:</strong> Show the months the activity takes place and the most popular or “peak use” months.</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Waterskiing:</strong></td>
<td>July, August, September</td>
</tr>
<tr>
<td><strong>Warmwater Fishing:</strong></td>
<td>August, September</td>
</tr>
<tr>
<td><strong>Salmon/Steelhead Fishing:</strong></td>
<td>March, April, May</td>
</tr>
<tr>
<td><strong>Sailing:</strong></td>
<td>June, July</td>
</tr>
<tr>
<td><strong>Power Boating:</strong></td>
<td>March/April (fishing)--June (Rose Festival)--July/August (cruising)</td>
</tr>
<tr>
<td><strong>Power Boat Racing:</strong></td>
<td>June, July</td>
</tr>
<tr>
<td><strong>Personal Watercraft:</strong></td>
<td>August, September</td>
</tr>
<tr>
<td><strong>Trailer Power Boats:</strong></td>
<td>Fairly even throughout the year; probably 3-4 times per year.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Question 3:</strong> Within the peak use months, does the activity vary by day of the week (i.e., weekend/weekday) or hours of the day (i.e., morning/afternoon)? Which is the most popular?:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Waterskiing:</strong></td>
</tr>
<tr>
<td><strong>Warmwater Fishing:</strong></td>
</tr>
<tr>
<td><strong>Salmon/Steelhead Fishing:</strong></td>
</tr>
<tr>
<td><strong>Sailing</strong></td>
</tr>
<tr>
<td><strong>Power Boating:</strong></td>
</tr>
<tr>
<td><strong>Power Boat Racing:</strong></td>
</tr>
<tr>
<td><strong>Personal Watercraft:</strong></td>
</tr>
<tr>
<td><strong>Trailer Power Boats:</strong></td>
</tr>
</tbody>
</table>
CONGESTION

Question 1: During the peak use periods, do you sense the river is: Not crowded; Crowded; or Very Crowded?

Waterskiing: Crowded--Milwaukie-West Park; Very Crowded--behind Ross Island
Warmwater Fishing: Not crowded in Swan Island area; Crowded at ramps, Ross Island
Salmon/Steelhead Fishing: Very crowded
Sailing: Very crowded
Power Boating: Crowded
Power Boating Racing: Crowded but controllable
Personal Watercraft: Crowded
Trailered Power Boats: Very crowded

Question 2: If you feel the river is crowded or very crowded, where on the river is this the case?

Waterskiing: On weekends behind Ross Island and between Willamette Park and the Milwaukie Ramp.
Warmwater Fishing: Launch area(s).
Salmon/Steelhead Fishing: Sellwood area, head of Sauvie Island, Kelley Point.
Sailing: Channel between Toe Island; West Bank of Willamette River.
Power Boating: Downtown Portland, Sellwood area, mouth of Multnomah Channel.
Power Boat Racing: Particularly in downtown area (i.e., first year of the Dragon Races).
Personal Watercraft: Newberg Pool and Willamette Park area.
Trailered Power Boats: Multnomah Channel, Kelley Point, downtown Portland, Ross Island.
**Question 3:** What factors cause you to feel the river is crowded or very crowded?

- **Waterskiing:** Safety, too many people/boats to enjoy the experience, and launch/take-out delays.
- **Warmwater Fishing:** Noise, launch/take-out delays, and other—boat wake disturbance.
- **Salmon/Steelhead Fishing:** Safety, rowdy behavior, too many people/boats to enjoy the experience, and launch/take-out delays.
- **Sailing:** Safety, rowdy behavior, and launch/take-out delays.
- **Power Boating:** Safety, and too many people/boats to enjoy the experience.
- **Power Boat Racing:** Launch/take-out delays (hear from friends).
- **Personal Watercraft:** Safety, rowdy behavior, too many people/boats to enjoy the experience, and other—inexperienced boaters.
- **Trailer Power Boats:** Safety, rowdy behavior, too many people, and noise.

### ACCESS/FACILITIES

**Question 1:** What are the most popular access points for your activity?

- **Waterskiing:** Willamette Park.
- **Warmwater Fishing:** Willamette Park/Cathedral Park.
- **Salmon/Steelhead Fishing:** Willamette Park, under the St. John's Bridge, and Swan Island.
- **Sailing:** Willamette Park/Private Ramp.
- **Power Boating:** ?
- **Power Boat Racing:** Probably Willamette Park for spectator fleet.
- **Personal Watercraft:** Willamette Park, Newberg, 10th Street, Salem, Sauvie Island.
- **Trailer Power Boats:** N/A.
Lower Willamette River Management Plan

Question 2: Are there adequate facilities (public or private) to support your activity?

Waterskiing: No.

Warmwater Fishing: No.

Salmon/Steelhead Fishing: Not during peak times.

Sailing: Somewhat.

Power Boating: No; only one public moorage on river--no gas docks below the Sellwood Bridge.

Power Boat Racing: No; it was a scramble in 1990--will be in 1991 and beyond due to on-going development of the riverfront in this area.

Personal Watercraft: No.

Trailer Power Boats: No.

Question 3: What additional facilities, if any, do you think need to be developed for your activity (e.g., gas docks, marina, boat storage, transient moorage, boat ramps, speed courses, etc.)?

Waterskiing: Parking

Warmwater Fishing: Ramps, shoreline access

Salmon/Steelhead Fishing: Gas docks, marinas, boat ramps, restroom facilities

Sailing: Gas docks, boat storage, chop off docks (?), floating restrooms

Power Boating: Transient moorage (secured)

Power Boat Racing: Ramp (reliever if nothing else) using the ODOT right-of-way for I-5/Marquam Bridge. Could also become a park.

Personal Watercraft: Ramps

Trailer Power Boats: Transient moorage, gas docks
USE TRENDS

Question 1: Is participation in your activity growing each year?

Waterskiing: Yes; boat skiing activity is going to other river locations and to lake areas.

Warmwater Fishing: YES!

Salmon/Steelhead Fishing: Yes.

Sailing: Yes.

Power Boating: Yes (or was)

Power Boat Racing: Yes; it is expected to grow, but it is limited in the number of spectator craft that can participate

Personal Watercraft: Yes

Trailer Power Boats: Yes

Question 2: Compared to past years, do you think current use is:

Waterskiing: Greater; on weekends--less or the same on weekdays

Warmwater Fishing: Much greater.

Salmon/Steelhead Fishing: Much greater.

Sailing: Greater.

Power Boating: Much greater.

Power Boat Racing: Greater.

Personal Watercraft: Greater.

Trailer Power Boats: Much greater and greater.
NAVIGATION PROBLEMS

Question 1: Are there areas of the river where there are hazardous conditions due to:

Waterskiing: N/A
Warmwater Fishing: Non-recreation river traffic--tugs, etc.
Salmon/Steelhead Fishing: Non-recreation river traffic--ships, tugs, barges.
Sailing: River width/narrowness, non-recreation river traffic--not during our time of year, other--high speed, large displacement of cruising boats.
Power Boating: River/channel depth, river width/narrowness.
Power Boat Racing: River/channel depth, river width/narrowness, in-water structures, and non-recreation river traffic--commercial traffic can’t be restricted.
Personal Watercraft: River/channel depth--not really a problem, in-water structures--big problem is congestion.
Trailerered Power Boats: River/channel depth--around Ross Island.

