

10 - Regional Maritime System

The Regional Maritime System chapter of the Regional Transportation Systems Plan (RTSP) includes:

- the location of existing or planned river navigation facilities in the SKATS area;
- an inventory of the regional ferry service and facilities in the SKATS area;
- the regional goals, objectives, and policies for the Regional Maritime System;
- an estimate of the vehicle and passenger movements associated with the ferry systems;
- committed and recommended service and infrastructure improvements needed on the ferry system in the area; and
- a general assessment of costs and revenues associated with maintaining existing services and recommended improvements.

Geographical Setting

The Willamette River lies in the Willamette Valley between the crests of the Cascade and Coast Ranges in northwest Oregon. The river forms at the confluence of its Coast and Middle Forks near Eugene-Springfield and flows north to its mouth at Portland with a total length of 187 miles. In its upper 133 miles, from Eugene to Newberg, the Willamette River flows northward in a braided, meandering channel. Through most of the remaining 54 miles, it flows between higher and more well defined banks, unhindered by falls or rapids, except for Willamette Falls at Oregon City, where the river drops 40 feet to tidewater. The average depth and flow rate of the river varies, depending on precipitation and the amount of water released at the 13 reservoirs behind dams in the Willamette River and its tributaries.

The Willamette River in the SKATS Area

The SKATS area is located in the midsection of the Willamette River and encompasses approximately 12 miles of the river, which flows from the southwest corner of the study area to the northwest corner. The river meanders through the SKATS area forming the boundary between Marion County on the east bank and Polk County (West Salem) on the west bank. The central business district of the Salem area is located at River Mile (RM) 85, which is 85 river miles upstream of the river's mouth. The average width of the Willamette River through the SKATS area is approximately 500 feet. The channel depth normally varies from 4 to 16 feet through the SKATS area depending on the time of year.

Overview of Facilities and Services

Currently, there are no commercial port or navigation facilities within the SKATS area. However, local efforts to pursue the dredging of the Willamette River for waterborne commerce through Salem resurface periodically. During 1996, a Riverine Goods Movement Study took place to measure the demand for commercial marine services on the upper Willamette River. The study concluded that currently it is more appropriate to use the river for recreational and commercial boating activities such as the River Queen. There is regular passenger and vehicle ferry service across the Willamette River at two locations near the SKATS area.

Commercial Navigation on the Willamette River in the SKATS Area

Background

During the mid-1970s, waterborne commerce on the Willamette River between Portland and the Yamhill River (RM 56) increased, particularly below Oregon City, while traffic above the Yamhill River through the SKATS region decreased significantly.¹ As a result, in 1973, the U.S. Army Corps of Engineers reduced dredging activity above the Yamhill River to minimal maintenance dredging and commercial traffic has not moved above the Yamhill River since that time. There has been no maintenance dredging above the Yamhill River since 1977.

There is currently an authorized Federal Navigation Channel in the upper Willamette River to Corvallis (RM 130). According to the Corps, the authorized channel has prescribed depths but no specified channel width. From Oregon City (RM 28) to the mouth of the Santiam River (RM 108) the prescribed depth is six feet. The location of the authorized channel is not specified.

Marine Transport System Requirements

Unique to regions with significant navigable waterways is the movement of goods via barge. However, in order for waterborne commerce to be a viable component of the overall transportation system in the region, a marine transport system must be in place that facilitates the movement of goods and is cost effective and competitive with rail and highway transport. Commercial barges need a channel depth of at least six feet and require at least 50 feet of channel width. Channel width in excess of 50 feet is preferable as most barges are 36 feet wide. Water transport is typically most competitive for long distance movements and bulky items or where other modes are not available. Some materials and products are more economically moved by barge than by truck or train. These products consist primarily of agricultural products, pulp and paper products, and sand and gravel. However, in order to be competitive economically, transfer and/or production facilities need to be in place near the river and an

¹ The terms "above" and "below" are used to describe the relative position of a place or activity on the river. "Above" is used to describe positions that are away from the mouth of the Willamette River at the Columbia River. "Below" is used to describe positions that are toward the mouth of the Willamette River. For example, Salem is "above" Portland.

adequate distribution infrastructure must exist to serve those facilities. Currently, there are no such facilities in the SKATS area.

Past Attempts to Re-initiate Dredging

In 1979, the U.S. Army Corps of Engineers prepared a Reconnaissance Report to determine the feasibility of dredging a 3.5-foot deep channel above the Yamhill River (RM 56) to Corvallis (RM 130) through the SKATS region. The annual cost of dredging this section of the river was estimated by the Corps to be \$1.2 million. However, the Corps did not fund the project because it was determined that this activity would not produce a net national benefit.² The primary factor in determining that there is a national benefit is the level of commercial traffic. In most cases, there must be at least 25,000 tons of commercial traffic per year currently moving on the waterway before the Corps will consider funding a project.

In both 1985 and 1987, state legislation was proposed calling for channel maintenance of the upper Willamette River, but failed to pass.

