



Bureau of Planning, City of Portland, Oregon

## CHAPTER 6

# The Willamette River: A Renaissance in the Making

Called Willamph, or “green water,” by its first inhabitants, the Willamette River in Oregon nourished surrounding wetlands, prairies, and forests. Its waters were home to the salmon that provided physical as well as spiritual sustenance. It was the source of life. Today, the river remains a source of life: millions rely on it for water, food, transportation, and recreation. With 13 major tributaries, the river drains a watershed of approximately 12,000 square miles, almost one-eighth of Oregon’s total area. The Willamette flows 187 miles from the river’s source, south of Eugene, northward to the Columbia River at Portland.

Over the past 200 years, the Willamette has been degraded, cleaned up, and degraded again. For the people of Portland, the river has alternately been a source of pride, shame, uncertainty, and hope. Mayor Vera Katz has summed up its history best: “The story of the Willamette reads like a potboiler romance—one of love, abuse, neglect, partial redemption, and unrequited promises” (Katz 2001).

Now Portland is embracing a massive effort known as River Renaissance that aims to end this cycle of ups and downs and set the river on a positive course for the future.

Two significant dates helped focus and galvanize the city and its citizens. The year 2001 marked the 150<sup>th</sup> anniversary of the city's founding on the banks of the Willamette. The year 2005 will mark the 200<sup>th</sup> anniversary of Lewis and Clark's arrival at the mouth of the Willamette as they floated down the Columbia. If the River Renaissance project succeeds, the city hopes that its completion will someday be the cause for another anniversary celebration—the year the Willamette became the centerpiece of the city's riverfront neighborhoods and its thriving economy.

#### CITY SNAPSHOT

Over the 17.5 miles that it flows through Portland, the Willamette River divides the city into east and west. Because the river is such an integral part of the city's identity, many Portlanders refer to their home as River City.

Perhaps it is the influence of the river, or the surrounding forests, or the snow-capped volcanoes of Mt. Hood and Mt. Saint Helens in the distance, but Portland's citizens have long been known for their environmental awareness and affinity for natural places. One mayor in the early 1900s is said to have proposed ripping out the buildings on every other street and replacing them with rose beds.

Portland is nationally renowned for its high quality of life. Gil Kelley, director of the city's bureau of planning, describes Portland as "a city in nature, nature in the city" (Kelley 2002). More than 200 parks, an urban wildlife refuge, bicycle and pedestrian trails, and boat launches illustrate Kelley's characterization. Portland also offers an award-winning mass transit system and many urban amenities.

As Robin Cody, a travel columnist for the *Oregonian*, writes, "A great sustaining notion of this place is that salmon and steelhead still surge through the heart of a metro area of 1.6 million people. One of America's great fishing holes lies within view of a Merrill Lynch office. Here is a heron rookery within paddling distance of NBA basketball. I can dock the boat and stroll to the world's best bookstore" (Houck and Cody 2000).

Portland has received national praise for its planning efforts. According to *Governing* magazine, "It sometimes seems as if the whole country is looking to Portland as a role model for twenty-first century urban development" (Ehrenhalt 1997). In 1997, the *Utne Reader* named Portland one of the nation's "10 Most Enlightened Cities" (Walljasper 1997). Three years later, Portland made that magazine's top-10 list of most environmentally friendly cities (Utne 2000).

#### Trouble in River City

Over the past several decades, however, the key foundation for that "enlightened" reputation—a healthy natural environment—has been eroding. Local rivers and streams have been especially affected. As the Portland area has grown, roughly 388 miles of streams have been buried, according to a concept map study (Lowthian 2003). And as of 2002, 994 water bodies in Oregon had been declared "water quality impaired," including the entire length of the Willamette for temperature, pollutants, biological criteria, or a some combination thereof (Oregon Department of Environmental Quality 2003).

Portland's relationship to its river has been like that of many U.S. cities. For much of the last century, the Willamette was choked with waste and hidden behind seawalls, buildings, rail lines, and streets. While Portlanders prided themselves on their environmental stewardship, the river flowing through their lives was sick.

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“It’s time to look our history straight in the eye and admit the sad truth: a disfigured and sickly river still runs through Portland,” said Katz in January 2001. “We have dammed it and diked it, filled it and diverted it, choked off its tributaries, and paved over much of its watershed, floodplains, and habitat. We’ve used it as a ditch, as a dumping ground, and a sewer and waste conveyor.”