Question 2: Are there other river recreation activities that compete with yours for the same river locations at the same time?

Waterskiing: Fishing in the Sellwood Bridge area, and canoes in area behind Ross Island.
Warmwater Fishing: No.
Salmon/Steelhead Fishing: All recreational activities
Sailing: No response.
Power Boating: No response.
Power Boat Racing: I don’t believe so. We’ve tried to incorporate many kinds of water-based activities to include everyone and make a “water festival” atmosphere, as well as the featured event of the tunnel hull power boat races.
Personal Watercraft: Everybody.
Trailerered Power Boats: Around Ross Island, Kelley Point, and Multnomah Channel.
1990-91 LOWER WILLAMETTE RIVER MANAGEMENT PLAN UPDATE
RECREATION FOCUS GROUP
Rowing Tally
The Rowing Shop, Ebb and Flow, and Portland Rowing Club

LOCATION

Question 1: Where does the activity take place?

The Rowing Shop: Downtown Portland plus Sellwood to Fremont Bridge.
Ebb and Flow: Sellwood to Ross Island and around the island (Many car top boats away?)
Portland Rowing Club: Concentrate behind Ross Island although late spring and fall go up to Lake Oswego Inlet (woodchip loading area).

Question 2: Are there areas that are more popular than others?

The Rowing Shop: Area around Ross Island - Holgate Slough
Ebb and Flow: Area around Ross Island.
Portland Rowing Club: Depends on the day; although preference is behind Ross Island. During summer the preference is to go upstream (Decision made depends on traffic).

NOTE: All members mentioned their very real concern with alcohol use on the river (a serious problem) and mixture of types of boating and boats.

TIMING

The Rowing Shop: 5:30-7:00 AM; 11:30 AM-1:00 PM; 3:00-6:00 PM
Ebb and Flow: Tuesday-Friday, 11:30 AM-6:00 PM; Saturday, 9:30 AM-5:00 PM; Sunday, 12:00-5:00 PM (Spring and Fall).
Portland Rowing Club: Mornings primarily.
Question 1: Is this a year round activity?

The Rowing Shop: Yes
Ebb and Flow: Yes
Portland Rowing Club: No (4-6 months).

Question 2: Show the months the activity takes place and the most popular or "peak use" months.

The Rowing Shop: April-July
Ebb and Flow: May-August
Portland Rowing Club: May-August

Question 3: Within the peak use months does the activity vary by day of the week (i.e., weekend/weekday) or hours of the day (i.e., morning/afternoon)? Which is most popular?

The Rowing Shop: Early AM and PM
Ebb and Flow: Foot renter during business hours
Portland Rowing Club: No, does not vary (primarily early AM-7 days a week).

CONGESTION/CROWDS

Question 1: During the peak use periods, do you sense the river is:

The Rowing Shop: AM-Not crowded; PM-very crowded
Ebb and Flow: Late afternoon-very crowded
Portland Rowing Club: In general, most of our rowing time-very crowded
Question 2: If you feel the river is crowded or very crowded, where on the river is this the case?

The Rowing Shop: RiverPlace Marina to Sellwood Park

Ebb and Flow: Willamette Park to Sellwood, across to Ross Island - very dangerous in the afternoon.

Portland Rowing Club: Milwaukie to downtown, especially during the fishing season (spring), waterskiing season (spring to fall) and any hot day with good weather.

Question 3: What factors cause you to feel the river is crowded or very crowded?

The Rowing Shop: Safety, rowdy behavior, too many people/boats to enjoy the experience, and other--wakes on river, people are not courteous to other boaters.

Ebb and Flow: Safety, rowdy behavior, too many people/boats to enjoy the experience, noise, and launch and take out delays.

Portland Rowing Club: Safety, rowdy behavior, too many people/boats to enjoy the experience, and noise.

ACCESS/FACILITIES

Question 1: What are the most popular access points for your activity?

The Rowing Shop: Boathouse at RiverPlace Marina owned by shop.

Ebb and Flow: Willamette Park (for foot traffic only).

Portland Rowing Club: From club just south of Sellwood Bridge-eastside.

Question 2: Are there adequate facilities (public or private) to support your activity?

The Rowing Shop: Yes, for now. Future growth dictates larger or additional facilities.

Ebb and Flow: Yes.

Portland Rowing Club: Future growth calls for larger/additional facilities.
Question 3: What additional facilities, if any, do you think need to be developed for your activity (e.g., gas docks, marinas, boat storage, transient moorage, boat ramps, speed courses, etc)?

The Rowing Shop: Additional large boathouse; public or private.
Ebb and Flow: Boathouse for storage.
Portland Rowing Club: Protected water behind Ross Island; more boat storage.

USE TRENDS

Question 1: Is participation in your activity growing each year?

The Rowing Shop: Yes, 15% per year
Ebb and Flow: Yes.
Portland Rowing Club: Yes.

Question 2: Compared to past years, do you think current use is:

The Rowing Shop: Greater.
Ebb and Flow: Much greater.
Portland Rowing Club: Greater.

NAVIGATION PROBLEMS

Question 1: Are there areas of the river where there are hazardous conditions due to . . . :

The Rowing Shop: River width/narrowness--Holgate Slough; in-water structures--log rafts; non-recreation river traffic--commercial traffic not a problem; other in-water uses.
Ebb and Flow:
Portland Rowing Club: River width/narrowness--Holgate Slough, especially with log rafts; other in-water uses.
<table>
<thead>
<tr>
<th>Question 2:</th>
<th>Are there other river recreation activities that compete with yours for the same river locations at the same time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Rowing Shop:</td>
<td>Yes, water skiers at Holgate Slough</td>
</tr>
<tr>
<td>Ebb and Flow:</td>
<td>Water skiers</td>
</tr>
<tr>
<td>Portland Rowing Club:</td>
<td>Yes, water skiers at Holgate Slough and fishermen in the early AM racing to get to and from desired spots.</td>
</tr>
</tbody>
</table>
Location

Question 1: Where does the activity take place?

Rower One - Nine: *N/A
Rower Ten: Lake Oswego Railroad Bridge to Ross Island Bridge.
Rower Eleven: East channel of Ross Island.
Rower Twelve to Fourteen: N/A

Question 2: Are there areas that are more popular than others?

Rower One - Seven: N/A
Rower Eight: Holgate Slough; Ross Island to RiverPlace ???
Rower Nine: N/A
Rower Ten: Summer--Lake Oswego to Sellwood; Winter--Holgate Slough to behind Ross Island.
Rower Eleven: N/A
Rower Twelve: South of Sellwood Bridge.
Rower Thirteen - Fourteen: N/A

*N/A Stands for ‘no answer’ given.
TIMING

Question 1: Is this a year round activity?