Barriers to Dredging

Even if the 25,000 tons per year threshold were met, the Corps would not automatically resume dredging; a favorable benefit/cost ratio and funding priorities would remain as significant issues.

There are also environmental concerns regarding the impact that dredging might have on steelhead and salmon habitat and spawning areas in the river. Other potential environmental impacts include damage to wetlands, disturbance to other wildlife, and water turbidity. The regulatory agencies such as the Oregon Department of Fish and Wildlife, the Environmental Protection Agency, and the Corps of Engineers will require a comprehensive study of the cumulative impacts of gravel removal before any large-scale dredging operation is considered.

According to the Port of Portland and ODOT, there are no long-term or foreseeable plans to use the upper Willamette River (from the Yamhill River to Corvallis) for commercial navigation. Although the Oregon Transportation Plan (OTP) emphasizes a multimodal system, the viability of water transport is limited to the lower Willamette River below the Yamhill River, the Columbia River and Pacific coastal ports.

Potential Demand for Commercial (Freight) River Transportation

Maritime goods movement systems are typically most competitive in the transportation of bulk shipments over long distances. In 1994, the Mid-Willamette Valley Council of Governments (MWVCOG) Economic Development Section conducted a survey of 66 of the region's largest industrial and commercial firms to gauge the level of interest for utilizing the Willamette River for the transportation of goods. The firms who were surveyed were manufacturing companies that are most likely to either ship or receive cargo in bulk or very large form either to or from

² The term "net national benefit" means that the benefit to the federal government, as calculated in dollars, is greater than the dollar cost to the federal government.

the Portland Area. Five companies indicated a strong interest in utilizing barge transportation. They included a sand and gravel company (100,000 tons annually), a grass straw exporter (15,000 tons annually) and a fertilizer firm (2,000 tons annually).

The 100,000 tons of potential barge product from the sand and gravel company would represent an expansion of existing operations and a mode shift. The 15,000 tons of product from the grass straw exporter would not be the result of an increase in production, but a mode shift away from trucking. The fertilizer company indicates that they are currently using both trucks and rail, trucks to bring in the raw materials and rail to ship the final product out to markets. The 2,000 tons of fertilizer would be an expansion of existing operations.

It is unknown at this time if a commercial navigation channel in the Willamette River will ever be restored. Before proceeding with attempts to revive commercial navigation, more complete information needs to be developed about both the environmental impacts of such an attempt (i.e., dredging on the salmonid fish habitat), as well as the need in terms of potential usage. Should sufficient political and commercial interest in restoring commercial navigation in this portion of the Willamette River arise, studies of the outstanding issues will likely be performed by the appropriate parties.

Ferry (Passenger and Vehicle) Transportation

Facility and Service Inventory

The Wheatland Ferry and the Buena Vista Ferry are both currently providing shuttle service across the Willamette River near the SKATS area. A general description of each ferry operation is followed by a financial plan, committed and recommended improvements, and goals, objectives, and policies.

Wheatland Ferry

The Wheatland Ferry, the larger and busier of the two ferries, is mutually owned by Marion and Yamhill counties and is operated by Marion County. The ferry is located about two miles north of the SKATS area near the Willamette Mission State Park.

The ferry mechanical system consists of two on-board electric motors that drive two propellers. Electrical lines suspended across the river connect to the ferry providing the needed electricity. A separate steel cable system suspended overhead is used to keep the ferry in its appropriate travel path.

The Wheatland Ferry can carry a maximum of nine automobiles and 50 passengers at a time and operates seven days a week. The maximum wait time for the ferry is 10 to 15 minutes, depending on the number and types of vehicles to be loaded off and onto the ferry. The ferry has an annual ridership of approximately 225,000 vehicles, with some pedestrians and bicyclists. The ferry is in service all year long depending on the weather and equipment conditions.

Buena Vista Ferry

The Buena Vista Ferry is located about five miles south of the SKATS area, just north of where the Santiam River flows into the Willamette River. The ferry is owned and operated by Marion County.

The ferry mechanical system consists of an on-board diesel generator that provides the electricity needed to run the on-board electric motors. The electric motors drive the propellers, and overhead, suspended steel cables are used to keep the ferry in its appropriate travel path.

The Buena Vista Ferry can carry a maximum of four automobiles and 28 passengers per trip, and operates five days a week from April through October. The maximum wait time for the ferry is 10 to 15 minutes depending on the number and types of vehicles to be loaded off and onto the ferry. The Buena Vista ferry is utilized annually to transport approximately 8,500 vehicles, and carries a lower number of cyclists and pedestrians than the Wheatland Ferry.

Improvements to the Regional Ferry System

Additional Improvements Needed or Recommended

Wheatland Ferry

No further improvements have been identified at this time.

Buena Vista Ferry

No further improvements have been identified at this time.

Financial Analysis

Ferry Operational Costs

Major expenses identified with the operation of the two ferries include ferry operator and toll taker wages, maintenance and repair, insurance, and general administration. Total annual operational expenses for fiscal year 1999 were approximately \$259,000 for the Wheatland Ferry and roughly \$123,000 for the Buena Vista Ferry.