### Population and Economy

The Willamette River basin is the fastest-growing region of the state. The Portland area alone is home to 44 percent of the state’s population. Recent studies project the five-county region’s population will increase by nearly 60 percent, to almost 3 million, by 2030 (Portland Metro Data Resource Center 2002).

The basin is also the state’s most economically developed region. Agriculture, forestry, and business activity in the basin make up nearly three-quarters of Oregon’s economic output. The largest employers in Portland include the service industry, wholesale and retail trade, manufacturing, and government.

The Port of Portland is a significant economic asset to the city and is the region’s link to the global marketplace. The port exports more wheat than any other port in the country and is the fourth largest port on the west coast of the North America. In the Portland and Vancouver area, the maritime activity associated with the port generates over 21,000 jobs (Daly 2003; Martin Associates 2001).

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### HISTORY OF THE PORTLAND RIVERFRONT

People have lived along the Willamette’s banks for approximately 10,000 years. But the major alteration and degradation of the river did not begin until European settlement.

Lewis and Clark came upon the Willamette in 1806 and camped where the University of Portland sits today. With news of great potential for timber, fur



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*In 1936, 4,000 schoolchildren joined a protest about the condition of the Willamette River.*

trapping, and deep fertile soil for farming, European settlement began soon after. Thousands of settlers traveled the Oregon Trail to the Willamette Valley in the 1840s and 1850s. Kelley (2002) characterizes the first 100 years of European settlement and interaction with the river as years of “discovery and embrace.”

Portland was incorporated as a city in 1851. Trees along the Willamette riverfront were clear-cut and a rectangular grid of buildings took their place. The grid’s orientation—perpendicular and parallel to the river—demonstrates the mindset of the city founders: true north and south were not as important as the main source of their livelihood, the river.

### The Thriving Seaport

Portland was ideally situated to become a thriving port. “Improvements” were necessary, however, to maintain a navigable shipping channel. Snag removal and riverbed dredging began in 1891. Dredging has continued ever since: today, the Port of Portland maintains a 40-foot deep navigation channel on the lower Columbia and Willamette rivers—and wants to increase it to 43 feet.

Portland’s early harbor was soon crowded with wharves, warehouses, and cargo ships. The Willamette became a major conduit for transporting goods to California, Alaska, Asia, and beyond. Most of the early waterfront development took place on the west bank, where steeper banks allowed boats to dock and kept damaging floods to a minimum. Flooding was more of a concern on the east bank, where wetlands prevailed. It wasn’t long, however, before the east bank’s wetlands and farmland were overtaken by warehouses and mills built on pilings.

Toward the end of the 1800s, the bustling waterfront suffered several damaging blows. After two fires destroyed downtown buildings, a flood discouraged redevelopment. The downtown center was moved from the waterfront to a safer location several blocks away. The waterfront’s transformation from a community center to a forgotten industrial district had begun.

The arrival of the railroad substantially changed the character of the riverbank. In order to make way for rail lines and other commercial development, the rail companies filled many of the ponds and marshes in the floodplain with material dredged from the riverbed. Guilds Lake was filled in, as was Mocks Bottom, a haven for waterfowl. Significant changes to the river continued as the port authority deepened the Willamette’s channel west of Swan Island and joined the island to the east bank.

*Portland’s early riverfront development, uncoordinated and controlled by individual commercial interests, would have its consequences.*

### From “An Open Sewer” to “A River Restored”

Portland’s early riverfront development, uncoordinated and controlled by individual commercial interests, would have its consequences. When Kelley speaks of the second 100 years of European settlement, from roughly 1900, he speaks of “growth and alienation.”

As the riverfront was industrialized, water quality plummeted. In 1911, the Oregon Board of Health declared the Willamette’s lower reaches “an open sewer” and said the fish were unsuitable for eating. Over the next decade, the river became too polluted for fishing, boating, or swimming. Raw sewage was discharged regularly into the river.

Public concern for the river grew and in 1936, 4,000 schoolchildren protested, begging polluters to clean up the river. Oregon soon had 48 separate laws relating to water pollution, but they were largely ineffective.