Rower One: Yes
Rower Two: N/A
Rower Three - Four: Yes
Rower Five: Yes
Rower Six - Thirteen: Yes
Rower Fourteen: N/A

Question 2: Show the months the activity takes place and the most popular or "peak use" months:

Rower One: March-October
Rower Two: N/A
Rower Three: March-September
Rower Four: February-December
Rower Five: N/A
Rower Six: April-October
Rower Seven: April-October
Rower Eight: April-October
Rower Nine: June-September
Rower Ten: April-October
Rower Eleven: May-August
Rower Twelve: May-August
Rower Thirteen: May-August
Rower Fourteen: N/A
Question 3: Within the peak use months does the activity vary by day of the week (i.e., weekend/weekday) or hours of the day (i.e., morning/afternoon)? Which is most popular?

Rower One: Weekdays--Sunrise-8:00 AM; 3:30-6:00 PM
Weekends--AM prior to busy traffic

Rower Two: N/A

Rower Three: Weekday morning before 8:00 AM--not crowded; some weekday afternoon 5:00-7:00 PM--crowded;
Weekends before 10:00 AM--semi-crowded.

Rower Four: Early morning from dawn + 2-3 hours primarily

Rower Five: Don't forget "noon hour" for rowing downtown.

Rower Six: Morning--5:00-9:00 AM; everyday March-November
Weekend--December-February

Rower Seven: Weekdays--Sunrise-8:00 AM; 3:30-6:00 PM.

Rower Eight: Early AM--summers, weekends.

Rower Nine: Monday-Saturday--AM's.

Rower Ten: Mornings because we are unable to use the river in busy traffic later in the day.

Rower Eleven: 5:00-9:00 AM everyday.

Rower Twelve: Mornings before 8:00 AM and evenings after 3:30 PM

Rower Thirteen: Mornings--most popular all week long.

Rower Fourteen: N/A
CONGESTION/CROWDS

Question 1: During the peak use periods, do you sense the river is:

Rower One: Crowded
Rower Two: N/A
Rower Three: Not crowded
Rower Four: Not crowded
Rower Five: N/A
Rower Six: Not crowded--weekdays; crowded--weekends
Rower Seven: Very crowded
Rower Eight: Crowded; very crowded--sunny PM
Rower Nine: Very crowded
Rower Ten: Very crowded
Rower Eleven: Crowded
Rower Twelve: Crowded
Rower Thirteen: Crowded to very crowded
Rower Fourteen: Crowded
Question 3: What factors cause you to feel the river is crowded or very crowded?

Rower One: Safety, rowdy behavior, and too many people/boats to enjoy the experience.

Rower Two: Safety, rowdy behavior, and other--power boaters need to be aware that rowing shells are very fragile and to watch their wakes

Rower Three: Safety, rowdy behavior, and other--alcohol abuse.

Rower Four: Safety, rowdy behavior--during non-peak times.

Rower Five: N/A

Rower Six: Safety, and rowdy behavior

Rower Seven: Safety, rowdy behavior, too many people/boats to enjoy the experience, and noise.

Rower Eight: Safety--wakes from motor boats, jet skis; rowdy behavior--drinking alcohol; too many people/boats--during peak waterskiing time; noise--engines and radios; other--exhaust fumes in air fuel slicks on water (how about DEQ ??? on inboards, outboards, or jet skis?).

Rower Nine: Safety, rowdy behavior, too many people/boats, noise, and launch and take out delays.

Rower Ten: Safety--power boaters harassing rowers; rowdy behavior, and too many people/boats.

Rower Eleven: Safety, rowdy behavior, too many people/boats, noise, and other--skiers drive too fast in narrow areas around turns.

Rower Twelve: Rowdy behavior, and noise.

Rower Thirteen: Safety--main concern; rowdy behavior--drinking and boating, malicious power boats; too many people/boats, and noise--depends on the boat; some are very loud while other are quiet.

Rower Fourteen: Safety, rowdy behavior, too many people/boats, and noise.
**ACCESS/FACILITIES**

**Question 1:** What are the most popular access points for activity?

<table>
<thead>
<tr>
<th>Rower</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rower One:</td>
<td>Rowing Clubs</td>
</tr>
<tr>
<td>Rower Two:</td>
<td>N/A</td>
</tr>
<tr>
<td>Rower Three:</td>
<td>Station L Rowing Club</td>
</tr>
<tr>
<td>Rower Four:</td>
<td>N/A</td>
</tr>
<tr>
<td>Rower Five:</td>
<td>N/A</td>
</tr>
<tr>
<td>Rower Six:</td>
<td>Area rowing clubs</td>
</tr>
<tr>
<td>Rower Seven:</td>
<td>N/A</td>
</tr>
<tr>
<td>Rower Eight:</td>
<td>Station L, RiverPlace, Portland Rowing Club (Willamette Park, Spokane Street)</td>
</tr>
<tr>
<td>Rower Nine:</td>
<td>N/A</td>
</tr>
<tr>
<td>Rower Ten:</td>
<td>Portland Rowing Club, near Sellwood Bridge</td>
</tr>
<tr>
<td>Rower Eleven:</td>
<td>Sellwood Bridge</td>
</tr>
<tr>
<td>Rower Twelve:</td>
<td>Sellwood area</td>
</tr>
<tr>
<td>Rower Thirteen:</td>
<td>Portland Rowing club, BH(?) Rowing Club, Station L, Oaks Park</td>
</tr>
<tr>
<td>Rower Fourteen:</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Question 2: Are there adequate facilities (public or private) to support your activity?

Rower One: Yes, at the moment, but increased participation will stretch current facilities.
Rower Two: N/A
Rower Three: N/A
Rower Four: N/A
Rower Five: N/A
Rower Six: Yes
Rower Seven: No
Rower Eight: No
Rower Nine: N/A
Rower Ten: Yes
Rower Eleven: Yes
Rower Twelve: Not yet
Rower Thirteen: Yes, but demand is growing
Rower Fourteen: ?
Question 3: What additional facilities, if any, do you think need to be developed for your activity (e.g., gas docks, marinas, boat storage, transient moorage, boat ramps, speed courses, etc.)?

Rower One: Dedicated non-power areas, boat storage, boat launching docks with 4"-6" freeboard; JV city-owned club operated facility (i.e., Greenlake, Seattle soon to be Lake Oswego).

Rower Two: N/A

Rower Three: More enforcement of boat safety on the water.

Rower Four: N/A

Rower Five: N/A

Rower Six: Cooperation between city and local clubs.

Rower Seven: Marinas

Rower Eight: Motor-free area in the river ??? everyday, or on alternative days.

Rower Nine: Toilet facilities

Rower Ten: "No wake" zones

Rower Eleven: N/A

Rower Twelve: Facilities, equipment, boathouses, and docks

Rower Thirteen: None

Rower Fourteen: N/A
USE TRENDS

Question 1: Is participation in your activity growing each year?