Wheatland Ferry Funding Sources

Revenue to fund the daily operation of the Wheatland Ferry consists of monies received from three different sources: Marion County, Yamhill County, and farebox revenues. An agreement between Marion County and Yamhill County splits the operating costs remaining after farebox revenues.

Marion County Funds

Marion County funds half of the operating cost remaining after farebox revenues with the county's Road Maintenance Dedicated Funds. In fiscal year 1994, it is estimated that the county allocated approximately \$40,000 of its Road Maintenance Dedicated Funds for its share of the ferry's operating costs.

Revenue for the Road Maintenance Dedicated Funds is derived from timber receipts and county shares of the State Highway Fund (gas tax money). When timber on federal lands within Marion County is harvested, the county receives 25 percent of the timber sales, which are known as timber receipts. Approximately 75 percent of this revenue is allocated to the County Public Works Department's Road Maintenance Dedicated Funds. Marion County Road Maintenance Dedicated Funds are considered a relatively secure source of funding over time, although subject to variations (currently downward) based on the volume of timber harvested.

Yamhill County Funds

Yamhill County funds half of the operating costs remaining after farebox revenues with the county's road funds. In fiscal year 1994, it is estimated that the county allocated approximately \$40,000 of its road funds for its share of the ferry's operating costs. The Wheatland Ferry is mutually supported by Yamhill County. In fiscal year 1999, it is estimated that the county allocated approximately \$26,000 for its share of the operating costs. Like Marion County, Yamhill County derives its revenue for the road fund from timber receipts and county shares of the State Highway Fund (gas tax money).

At this time, it is unclear how long Yamhill County will be able to maintain funding for its share of the ferry's operating costs. According to Public Works staff, timber receipts have been going down over the last few years and if they continue to dwindle, continued funding of the ferry is uncertain.

Farebox Revenues

Over the last four years, farebox revenues for the Wheatland Ferry have been generating approximately 68 percent (\$176,000) of the annual operating costs. The annual operating costs for the 1999-2000 fiscal year was approximately \$207,000. There are five classes for the new fares for the ferry, ranging from \$0.75 for a motorcycle to \$6.00 for a vehicle that takes up the entire ferry (such as a farm tractor with a trailer). There is no charge to pedestrians and bicyclists using the ferry. The fares were recently increased by nearly 35 percent across the board. Staff at Marion County Public Works predicts that increased farebox revenues will generate approximately 89 percent of the actual operating cost.

Buena Vista Ferry Funding Sources

The daily operation of the Buena Vista Ferry is funded by monies received from three different sources: Marion County, ODOT, and farebox revenues. An agreement in place since 1990 between ODOT and Marion County splits the operating costs remaining after farebox revenues.

Marion County Funds

Marion County funds half of the operating costs remaining after farebox revenues with its Road Maintenance Dedicated Funds. In fiscal year 1994, it is estimated that the county allocated approximately \$37,000 of Road Maintenance Dedicated Funds for its share of the ferry's operating costs. Road Maintenance Dedicated Funds are generally described above in the Wheatland Ferry funding sources.

ODOT Funds

The other half of the operating costs remaining after farebox revenues is funded by ODOT. ODOT funds their share of the Buena Vista Ferry's operating costs with Highway Fund monies. In fiscal year 1994, it is estimated that ODOT appropriated approximately \$37,000 to Marion County for its share of the operating costs. In fiscal year 1999, it was estimated that ODOT appropriated approximately \$61,000 to Marion County for its share of the operating costs. The operating cost sharing agreement with Marion County is open ended and has no termination date. This revenue is regarded as a relatively secure source of funding.

Farebox Revenues

Over the last four years, farebox revenues for the Buena Vista Ferry have been generating approximately 8 percent (\$7,000) of the annual operating costs. The annual operating cost for the 1999 fiscal year was approximately \$8,600. There are five new classes of fares for the ferry, ranging from \$0.75 for a motorcycle to \$6.00 for a vehicle that takes up the entire ferry (such as a farm tractor with a trailer). There is no charge to pedestrians and bicyclists using the ferry. The fares were recently increased by nearly 35 percent across the board. Staff at Marion County Public Works predicts that now farebox revenues will generate approximately 10 percent to 12 percent of the actual operating cost.

Outstanding Issues

In this Plan and the city of Salem's TSP, the Union Street Railroad Bridge is identified for conversion into to a pedestrian/bicycle facility to link Riverfront Park on the east with Wallace Marine Park on the west. Currently, the bridge is abandoned for railroad uses and the city is looking to buy the structure. At issue is the federal requirement that the bridge be functionally operable to the extent that the center section can be raised in the event that a marine vessel needs to pass under, due to the height of the vessel or the water level. Currently (2001), there are two businesses in the Salem-Keizer area that have status with the U.S. Coast Guard for commercial operation on the River.