It wasn’t until 1962 that a popular journalist named Tom McCall galvanized the public with the documentary *Pollution in Paradise*. McCall later became governor and spearheaded the initiative to clean up the Willamette.

The success of those efforts served as one of the models for the Clean Water Act, passed in 1972. That same year, a National Geographic cover story proclaimed the Willamette “a river restored” (Starbird 1972). But the story wouldn’t end there.

### PORTLAND’S PLANNING EFFORTS ON THE WILLAMETTE

The positive steps for the Willamette didn’t begin with McCall. Portland’s planning efforts and the acknowledgement of the need for natural areas began as early as 1903. That year landscape architect John Olmsted (whose stepfather, Frederick Law Olmsted, designed Central Park in New York City) was hired to create a Portland Park Plan.



Amy Souers

*The Port of Portland maintains a 40-foot-deep navigation channel and wants to increase that channel to 43 feet.*

Olmsted laid the groundwork for the creation of Portland's 5,000-acre Forest Park, the largest wilderness park within any American city. Today, the park is home to more than 100 species of birds, 60 species of mammals, and 140 plant species.

Olmsted also proposed the creation of a system of parks linked by a network of trails and greenways. His plan was never completed, but his idea of "interconnected natural features" laid the groundwork for future efforts.

During the 1970s, the city took many of its first river-friendly planning steps. One of these steps was the decision in 1974 to demolish Harbor Drive, an expressway that dominated the waterfront, and replace it with a public park that would connect people to the river. The act generated national praise and became a source of civic pride. Today, the west bank's Tom McCall Waterfront Park is a popular place for picnickers, sunbathers, joggers, and concertgoers.

The 1970s also saw the creation of Portland's first urban wildlife refuge. Michael Houck, executive director of the Urban Greenspaces Institute and urban naturalist with the Portland Audubon Society, calls the Oaks Bottom Wildlife Refuge the city's "premier Willamette River natural area." He describes the fight to save Oaks Bottom from development as "the city's first serious foray into debates about the future management of the Portland Park system, and the larger question of the city's responsibility for retaining wildlife and wildlife habitat in the urban core" (Houck and Cody 2000).

Several factors led to the protection of Oaks Bottom. A film captured the story and helped galvanize additional public support. Changes in the Park Bureau, combined with growing political support for urban greenspaces, helped as well. Houck also tells the story of "sporadic guerilla activism," referring to handmade Wildlife Refuge signs that supporters placed throughout the area. It wasn't long before the local newspapers were referring to the area as the Oaks Bottom Wildlife Refuge. The Portland City Council finally made it official in 1988. Today, this 163-acre swath of wetlands within view of downtown Portland is home to more than 100 species of birds and is laced with several popular walking trails.

The development of the City Greenway Plan in 1979 was also a significant landmark in Portland's planning history. The plan's goals included restoration of the river as a "central axis and focus" for neighborhoods;

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*Imagine a vibrant city  
centered on a healthy  
Willamette River. Look to  
the future of Portland where  
a natural river system  
thrives and links together  
industry, habitat, business  
districts, and neighborhoods.*

—PORTLAND MAYOR VERA KATZ  
JANUARY 2001

increased public access; and conservation of natural riverbanks and habitat. The plan called for the establishment of greenway trails that would provide recreation and transportation along the length of the greenway.

The plan also established a greenway boundary, located at least 150 feet from the river's low-water line. Any new development within the boundary was—and still is—required to meet specific standards. In addition, a greenway setback was created, a minimum of 25 feet measured from the top of the bank. All new developments must dedicate a right-of-way or easement for a greenway trail within this setback.

Finally, the newly formed, four-county Metro Government established an urban growth boundary in 1980 in fulfillment of state land-use requirements. The boundary, adjusted more than 30 times since but expanded only about 2 percent, has had major consequences—some good, some bad—for Portland (Portland Metro 2003). While the growth boundary was designed to limit sprawl in the city's outlying rural areas, Gil Kelley of Portland's planning bureau feels it may have had an unintended consequence. He says some now have the perception that "all nature exists outside of the boundary, and there's nothing natural within." Combating that perception remains a challenge as planners and conservationists strive to preserve natural areas and create new ones within Portland's city limits.