Rower One: Yes.
Rower Two: N/A
Rower Three: Yes.
Rower Four: Yes.
Rower Five: N/A
Rower Six: Yes.
Rower Seven: Yes.
Rower Eight: I think so.
Rower Nine: Yes.
Rower Ten: Exponentially(?)
Rower Eleven: Yes.
Rower Twelve: Yes!
Rower Thirteen: Yes.
Rower Fourteen: Yes.
Question 2: Compared to past years, do you think current use is:

<table>
<thead>
<tr>
<th>Rower</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rower One</td>
<td>Greater</td>
</tr>
<tr>
<td>Rower Two</td>
<td>N/A</td>
</tr>
<tr>
<td>Rower Three</td>
<td>Greater</td>
</tr>
<tr>
<td>Rower Four</td>
<td>Greater</td>
</tr>
<tr>
<td>Rower Five</td>
<td>N/A</td>
</tr>
<tr>
<td>Rower Six</td>
<td>Greater</td>
</tr>
<tr>
<td>Rower Seven</td>
<td>Greater</td>
</tr>
<tr>
<td>Rower Eight</td>
<td>N/A</td>
</tr>
<tr>
<td>Rower Nine</td>
<td>Greater</td>
</tr>
<tr>
<td>Rower Ten</td>
<td>Much greater</td>
</tr>
<tr>
<td>Rower Eleven</td>
<td>Greater</td>
</tr>
<tr>
<td>Rower Twelve</td>
<td>Greater</td>
</tr>
<tr>
<td>Rower Thirteen</td>
<td>Way between much greater and greater</td>
</tr>
<tr>
<td>Rower Fourteen</td>
<td>Much greater</td>
</tr>
</tbody>
</table>
NAVIGATION PROBLEMS

Question 1: Are there areas of the river where there are hazardous conditions due to . . .

Rower One: River width/narrowness—east channel; non-recreation river traffic—fast barges; other in-water uses—logs, debris

Rower Two: River width/narrow—log rafts around Ross Island; in-water structures—log rafts, buoy expansion of RiverPlace (when it was three rows) pushes us out into the river too far.

Rower Three: Non-recreation river traffic—large wakes from barges.

Rower Four: Other in-water uses—logs and water debris

Rower Five: In-water structures—river bank structures/"hard" shoreline increases wave reflection—risk of swamping; non-recreation river traffic—speed/wake limit for tugs and other traffic, other in-water uses—log rafts at Ross Island—removal would increase water surface area available for rec. uses as well as increase water quality; other—additional hazard—buoy for mooring along east bank.

Rower Six: Non-recreation river traffic—barges going too fast.

Rower Seven: N/A

Rower Eight: Non-recreation river traffic and other in-water uses—at low water or very high water.

Rower Nine: N/A

Rower Ten: N/A

Rower Eleven: River width/narrowness—E. Channel at Ross Island; other in-water uses—E. channel at Ross Island.

Rower Twelve: Non-recreation river traffic—mostly.

Rower Thirteen: River width/narrowness—yes, eastside of Ross Island; non-recreation river traffic—yes.

Rower Fourteen: Other in-water uses—log rafts.
Question 3. Are there other river recreation activities that compete with yours for the same river locations at the same time?

<table>
<thead>
<tr>
<th>Rower</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>N/A</td>
</tr>
<tr>
<td>Two</td>
<td>N/A</td>
</tr>
<tr>
<td>Three</td>
<td>Early AM waterskiiers</td>
</tr>
<tr>
<td>Four</td>
<td>Not significant</td>
</tr>
<tr>
<td>Five</td>
<td>Waterskiing and jet boats—east channel along Ross Island</td>
</tr>
<tr>
<td>Six</td>
<td>N/A</td>
</tr>
<tr>
<td>Seven</td>
<td>Waterskiing and power boating</td>
</tr>
<tr>
<td>Eight</td>
<td>Waterskiing and jet skiing</td>
</tr>
<tr>
<td>Nine</td>
<td>N/A</td>
</tr>
<tr>
<td>Ten</td>
<td>Yes, behind Ross Island—recreational motor boats who are using the same section of river. We can't row with wakes present.</td>
</tr>
<tr>
<td>Eleven</td>
<td>N/A</td>
</tr>
<tr>
<td>Twelve</td>
<td>N/A</td>
</tr>
<tr>
<td>Thirteen</td>
<td>Waterskiing and speed pleasure boating</td>
</tr>
<tr>
<td>Fourteen</td>
<td>N/A</td>
</tr>
</tbody>
</table>
The group identified the following operational needs for each activity.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Activity</th>
<th>Turning Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-12'</td>
<td>Waterskiing</td>
<td>400-500'</td>
</tr>
<tr>
<td>2'</td>
<td>Eight person rowing shell</td>
<td>80-100'</td>
</tr>
<tr>
<td>4'</td>
<td>Sailboat (tacking)</td>
<td>30-40'</td>
</tr>
<tr>
<td>10-12'</td>
<td>Personal watercraft</td>
<td>100'</td>
</tr>
<tr>
<td>15-18'</td>
<td>Fishing (trolling)</td>
<td>400-500'</td>
</tr>
<tr>
<td>10'</td>
<td>Power boat (cruising)</td>
<td></td>
</tr>
</tbody>
</table>
INTRODUCTION

This analysis of the potential for new in-water development to affect water-dependent recreation activities was conducted as a combined effort of the Recreation Focus Group and agency (ODFW, OSMB and DSL staff). The results help to identify factors that influence sage and enjoyable recreation on the river. The following description outlines how the analysis was done and the criteria used to assign ratings. Both the criteria and ratings were derived from expert and professional judgement of the staff and Recreation Focus Group members.

Factors influencing the impact of new in-water development on recreation are:

1) Current usable width of the river;

2) The more in-water shoreline development, the greater the potential for conflict, hazardous conditions and loss of freedom of movement.

3) The greater the diversity and amount of recreational use, the greater the need to conserve the existing water surface for that public interest.

4) The greater the commercial navigation activity, the greater the potential for conflict with recreational boating and the need to conserve the existing water surface.

RATING METHOD

1. Shoreline development
   
   If rating is . . .
   
   High = 3
   
   Moderate = 1
   
   Low = 0

   The rating was based on the percent of riverfront in each river mile affected by in-water development. This information was derived from LWRMP shoreline development/visual characteristics inventory.

2. Width
   
   If minimum usable width is . . .
   
   100' - 999' = 5
   
   1000' - 1499' = 1
   
   > 1500' = 0

   Impacts Analysis Methodology
The usable width is the open water not leased, leased, or occupied by structure. The average width per river mile was estimated from a map and a rating assigned. Boating turning requirements (500' radius) established the minimum standard.

3. Commercial Activity
   If ship and barge rating is...
   - High/High = 5
   - High/Moderate = 4
   - Moderate/Moderate = 3
   - Low/Moderate = 1
   - Low/Low = 0
   - High/Low = 3
   - 0/High = 2
   - 0/Moderate = 1
   - 0/Low = 0

The rating was based on ship and barge traffic destination and origin data and personal knowledge of evaluators.

4. Recreation Amount
   If recreation amount is...
   - High = 5
   - Moderate = 3
   - Low = 1
   - 0 = 0

Ratings were assigned to each recreation activity type based upon judgement of group and evaluated on a mile by mile basis.