#### **A NEW VISION: RIVER RENAISSANCE**

While Portland has taken steps over the past 40 years to establish parks, trails, and cleanup plans, they haven't been enough for the Willamette. Since the 1972 *National Geographic* cover story, Portland has faced continued issues with the river's water quality, primarily because of combined sewer overflows, runoff from urban areas, and lasting effects of industrial and other development practices. The problem has gotten so serious that Portland now faces a mandate from the state to clean up the river.

The city is under federal scrutiny as well: a six-mile stretch of the Willamette that flows through Portland harbor was declared a Superfund site in December 2000. A century of industrial and maritime activity has contaminated river sediments with toxics such as PCBs, dioxin, mercury, and several pesticides. Many Willamette River fish suffer from deformities, lesions, and tumors. The Oregon Department of Environmental Quality has warned residents against eating the fish because the toxics pose a cancer risk.

As if that weren't enough, in 1999 two species in the Willamette—the steelhead and the Chinook salmon—were listed as threatened under the Endangered Species Act. As these fish travel from the ocean, they use the Willamette to reach upstream spawning grounds. The river is also important to the juvenile fish, which need food and refuge as they migrate downstream. Portland is required by law to restore habitat for these species.

These factors have created the impetus that drives the River Renaissance project. As Kelley (2002) explains, these realities are "forcing us to deal with the issues that have been facing us for a long time [and] to step back and take a holistic look at what will fix it for the long term." The river's troubles indicate deeper problems in the city, he suggests. "For years, we've ignored our very reason for being—the soul of our city, the river," he says. Because "the river is so symbolic and meaningful in terms of its ability to focus us, it made sense to rotate the river up to the highest priority." When Kelley talks about River Renaissance and Portland's next 200 years, he says it should be a time of "rediscovering pieces of our past."

Kelley's sentiments are echoed by Portland's current mayor, Vera Katz, who is urging Portlanders to unite and "recapture the heart of our city." The mayor says she wants to make the river Portland's "front yard."

River Renaissance, led by the city's Bureau of Planning, encompasses new initiatives as well as efforts already underway. It unites Portland's Clean River Plan, the Endangered Species Act program, an update of the Willamette River Greenway plan, urban renewal plans, parks plans, and others.

The visioning process for River Renaissance began in the fall of 2000. More than 1,000 Portlanders participated in public workshops, guided tours, and classroom sessions in which they contributed to the River Renaissance Vision. Their ideas were refined as more public comments were gathered, and the Vision was endorsed by city council in March 2001. Components of the River Renaissance program have gone through the next stage of research and planning, with some nearing or beginning early implementation. A full action plan is currently being developed and is scheduled for adoption by the city council in April 2004.

Although the first three years of the program have seen some dramatic results, it is too soon to tell how much of the River Renaissance Vision can or will come to fruition. Many of the project specifics and funding sources have not yet been ironed out or identified. Kelley readily admits that some of the results may not be seen for 50 or 100 years. But he thinks it is wise to have given River Renaissance such a long timeframe. He explains that River Renaissance is about "planning for the future." Thinking long-term "helps people think out of the box. This way, big ambitious projects don't seem so impossible."

Another benefit of the long timeframe is that funding can be more easily secured for the project. Portland alone will not be able to provide all funding. Partnerships with state and federal agencies, private foundations, and landowners will be essential. Kelley highlights the Army Corps of Engineers as a promising potential partner. By February 2003, Portland had in place a cost share agreement with the Corps, which Kelley (2003) said could tap into hundreds of millions of dollars in Water Resources Development Act funds. He also plans to rely heavily on volunteer work by citizens and neighborhood groups.

Kelley agrees that even though the city's thinking and planning is long-term, it still must come up with tangible short-term victories in order to maintain public involvement and support. He laid out 10 early action items to the city council in early 2003, with a total budget of more than \$5 million. He estimated that the projects would cost the city \$2 million, with the remainder leveraged from federal and private funds.

A series of events in the summer of 2003 demonstrate the city's efforts to galvanize public interest and involvement. In July, a new three-mile section of the riverfront pedestrian trail called the Springbank Corridor was opened with much ceremony, with rides on a vintage steam train and other events. The Portland Development Commission adopted the Development Agreement for the South Waterfront district, and city council indicated it would adopt a revised version after addressing concerns that the plan does not require affordable housing at the level set by other city standards. A river ferry also began a one-month demonstration run between stops on both sides of the river, again relying on volunteer effort.

Portland has been on the cutting edge of planning, and Kelley wants to keep it that way. He says that in the next two years of this unprecedented effort, city planners will be "inventing, pushing the envelope of science and art. . . . We can't just import solutions." But the city's first attempt to revise zoning in protected areas near streams, called the Healthy Streams Initiative, demonstrated that citizens may push back. The first iteration of more stringent zoning requirements for protection, conservation, and transition zones received what Kelley (2003) termed "a tough reception" by landowners who objected to the new



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*Not all cities have an official bird, but Portland does. About 15 years ago, Michael Houck, the Audubon Society of Portland's urban naturalist, got the idea to make the great blue heron Portland's official city bird. The mayor agreed and an annual Great Blue Heron Week began. This bird, a symbol of the Willamette, is a constant reminder to Portlanders of their connection to the river.*



## GOALS OF THE RIVER RENAISSANCE VISION

- ◆ Assure a clean and healthy river
- ◆ Maintain and enhance a prosperous working harbor
- ◆ Embrace the river as Portland's "front yard"
- ◆ Create new vibrant waterfront districts and neighborhoods
- ◆ Engage in partnerships, leadership, and education

Source: City of Portland Bureau of Planning 2001

requirements. City officials responded with 100 site visits to hear the landowners' concerns and are reevaluating their streamside property inventories before proposing new protective zones.

### The Five Goals of River Renaissance

**River Renaissance Goal 1: Make the river clean and healthy for fish, wildlife, and people by emphasizing riverbank restoration, elimination of combined sewer overflows, and better stormwater management.** In order for the Willamette to be healthy, its watershed must be healthy as well. Portland recognizes it will have to coordinate with upstream and downstream communities and government agencies. Improving buffers along nearby creeks and tributaries will be part of the plan, and the type of restoration will vary by location. "While it's not realistic to expect native cottonwood forests along the Willamette in the heart of downtown Portland," says Houck (2003), of the Urban Greenspaces Institute and Audubon Society of Portland, "it's perfectly reasonable to demand ecologically meaningful restoration for fish and wildlife on the banks and within the Willamette River Greenway of a major redevelopment project like South Waterfront, where the city is providing millions of public dollars to redevelop a 140-acre brownfield site."

On the Willamette itself, streamside habitat and floodplain areas will be restored and protected to improve water quality, provide natural flood control, and improve conditions for fish and wildlife. The city's planning bureau has proposed increasing the mandatory 25-foot greenway setback along the Willamette to 100 feet. The South Waterfront development will be one of the larger projects to incorporate this new, wider buffer, but the city has already implemented it elsewhere, such as at a new police stable in the River District, a redevelopment zone in the city's northwest quadrant. Native vegetation will be planted and invasive species controlled along the greenway and elsewhere on the river.

Much of the Willamette's riverbank is lined with concrete and engineered structures. Fifty-one percent of the bank is armored with rocks and other riprap; 21 percent is covered by structures such as pilings; 26 percent is natural; and 2 percent is bioengineered. "The river right now is a canal with hard edges that runs through downtown. We need to open it up, to green the banks up," explains Kelley (2002).

Included in the River Renaissance Vision are plans for more natural banks and improved river conditions. The city's first step toward these goals was publication of a report, "Framework for Integrated Management of Watershed and River Health," released in draft form in November 2002. The report defines watershed health in terms of stream flow and hydrology, physical habitat, water quality and biological communities. It describes methods and tools for implementation and evaluation, with indicators and quantitative objectives for each area (City of Portland 2002).

Another important piece of the River Renaissance puzzle is the elimination of combined sewer overflows (CSOs). More than 50 CSOs enter the Willamette about 100 times a year, sending nearly 2.8 billion gallons of untreated waste into the river annually.

State-imposed deadlines commit the city to halting 94 percent of these overflows by 2011. Laying the new pipes and expanding the city's treatment plant to stop sewage, storm runoff, and other debris from overflowing into the river will cost the city approximately \$1 billion over 20 years (City of Portland Bureau of Environmental Services 2003). It will be the largest construction project in the city's history. Portland's sewer ratepayers—who already pay among the highest urban bills in the nation—will bear the cost.