   - High = heavy use area
   - Moderate = moderate use area
   - Low = low use area
   - 0 = no use or occasional use

5. Recreation Diversity

This rating recognizes that various uses offer inherently different experience and mode of operation. Therefore, a point was given for each category represented in the river segment. There were five possible points. Each activity was assigned a category in recognition of the differences.

A. Motorized Active
   1. Waterskiing
   2. Power boat cruising
   3. Personal watercraft

B. Non-motorized Active
   1. Rowing
   2. Sailing
   3. Sturgeon fishing

C. Motorized Passive
   1. Warmwater fishing
   2. Salmon fishing
   3. Sturgeon fishing

D. Non-water Dependent Recreation Facilities (e.g., Tom McCall Waterfront Park)

E. Water-dependent Recreation Facilities (e.g., Willamette Park)

6. Recreation-Multiple Activities

This rating recognizes that many different recreation activities may occur in the same area. A point was given for each activity. There were 10 possible points.

7. Total Points

This is the total number of points scored in all factors. The higher the score for each river mile, the greater the potential for impacts to recreation. In addition, changes in any one factor may influence the total point score.

8. Potential Impact

The final impact level rating was based on a percent of the total points possible (78) for each river mile. The percentage breakdowns for impact level 1, 2, and 3 recognize that the greater impacts are likely to occur in areas with multiple activities and conflicts opportunities. These categories mean...
Level 1 - In-water development in this area may have a high potential to negatively impact recreation values.

Level 2 - In-water development in this area may have a moderate potential to negatively impact recreation values.

Level 3 - In-water development in this area may have a low potential to negatively impact recreation values.

Ratings were assigned as follows:
- Level 1 = 100% - 50%
- Level 2 = 49% - 36%
- Level 3 = 35% - 0%
### EXHIBIT 3
LOWER WILLAMETTE RIVER MANAGMENT PLAN
RECREATION USE FACTORS

<table>
<thead>
<tr>
<th>RIVER CONDITIONS</th>
<th>River Activities Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>USABLE WIDTH</td>
</tr>
<tr>
<td>R-MO-1</td>
<td>Low</td>
</tr>
<tr>
<td>1-2</td>
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</tr>
<tr>
<td>2-3</td>
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<tr>
<td>3-4</td>
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</tr>
<tr>
<td>4-5</td>
<td>High</td>
</tr>
<tr>
<td>5-6</td>
<td>High</td>
</tr>
<tr>
<td>6-7</td>
<td>Mod.</td>
</tr>
<tr>
<td>7-8</td>
<td>High</td>
</tr>
<tr>
<td>8-9</td>
<td>High</td>
</tr>
<tr>
<td>9-10</td>
<td>Low</td>
</tr>
<tr>
<td>Swan Is.</td>
<td>High</td>
</tr>
<tr>
<td>10-11</td>
<td>High</td>
</tr>
<tr>
<td>11-12</td>
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<td>13-14</td>
<td>High</td>
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<td>R-11</td>
<td>Low</td>
</tr>
<tr>
<td>R-2</td>
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<td>16-17</td>
<td>Low</td>
</tr>
<tr>
<td>17-end</td>
<td>Low</td>
</tr>
<tr>
<td>Multi Ch.</td>
<td>Mod.</td>
</tr>
</tbody>
</table>

**NOTES:**
- O = No use or occasional use
- L = Low use
- M = Moderate use
- H = Heavy use
- 1. Holgate Slough
## EXHIBIT 4
### POTENTIAL IMPACT TO RECREATION VALUES

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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<tr>
<td>RM 0-1</td>
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<td>3</td>
<td>26</td>
<td>3</td>
</tr>
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<td>3</td>
</tr>
<tr>
<td>2-3</td>
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<td>5</td>
<td>13</td>
<td>2</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
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<td>1</td>
<td>5</td>
<td>10</td>
<td>2</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>4-5</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>8</td>
<td>3</td>
<td>24</td>
<td>3</td>
</tr>
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<td>5-6</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>10</td>
<td>2</td>
<td>28</td>
<td>3</td>
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<tr>
<td>6-7</td>
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<td>5</td>
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<td>4</td>
<td>14</td>
<td>3</td>
<td>27</td>
<td>3</td>
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<tr>
<td>Swan Island</td>
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<td>3</td>
<td>12</td>
<td>4</td>
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<td>8</td>
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<td>3</td>
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<td>20</td>
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<td>16</td>
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<td>24</td>
<td>4</td>
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<tr>
<td>Mult. Chn.2</td>
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<td>0</td>
<td>15</td>
<td>3</td>
<td>29</td>
<td>2</td>
</tr>
</tbody>
</table>

Notes:
- Level 1 = In-water development in this area may have a high potential to negatively impact recreation areas.
- Level 2 = In-water development in this area may have a moderate potential to negatively impact recreation values.
- Level 3 = In-water development in this area may have a low potential to negatively impact recreation values.

1. R1, R2 are Holgate Slough 2. Multnomah Channel segment is about 1/4 mile long.
SECTION E

BARGE OPERATORS INFORMATION PROJECT

FOR THE
1990-91 LOWER WILLAMETTE RIVER MANAGEMENT PLAN UPDATE
JULY 1991
DIVISION OF STATE LANDS

INTRODUCTION

Ocean-going and river tugs move barges and log rafts around the Portland harbor, to/from Lake Oswego, Oregon City, Milwaukie, and West Linn, and into the Columbia river.

Cargo includes such materials as paper goods, wood chips, lumber, petroleum products, sand and gravel, and logs. Barges may be enclosed or flat and may range in length from 30 feet to 200 feet and width to around 40 feet. While in transit several barges may be lashed together. Barges draft 10-15 feet of water. Tugs push these barges. Log raft may be several hundred feet long and 100 to 150 feet wide. Tugs tow log rafts.

Barges and log rafts are difficult to maneuver and stop. Controlling the "tow" requires considerable skill and experience, particularly in confined river areas or when the channel is shared with other users (e.g. recreational boaters, swimmers, waterskiers, etc.)

Safe and efficient barge movement on the river is affected by the location of in-water developments, shoreline uses and recreational and other commercial boating traffic.

During late April and May of 1991, the Division of State Lands (DSL) conducted a survey of seven barge companies believed to be the most frequent operators within the LWRMP. The mail out survey was designed with the help of Dave Polland of Brix Maritime. It was aimed at gathering information about trip origin and destinations; frequency and timing of trip; problems encountered and hazardous operating areas.

Operators were asked to identify their three most frequent trips; how often per month these trips were taken; what time of day and day of week they were taken; and which quarter of the year. On an aerial photograph of the LWRMP area, respondents were asked to: 1) chart their safest, most efficient course; 2) identify the location and type of hazards or areas where special caution is employed; and 3) note areas where new shoreline or in-water development would require a change in course or operation.

SECTION E-1
RESULTS

Of the seven surveys sent, five were returned completed; one company declined to respond citing its lack of use of the LWRMP area. One (unknown) has yet to respond. Three of the five respondents represent a very high percentage of the total barge traffic in the area. The response was deemed to be sufficient to indicate that further responses will not materially add to the database.