To tackle the stormwater problem at its source, the city will push new building and street designs that improve drainage flow. For example, a



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development at Buckman Heights in southeast Portland was designed to allow 100 percent of its stormwater to infiltrate into the ground. As a result, thousands of gallons of runoff never entered Portland's combined sewer system. Rooftop gardens and other "green roof" designs already gaining popularity in Portland will likely become more prevalent. Several additional demonstration projects were completed by 2003, including the Multnomah County Building's ecoroof and a bioswale parking lot at the Oregon Natural Resource Council. The Portland Department of Transportation has also adopted best management practices in erosion control, pollution prevention, water quality, and runoff management.

In addition, residents will be encouraged to plant native vegetation in their yards to conserve water and improve water quality. A more extensive tree canopy will help intercept and filter rainwater before it reaches the river. The underlying philosophy is, as Kelley says, that "green infrastructure needs to be as readable as the city streets and the built infrastructure. The 'green' needs to be the other grid."

The Superfund cleanup at Portland Harbor will be another massive undertaking. The Port of Portland and 72 potentially responsible parties will be part of the effort to remove or isolate pollutants in the harbor and at their source. The city has completed initial testing of fish and sediment for contamination. The timetable for cleanup envisions completion of a feasibility study containing cleanup alternatives by autumn 2005, with adoption of cleanup and contaminated sediment disposal options by autumn 2006 (U.S. EPA 2003b). The cleanup effort will be essential if fish populations in the Willamette are to become healthy and safe for consumption again.

All of the above efforts will also aid recovery of imperiled salmon populations. But the special habitat requirements for salmon may create new obstacles for riverfront developers. For example, a park slated for the east

*The first goal of River Renaissance is to make the river clean and healthy for fish, wildlife, and people.*

bank was to include paths, overlooks, a boathouse, and much-improved river access. But the National Marine Fisheries Service raised concerns that the park and associated activity would damage important shallow water salmon habitat. The city has modified its plans for Crescent Park to address habitat concerns (Lozovoy 2003). In early 2003, Portland also finalized an agreement with federal permitting agencies to streamline future project reviews.

The city's proposals for larger setbacks also concern some private landowners. In response to these concerns, the Clean Streams Initiative slowed down its implementation schedule to consult streamside landowners and revise its ecological inventory.

A city-sponsored design handbook published in 2001 gives guidance for projects that affect the riverfront. Its purpose is "to establish a common frame of reference and common goals for all who are concerned with development at the river's edge," and "to guide riverbank design in directions that have multiple natural resource and urban benefits." The design notebook summarizes current riverbank conditions that affect endangered species, lists scientific "pathways and indicators" toward species recovery, and recommends design objectives and a process to meet them (City of Portland 2001).

Despite the challenges posed by restoration plans and the need to balance the river's health with residents' interests, Houck hopes River Renaissance will combine "financing schemes with planning processes to make sure we treat places as interconnected. You can't look at one restoration project without thinking about the other one downstream."

***River Renaissance Goal 2: Maintain and enhance the working harbor and its infrastructure.*** River Renaissance promises that the Port of Portland will remain a vital economic asset. To follow through on its pledge, the city will need to maintain this asset while it also restores river health. But the harbor and its users will also face challenges as they adapt to the river's expanded natural and recreational functions.

The city aims to explore and adopt new technologies, designs, and industrial practices that can exist in harmony with habitat and water-quality restoration. The Superfund designation will also be an opportunity to create new partnerships as well as new environmental cleanup industries and technologies.

"As we are doing cleanup to mitigate for the damage, we can identify great opportunities and help the city identify projects," explains Jim Middaugh, a Portland Endangered Species Act program leader. "We can take restoration work that is required and apply it to projects that would aid in salmon recovery."

Some of the freeways, cargo docks, and rail lines that currently dominate the riverfront will likely be redesigned and better integrated into the larger built and natural environment. Already, the Port of Portland took advantage of a Toyota distribution center's most recent lease renewal to redevelop the company's 100-acre property. More than 1,000 feet of pavement were pulled up, and the riverbank was replanted.

In addition, regional transportation objectives linked to the harbor are to be integrated into river protection activities. One possible project is the burial of the interstate that currently crowds the east bank, just as Harbor Drive was transformed to Waterfront Park in the 1970s. As mayor, Katz has appointed a steering committee to review possible improvements to Portland's expressway infrastructure in coming decades. The redevelopment plan for the South Waterfront district also includes extensive transportation upgrades, from a streetcar extension to new city streets to an overhead tram.