Three Most Frequent Trips

The operators response to this question was not as clear as expected. This is probably due to the instructions or the response form. However, clearly barge traffic is heaviest north of the Steel Bridge. It is known that one company, Western Transportation, (it is not known if they are a respondent) schedules daily trips to Lake Oswego and West Linn. Another respondent barges gravel from Ross Island lagoon to their plant near the east end of the Ross Island Bridge (river mile 14) and to other facilities downstream.

Trip Timing/Frequency

The three major respondents indicated their most frequent trip operates more than 30 times per month. Two said their second most frequent leaves 20-30 times a month; the same two said Trip Three operates 10-20 trips per month. One respondent identified all three trips as operating more than 30 times per month; while the fourth respondent indicated all trips are taken less than ten times per month. The Ross Island gravel barging operation makes as many as 20 round trips per day between the lagoon and the plant; low activity is about 2 trips per day.

All operators schedule their trips year around. Three of the five travel without regard for day of week or time of day. One schedules trips mostly on weekday mornings.

Problem Areas

All respondents indicated problem areas that require caution while operating. Usually this means the tug and barge must operate in a slow down, or "no wake" mode to avoid swimmers or small boats. Public parks such as Kelley Point, Cathedral Park and Willamette Park were mentioned. Also, certain private docks and moorages such as Station "L" Rowing Club, RiverPlace, Riedel, McCormick Pier, Terminal 4, Berth 203 and the old coal loading dock were noted by at least one respondent. Most frequently mentioned were Kelley Point Park and RiverPlace. Waterskiiers in Holgate Slough were identified as a problem to gravel barges moving from Ross Island lagoon. According to one respondent, the annual spring chinook fishery brings out a large number of fishermen in boats that congregate at the mouth of Multnomah Channel and from the Steel Bridge upstream. This causes some delay in moving through these areas.

Safest, Most Efficient Course

Each respondent charted their course on an 1"=1000' aerial photograph of the LWRMP area.

Most operators tend to stay in the middle of the river, except near RiverPlace. There they swing close to the marina in order to line up on the Hawthorne Bridge lift span.

One major operator's course hugs the east bank below the St. John's Bridge in order to keep clear of ship traffic. Between the railroad and the Broadway Bridges these barges may stay near the east or west shoreline and keep the middle of the river open.

CONCLUSIONS

Barge traffic is heaviest in the LWRMP area below the Steel Bridge. Trips do occur upriver particularly around Ross Island and to West Linn/Oregon.
City and Lake Oswego. Barges are daily users of the river; year around during any time of the day or week.

It appears that with the exception of major public use facilities (i.e. Kelley Point Park and RiverPlace) there is ample river area and few obstructions to hamper safe, efficient barge movement. In the areas mentioned on Holgate Slough and the spring chinook boat fishing areas there are hazards or conditions which cause operators to slow down and operate more cautiously. Generally, these hazards include small boats, swimmers, waterskiers, fisherman, floating docks or floating home moorages.

The preferred course of travel through the LWRMP is well within the existing harborline and recognized channel area.

Based on this information, it appears that new in-water developments will likely not interfere with barge movement if kept out of the channel and landward of the harborline. However, increasing water-dependent recreation activities (swimming, boating, etc.) along the river may increase conflicts and result in barge traffic delays.
SECTION F

SUMMARY OF PUBLIC HEARINGS

1992 LOWER WILLAMETTE RIVER MANAGEMENT PLAN

June 15, 1992
7:30 P.M.
Portland Building, Hearing Room C

Attendance

Dick Basney, Time Oil Company
Les Prentice, Portland Development Commission (PDC)
Sheila Frugoli, Portland Planning Bureau
Zari Santner, Portland Parks Bureau
Alan Willis, Port of Portland

Staff

Janet Neuman, Director, Division of State Land and Hearings Officer

John Lilly, Waterway Planner, Division of State Lands
Barbara Hilts, Secretary, Division of State Lands

INTRODUCTION

The hearing began about 7:35 P.M. by Janet Neuman, Hearings Officer. Ms. Neuman asked the attendees to introduce themselves. Since everyone in attendance was familiar with the Plan, no staff explanation was given and the testimony phase of the hearing commenced.

PUBLIC TESTIMONY

Les Prentice (PDC) submitted a letter into the hearing record. He covered the following concerns:

1) The Plan should acknowledge the Eastbank Esplanade Master Plan currently underway.

2) The Plan should re-consider the size of the Public Access area designation at the Burnside Bridge (eastside) in order to accommodate a future public access facility. The Plan shows the Public Access as only 30 feet. More area is needed for future public development of the Esplanade. It is not clear in the Plan which
planning criteria has resulted in such a narrow area of designation.

3) The Plan’s maps need to be clearer and more readable.

Mr. Prentice acknowledged that the Public Access and Development area criteria and rules are understandable and acceptable to the Portland Development Commission.

Alan Willis (Port of Portland) said the Port was very pleased with the Plan. In addition, he said:

1) The use designation of the river area fronting T-1 and T-2 should be revised to Development rather than Open Water. The current use of the site as storage, etc., should influence the designation.

2) The Plan needs to be clearer on how and under what circumstances future amendments will be made, particularly to change a management area designation. This may be necessary if there are changes in the harborline or the navigational channel.

3) The Plan should allow dredge materials disposal (DMD) in the river. This need to be investigated more closely. Current practice is to use Ross Island lagoon or dispose of material on upland. There are fewer good upland locations available. In-river DMD should be allowed as a Provisional use. This would be consistent with the Plan’s Goals and Objectives.

Dick Basney (Time Oil Company) said that he has worked along the river for over 18 years. He supported the Plan as “excellent.”

Sheila Frugoli (Portland Parks Bureau) submitted a letter for the hearing record. Ms. Frugoli said that the Planning Bureau found no major conflicts with the Plan and endorses its adoption; some technical changes are needed.

Zari Santner (Portland Parks Bureau) stated that the “public trust” includes recreation; Portlanders want more access to the eastside of the river; providing access is difficult due to the freeway, riverbank steepness, etc. She added the Plan needs to be flexible in order to accommodate the results of the Eastbank Esplanade Master Plan. Another concern is that the Plan amendment process needs more explanation.

CLOSING REMARKS

Ms Neuman announced that the hearing record would remain open to receive written comments until June 26.

Written Testimony Received Before Close of Hearing Record (June 26, 1992)

1. Brix Maritime Company
2. Port of Portland
3. Philip Thompson
4. Oregon State Parks and Recreation Department
5. Portland Development Commission
6. Oregon State Marine Board
7. Portland Planning Bureau
8. Oregon Water Resources Department
9. Oregon Department of Environmental Quality
10. Tom Wright, McKenzie/Saito and Associates, P.C.
Written Testimony Received after June 26, 1992 Deadline

1. J.E. Bud Clark, Mayor, City of Portland

2. U.S. Army Corps of Engineers, Portland District

3. Paul Fishman, Fishman Environmental Services

4. J.W. Buell, Buell and Associates

5. Oregon Department of Fish and Wildlife

6. U.S. Coast Guard, Port Operations, Portland

* NOTE: Actual comment letters on file with the Division of State Lands, Salem, Oregon.
SECTION G
DIVISION OF STATE LANDS

RESPONSES TO MAJOR COMMENTS
TO THE DRAFT
1992 LOWER WILLAMETTE RIVER MANAGEMENT PLAN (LWRMP)

The following major comments were received as a result of public and agency review of the draft 1992 LWRMP. The Division's response to each comment is shown. Each represents the manner in which the item will be treated in the final 1992 LWRMP to be recommended for State Land Board adoption.

There were a total of 17 sources for review comments ranging from letters to meeting summary notes. Almost all were received prior to close of the public hearing record on June 26. There were a total of 126 comments made. Of these, about 36 were found to be significant or major due to their content and nature (i.e., significant requests for change to vital elements of the Plan). The remainder (90) were deemed minor (i.e., editorial and factual corrections) without policy impact on the LWRMP.

The comments and DSL's response are organized according to the Plan format. The identity of the commentator is shown.

TITLE OF PLAN

1. Title of the Plan should be Lower Willamette River Development and Use Management Plan since its intent is primarily to manage human development and use activities. (Fishman Environmental Services)

DSL Response: The title Lower Willamette River Management Plan (LWRMP) has become well-known. Adding the words "development and use management" will be added as a subtitle to the Plan.
PART A. EXECUTIVE SUMMARY

No major comments.

PART B. INTRODUCTION

No major comments.

PART C. THE PLANNING PROCESS

No major comments.

PART D. PLAN AREA DESCRIPTION

No major comments.

PART E. REGULATORY SETTING

No major comments

PART F. IMPLEMENTATION PLAN

1. Management Goals and Objectives

a. Strict reading of Goals restricts new development to only that needed for public access. (Buell and Associates)

DSL Response: While we believe the Goals are not as strict as stated, adding Objective 1 to the list of Goals would further clarify the intent.

Objective 1: Encourage new developments which contribute to the furtherance of multiple public trust values.

2. Waterway Management Areas

a. Expand Public Access riverward at the east end of the Burnside Bridge in order to provide space for public access development as part of the Eastbank Esplanade Master Plan. (Portland Development Commission)

DSL Response: The Public Access area is currently about 108 feet wide from the bank (bankfull stage). An additional 50 feet will be added. No conflicts with rowers or other recreation or commercial interests are apparent.

b. Convert riverfront area along T-1 and T-2 to Development Area from Open Water designation in order to accommodate existing uses and maintain flexibility for future. (Port of Portland)

DSL Response: The Open Water designation currently allows log rafts, log booming areas and temporary storage, as a Provisional Activity, a distance of 125 feet out into the river from the edge of the pier. The designation will be retained, but long term storage will be added as a Provisional Activity and the area expanded to include RM 9.5. There are no apparent conflicts.

c. Convert the riverfront area along the west bank from the River Queen to T-1 from Open Water to Development. (Linda Dobson, Commissioner Lindberg’s office)

DSL Response: The Open Water designation was proposed due to the navigation channel “hugging” the west side of the river in this segment. See response to (b).

d. Change one of the criteria for Development Area to “maritime navigation area” rather than “authorized navigation channel.” (Port of Portland)

DSL Response: The “channel” criteria is one of several used to delineate Development Areas; it is easily locatable.

e. According to the selection criteria, all Open Water Areas could also be Development Areas. Resolve the contradiction. (Buell and Associates)

DSL Response: There is no contradiction. The Open Water includes the dominant public and commercial boating use areas while the Development Areas do not.
3. Waterway Management Area Activity Matrix and Project Application Process

a. Allow houseboats without Plan amendment. (Philip Thompson, citizen-at-large and member of the LWRMP Policy Review Committee)

DSL Response: No Plan amendment is needed, only a Major Exception. The Major Exception criteria is nearly identical to that required under Goal 15 and found in the City’s zone code. Clarify that local land use compatibility also includes Goal Exceptions. In the event a proposal came forward, it would be possible to process the LWRMP Exception concurrent with the City’s.

b. Floating homes should be restricted to current locations. (Department of Environmental Quality)

DSL Response: See response to (a).

c. Allow dredge material disposal (DMD) in the river for beneficial uses including commercial development and beach nourishment. (Port of Portland) (Corps of Engineers)

DSL Response: Currently DMD is permitted within the LWRMP only within the Ross Island lagoon. The Plan anticipates the possibility of in-water DMD through the Minor Exception or the Hazardous Material Cleanup Waiver process. Allow DMD of clean, non-contaminated sandy material for beach nourishment, riverbank erosion control treatment and approved fills.

d. Clarify beach nourishment conflict with in-water DMD. (Corps of Engineers)

DSL Response: See response to (c).

e. Maintain current policy of DMD at Ross Island lagoon; allow flow lane disposal or deepwater capping only through the Minor Exception process. (Oregon Department of Fish and Wildlife)

f. Allow public recreation docks, etc., within Conservancy Areas as Provisional Uses. (Linda Dobson, Commissioner Lindberg’s office)

DSL Response: Currently these uses could be allowed through the Minor Exception process. Of paramount importance is protecting the natural integrity of the Conservancy Areas as “legacy” areas, representative of what the Willamette River landscape used to be.

g. Clarify where “transient docks” fit in the matrix; allow them in all areas. (Oregon State Marine Board)

DSL Response: A definition for transient docks will be added to Part F Definitions (Section 8). It will also be added to the Activity Matrix. Transient docks will be OK in Development and Public Access Areas; Not allowed in Open Water Areas or Conservancy Areas.

h. Allow filling for riprap toe trench as something other than “fill to create upland” when needed for riverbank aesthetic and recreational purposes. (McKenzie/Saito & Associates, P.C.)

DSL Response: Filling in the river for whatever purpose is a serious undertaking. Once an area of the river is filled, it is no longer available for aquatic habitat or river-dependent recreation. Careful scrutiny of all fills, regardless of intent or purpose, is a basic tenet of the LWRMP.

i. The Activity Matrix (Table G) is flawed by inconsistent reliance on the significance of shallow water. (Buell and Associates)

DSL Response: The basic purpose of each management area (pages 61 and 62) was the primary factor in activity determinations in the matrix. Shallow water interests were not a major factor.
j. Table G does not appear to offer adequate protection for fish and wildlife from impacts except in Conservancy Areas. (Fishman Environmental Services)

**DSL Response:** The General Conditions apply to all activities. There will be provisions to require no significant adverse effects to riparian and aquatic life and habitat within all shallow water and Rank 1 and 2 wildlife habitat areas.

k. Maintain current policy of DMD at Ross Island lagoon; allow in other areas for beach nourishment, wetland creation, hazardous waste site capping provided sediments are clean and free of contaminants. (Department of Environmental Quality)

**DSL Response:** See response to (c).

l. Stormwater outfalls are a major source of river contamination. Should they be OK in all areas? (Fishman Environmental Services)

**DSL Response:** The draft LWRMP assumed that effluent from new stormwater outfalls will frequently meet or exceed water quality standards, however, others have questioned this assumption. New stormwater outfalls will be Provisional in Public Access and Conservancy Areas and “OK” in Development and Open Water Areas.

m. Stormwater outfalls should be Provisional in all areas. (Department of Environmental Quality)

**DSL Response:** See response to (l).

n. Stormwater outfalls should be Provisional in Conservancy Areas. (Oregon Department of Fish and Wildlife)

**DSL Response:** See response to (l).

o. Treat public recreation facilities (i.e., boat ramps) as a separate class of activities. (Oregon State Marine Board)

**DSL Response:** The LWRMP is concerned with the effects of all activities, regardless of user, on the public trust values. In order to effectively assess these effects, the components of each project must be analyzed. The Plan clearly lays out standards and conditions for each component. To lump public boating ramps, floats, etc., into a separate “activity” class would be disruptive to the Plan structure.