***River Renaissance Goal 3: Embrace the river as Portland's front yard.*** While the river is already a city centerpiece, the River Renaissance Vision aims to make the river even more accessible to residents so that it becomes an integral part of everyday life.

More destinations and access points will be created along the river corridor. Ramps, boat slips, docks, and marinas will provide new opportunities for boating, fishing, swimming, and other activities. Trails, bike paths, and view corridors will connect new and existing neighborhoods to and across the river. An expanded trail network will encourage walking and biking and will thus reduce car traffic and the toxicity of street runoff that reaches the river. The Greenway Trail will connect accessible riverside segments, with the goal to create a continuous recreation and transportation corridor along both banks of the river.

Historically, most of the riverfront redevelopment has occurred on the west bank. But that changed in May 2001 when the Eastbank Esplanade officially opened. The Esplanade, which cost roughly \$30 million to build, is a narrow linear trail for foot, bicycle, and other pedestrian traffic



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*The third goal of River Renaissance is to embrace the river as Portland's front yard.*

that follows the riverbank. It gives residents more access to the river, but many feel the project fell short because it didn't include riverbank or habitat restoration. But residents concede that, even though the noisy interstate dominates the Esplanade, the trail is a first step toward east bank riverfront access.

A three-mile extension of the Esplanade called the Springwater Corridor opened in 2002. It follows a rail corridor and provides pedestrian access from the city's north side to Oaks Bottom, on the south side. At the July 2003 grand opening celebration, volunteers gave rides on historic steam engine trains while joggers, walkers, bicyclists, and others traveled the trail. The area also features restoration efforts to replace invasive Himalayan blackberry with native dogwood, elderberry, Indian plum, and willows. Along the path, an art installation depicts geological strata.

The city recognizes the need to acquire lands for parks and natural areas. In spring 1995, Portland metro-area voters approved a bond measure that created a one-time \$135 million fund to acquire important natural areas. As of July 2003, Metro, the regional governing body, had acquired 7,935 acres of open space in 251 separate property transactions, incorporating the land into 14 regional natural areas and six regional trail and greenway projects throughout the four-county region. But acquisition can only go so far. As Houck says, "Acquisition alone is never going to cut it—there's never going to be enough money."

Travis Williams, executive director of the river advocacy group Willamette Riverkeeper, thinks existing parks, such as the city's popular Waterfront Park, could be improved. He would like to see the seawall that currently separates the park and downtown from the river torn down or at least reconfigured. Getting rid of the seawall—a project that may be incorporated into River Renaissance—would allow people to have closer contact with the water. “There are drawings of what a waterfront park would look like without the seawall. It would provide a much better experience for the people who go there. It’s not a flooding issue, just a question of expense,” Williams says.

Finally, art will also play an important role in connecting Portlanders to their river. The city already has a number of fountains, murals, and sculptures that reflect the river’s importance in city life. At the south end of the Eastbank Esplanade, for example, is a bronze relief map of the Willamette oriented toward the river and its sources in the Cascades to the south and east and its confluence with the Columbia to the north. Portland’s River Renaissance Vision provides for the construction of a “world-class monument in a prominent riverfront location.” The monument will seek not only to connect civic life with the river, but could also reinforce the river’s role in city history.

***River Renaissance Goal 4: Create vibrant waterfront districts and neighborhoods.*** The river is to become the unifying feature of riverfront neighborhoods and a major contributor to the appeal and activity of these districts.

New development, such as 770 units of housing in the River District, will be oriented toward the river and will include greenway setbacks and river access. The River District is a high-density urban residential neighborhood that currently has 5,000 housing units under construction, including more than 2,000 affordable units, in vacant and underused land on the north edge of downtown Portland. The project also includes a connection to the Central City Streetcar system and the classical Chinese Garden in Portland’s Chinatown, and has acquired 4.5 acres for park space (Portland Development Commission 2003).

More of the riverfront throughout the city will be dedicated to nature walks, urban promenades, playgrounds, marinas, cafes, museums, outdoor learning venues, Native American history, public art, and natural history

*The fourth goal of River Renaissance encourages the orientation of new development toward the river with greenway setbacks and river access.*

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interpretation. Festivals, regattas, and sporting events will build awareness of and celebrate the river.

Existing riverfront developments, such as River Place, built in the 1980s, feature a mix of marinas, shops, restaurants, outdoor seating, and art galleries. What places like River Place lack are any benefits for the natural river. The riverbank there is riprapped and offers no physical connection to the river, except via the marina docks. River Renaissance plans to take the proven, successful model of mixed-use development embodied by River Place several steps further to incorporate ecosystem needs.

*Replacing hard edges with natural vegetation brings people closer to the river and provides habitat.*



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*The North Macadam District (now the South Waterfront District) was natural (1867, above), then a brownfield (1964, top right), and now a site for extensive redevelopment (2001, bottom right).*

One of these new opportunities exists in a place known as the South Waterfront District (formerly the North Macadam District), a privately owned 130-acre brownfield site immediately south of downtown Portland. Formerly used for barge and shipbuilding, the land is now slated for redevelopment with apartments, offices, a biotech research center, shops, and mass transit, including an extension of an existing streetcar line and a new aerial tram to the Oregon Health Sciences University. The city has negotiated an agreement with the developers of the South Waterfront's 30-acre central district to restore the riverbanks and allow for an average 100-foot vegetated greenway buffer, largely to improve salmon habitat. "It will be interesting to see the progression of something like River Place to what could be at North Macadam," says Travis Williams. "The city has a chance to really accomplish something good for the river there."

In addition to this residential and commercial development, new transportation options—such as river taxis, ferries, tour boats, and cruise ships—will also link waterfront neighborhoods. A river-ferry pilot project began operating for a month of weekends in July 2003 using an open-air yawboat, patterned after river transport from Portland's early years. Volunteers from RiversWest, a nonprofit that seeks to preserve maritime traditions, took passengers for free on hourly weekend runs from the West Side's River Place, across the river to the Oregon Museum of Science and Industry, and to two stops along the Eastbank Esplanade.

The South Waterfront Development Agreement, adopted by the city council in August 2003, provides one specific example of the potential economic boost provided by these new projects. The proposal for the area's 31-acre central district along the riverfront would drive \$1.9 billion in total investment: \$1.6 billion in private funds, \$219 million in public investment, and \$131 million in tax increment financing. The largest single development project in Portland history projects 1,000 construction jobs, 300 indirect jobs, and would include a biomedical research facility for the Oregon Health Sciences University, which will create 2,500 jobs (Mazziotti and Tweedy 2003).

***River Renaissance Goal 5: Promote partnerships, leadership, and education.*** River Renaissance is not a single program; it is an umbrella for many programs. In that sense, it won't succeed without strong collaboration.

A group called the River Renaissance Partners—made up of government, tribal, business, neighborhood, and environmental leaders—has been assembled to advocate for implementation of the River Renaissance vision. In addition, a multijurisdictional organization called the River Trust was established to coordinate local river improvement efforts among 13 management agencies that have jurisdiction over the river, and with upstream and downstream communities. City officials say the River Trust was instrumental in devising an agreement with federal fisheries managers to streamline permitting of projects that are part of the city's Endangered Species Act response (Hart 2003; Reed 2003).

Educating and involving the community, especially through local schools, is also an important part of the city's plan to promote stewardship of the river. Even though the visioning process is over, Gil Kelley and others continue to talk with local groups and conduct informal slide shows and presentations about River Renaissance throughout the city. A second set of public meetings and reviews will accompany the development of the River Renaissance action plan in 2004. Kelley knows that building support and maintaining contact with the public will be essential to success.



Bureau of Planning, City of Portland, Oregon

*River Renaissance is a remarkably ambitious river revitalization effort that may help ensure the health and beauty of the Willamette for future populations of Portlanders.*

### LOOKING FORWARD

River Renaissance is arguably the most ambitious river revitalization effort in recent U.S. history. It seeks to tackle the needs of a growing population as well as of endangered salmon. It encompasses restoration goals for streambanks, streets, and residential yards in downtown Portland as well as for distant watershed locations. It must serve as the umbrella for a variety of local, state, and federal programs. It requires the collaboration of diverse parties, from the industries that use the harbor to private landowners to conservationists.

But if any city is likely to succeed with such a task, it is Portland, a city known for its long history of planning and environmental stewardship. The Willamette was a model for restoration in the 1970s, and it can be again.