4. **General Conditions**

a. Limit individual private residential or commercial docks to 400 square feet rather than 1,000 square feet. (Oregon Department of Fish and Wildlife)

**DSL Response:** Individual private residential docks will be limited to 400 square feet; commercial docks to 1,000 square feet. A definition of “commercial” will be included.

b. Too much reliance in “G” (pages 66 and 67) on the significance of shallow water; list attributes that demonstrate the importance of shallow water areas from other areas. (Buell and Associates)

**DSL Response:** General Condition will be changed significantly to read as follows:

There shall be no significant adverse effect to the riparian and aquatic life and habitat by any activity within shallow water (-15 feet Columbia River datum) or Rank 1 and 2 wildlife habitat areas as depicted in the Plan inventory.

c. Table H is flawed, inaccurate and too general to be of any use. (Buell and Associates) (Fishman Environmental Services)

**DSL Response:** The Table will be deleted from the final Plan. In addition, see response to (b).
5. Provisional Standards

a. Clarify that the mitigation options for "filling to create upland" are listed in descending order of application and preference (i.e., if not 2(a), then 2(b) and (3)). (Oregon Department of Fish and Wildlife)

DSL Response: The order of preference will be stated more clearly.

b. Standards for new and expanded marinas, et al, are too numerous in comparison to other standards for activities with potentially greater resource impacts. (Buell and Associates)

DSL Response: The marina standards resulted from a need to carefully evaluate the river traffic impacts and conflicts caused by new or expanded facilities.

This is a key public trust issue. More specific standards were rejected as arbitrary. The current standards are designed to give DSL sufficient information to evaluate the traffic impacts of a proposal and to place the burden of proof on the applicant.

c. Add to the Conservancy Areas’ list of activities presumed to have adverse effects: beach nourishment (except at public swimming areas); intakes (except when no suitable alternate location is available). (Buell and Associates)

DSL Response: The activities will be added as described.

6. Major and Minor Exception

a. Revise hazardous materials clean-up waiver to allow filling and capping and temporary storage of barges (for drilling and testing sediments, etc.) in all management areas. (Department of Environmental Quality)

DSL Response: Temporary storage of a barges engaged in hazardous material testing and monitoring will be permitted in all areas. However, filling and capping need to be carefully reviewed on a case-by-case basis. A blanket approval of this activity in any waterway management area is inappropriate at this time. In addition, the revised Plan will make it clear that hazardous waste, removed under an Environmental Clean-up Plan or removal/ fill permit, is not to be stored or deposited on state-owned submerged or submersible lands.

7. Plan Review, Amendments, Public Information Hearings, Appeals, etc.

a. Develop a process within the Plan that allows Waterway Management Area (WMA) designations and boundaries to be changed without a Plan amendment. (Port of Portland)

DSL Response: WMA designations are fundamental river management policy decisions. Changes in them can be proposed during Plan review (every five years) or whenever there is a major change in conditions. Amendments can be proposed by the Division or any interested party at any time. The Plan amendment process allows the Land Board to scrutinize the proposal and carefully weigh its merits.

b. Clarify that public information hearings for removal/fill projects will follow existing procedures set out in administrative rules (OAR 141-85-075). (Oregon Attorney General)

DSL Response: Clarification will be added to page 92.

c. Allow for an informal review of non-removal/fill permit decisions by the Director prior to beginning any contested case proceedings. Removal/fill permit appeals should follow existing process (OAR 141-54-075(2)). (Oregon Attorney General)

DSL Response: Changes will be made on page 93 as suggested.
PART G. PUBLIC TRUST VALUES

1. More explanation is needed as to why "shallow water" is significant. (Fishman Environmental Services)

DSL Response: The following will be included in the Plan:

*Shallow water habitat is a term used to describe shoreline areas that are often more biologically productive than other areas. Depth is used as a general indicator for areas that receive more effective light penetration, have higher primary productivity (phytoplankton, emergent, submersed and riparian vegetation) have stable substrates, have sites for periphyton, etc., that lead to greater value for aquatic life in the lower Willamette River. It is recognized that not all shallow water habitat areas are, in fact, biologically active or uniformly biologically important. Rather, these areas are typically more valuable than deeper areas. Shallow water habitat is arbitrarily defined as areas less than -15' CRD.*

2. Clarify that the recommended DMD site study will include in-water disposal as an option; revise LWRMP standards based upon results of study. (Port of Portland)

DSL Response: A clarification will be made on page 145 (Part I).

PART I. OTHER RECOMMENDATIONS

1. Add a recommendation to coordinate the staging of aquatic events (e.g., Rose Festival dragon boat races) with all affected agencies, including DSL. (Division of State Lands, Waterway Leasing)

DSL Response: This recommendation will be added to the Plan.

SECTION G-6
SECTION H

WILDLIFE HABITAT MAPS

Rank 1 and 2 wildlife habitat areas for use with the General Conditions of the Plan are given on the following four maps.
Lower Willamette River Management Plan

Wildlife Habitat

Explanation

Wildlife Habitat Ranking 1 and 2

Map 1 of 4

Scale in Feet

2000 0 2000 4000 8000 8000

Division of State Lands - June 1993

Note: This map is for planning purposes only. Precise site-specific interpretation may require greater detail. Contact the Division of State Lands for more information.
Lower Willamette River Management Plan
Wildlife Habitat

Explanation
Wildlife Habitat Ranking 1 and 2

Map 2 of 4

Scale in Feet

2000 0 2000 4000 6000 8000

Division of State Lands - June 1993

Note: This map is for planning purposes only. Precise site-specific interpretation may require greater detail. Contact the Division of State Lands for more information.
Lower Willamette River Management Plan
Wildlife Habitat

Explanation
Wildlife Habitat Ranking 1 and 2

Map 3 of 4

Scale in Feet

Division of State Lands - June 1993
Lower Willamette River Management Plan
Wildlife Habitat

Map 4 of 4

Explanation
Wildlife Habitat Ranking 1 and 2

Scale in Feet

0 2000 4000 6000 8000

Note: This map is for planning purposes only. Precise site-specific interpretation may require greater detail. Contact the Division of State Lands for more information.

Division of State Lands - June 1993