

APPENDIX C
Existing City Activities the *Framework*
Builds Upon

Existing City Activities the *Framework* Builds Upon

The watershed management system described in the *Framework* builds on the momentum of City initiatives and efforts already under way to address watershed and river health. These include, but are not limited to, the following City of Portland programs and activities:

Assessment of City of Portland Activities for Potential to Affect Steelhead. The City of Portland commissioned this assessment in 1998 to determine whether City activities have the potential to affect steelhead and steelhead habitat. Activities assessed include planning, permitting, inspection and enforcement; water delivery; stormwater and wastewater management; structure and road construction and maintenance; environmental enhancement; and emergency response. The assessment also evaluated Endangered Species Act compliance approaches and potential conservation strategies for Portland-area watercourses used by steelhead and other salmonids.

Clean River Plan. The Clean River Plan sets forth a comprehensive approach to catching and treating stormwater before it enters the sewer system or reaches a receiving stream. The Clean River Plan was designed as a major supplement to the Combined Sewer Overflow (CSO) Abatement Program to more effectively and efficiently address sewer overflows and bacterial pollution, as well as overall watershed health and stewardship. It uses a variety of innovative techniques to reduce stormwater runoff, reduce pollutant levels, restore floodplains and foster environmental education and stewardship.

Combined Sewer Overflow (CSO) Abatement Program. The CSO Program is designed to control combined sewer overflows to the Willamette River and Columbia Slough. The City of Portland has already completed combined sewer overflow reduction projects for the Columbia Slough that reduce the volume of combined sewer overflows by more than 99 percent. Westside CSO projects under construction include the West Side Big Pipe project. The 14-foot-diameter Big Pipe tunnel runs parallel to the Willamette River for four miles. The pipe will collect and store wastewater from existing sewers and convey it under the river to the new Swan Island Pump Station, from which it will be pumped to the Columbia Boulevard Wastewater Treatment Plant. A companion pipe, which is likely to be 20 to 24 feet in diameter, will be built on Portland's east side by 2011. The combined capacity of the new pipes will reduce CSOs to the Willamette River by a minimum of 96 percent.

Development Standards. Development standards have been put in place to comply with the City's National Pollutant Discharge Elimination System (NPDES) MS4 permit (for municipal separate storm sewer systems) and the City's policies pertaining to a sustainable environment and the recovery of threatened or endangered species. The City of Portland's *Stormwater Management Manual* (City of Portland Bureau of Environmental Services 2000), for example, requires specific measures to reduce the impacts of stormwater runoff and pollution resulting from new development and redevelopment within the City. Some key requirements are as follows:

- Removal of at least 70 percent of total suspended solids in stormwater
- Removal of pollutants of concern in water quality-limited waterbodies (meaning those with total maximum daily load [TMDL] limits)
- Management of stormwater runoff once construction is completed
- Suggested best management practices. Using eco-roofs, vegetated swales and public education helps reduce, retain and filter stormwater runoff onsite instead of it being discharged directly to streams.

The City of Portland's *Erosion Control Manual* (City of Portland 2000) provides guidelines that require all sites of ground disturbance to comply with a "no visible or measurable" sediment discharge standard. There also are enhanced controls for large, sloped and sensitive development sites. Erosion, sediment and pollutant control plans are required for all sites needing a City permit.

In addition, the watershed management process presented in Chapter 3 of the *Framework* guides the development of individual watershed management plans for Portland's urban watersheds. Each watershed management plan will include assessments of water quality and flow that will lead to recommendations for new or revised stormwater management program elements or best management practices (BMPs) that would help the City of Portland meet the requirements of its NPDES stormwater permit and other regulatory obligations. The watershed management plans will identify projects and actions to restore natural stormwater infiltration functions and stormwater retention, as well as fish and wildlife habitat.

Endangered Species Act Program. The City of Portland initiated its Endangered Species Act (ESA) Program in 1998 to manage the City's activities in response to the listing of salmonids under the federal Endangered Species Act. The Endangered Species Act Program is designed to be comprehensive, based on sound science and focused on action. The program's aim is to go beyond the minimum standards set by the ESA (that is, to avoid "take") to help the City of Portland achieve its goal of assisting with the recovery of native fish and wildlife. In addition, the program acts to empower, engage and motivate the community and City government to act strategically and proactively so that the greatest overall community, economic and environmental benefits are achieved. The ESA Program became part of the Bureau of Environmental Services' Science, Fish and Wildlife Division, within the Watershed Services Group, in 2005.

ESA Section 7 Streamlining Agreement. In October 2002, the City entered into a federal ESA Section 7 streamlining agreement with the National Marine Fisheries Service in the National Oceanic and Atmospheric Administration (NOAA Fisheries), the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service (USFWS). This agreement establishes a cooperative process for streamlining ESA Section 7 consultations among the four parties to the agreement for City projects that require federal permit approval or funding. Every quarter, City and federal agency staff meet to simplify and streamline Section 7 consultations; develop information, documentation, formats and timeframes for biological evaluations/assessments (BE/BA) and biological opinions; develop additional compliance strategies; and improve coordination of strategies for complying with the ESA and additional regulatory requirements of other state and federal regulatory programs. The

streamlining agreement facilitates early planning and coordination among the City and federal agencies for projects, programs and activities that require or would benefit from federal agency review. Benefits of the agreement include increased coordination for review, analysis and documentation of City projects, programs and activities so that they proceed in a timely manner while meeting federal agency and City goals for ensuring ESA compliance and assisting in the conservation of listed species.

Erosion Control. In response to ESA listings, the City assembled a citywide team to expand and improve on the City's erosion control program, which works to reduce erosion and its impacts on fish and their habitat. This effort produced new erosion control regulations as well as a revised erosion control handbook.

Fanno Creek Resource Management Plan. The Bureau of Environmental Services completed the Fanno Creek Resource Management Plan in 1998 as part of the City's Public Facilities Plan. The Fanno Creek Resource Management Plan contains an assessment of resource, habitat, hydrologic and hydraulic conditions in the watershed, and it analyzes areas and subbasins in the Fanno Creek Watershed that generate high pollutant loads. Some actions recommended in the Fanno Creek plan have been implemented. The plan also provided critical technical support to the Planning Bureau's Southwest Community Plan project.

Fish-Friendly Maintenance Practices Manual. The City of Portland's Maintenance Bureau, in conjunction with the Endangered Species Act Program, developed a manual of fish-friendly maintenance practices. The manual was the basis for a City application to NOAA Fisheries for an ESA Section 4(d) "take" limitation program, to help ensure that City road maintenance activities do not harm listed species.

Fish Research. The City's Endangered Species Act Program partnered with the Oregon Department of Fish and Wildlife in 2000 to conduct a 4-year study in the lower Willamette River to evaluate the habitat functions that bank treatments and near-shore developments provide for salmonids. Information was collected on the types of bank treatments and near-shore developments that are preferred, how they are distributed in the lower Willamette, and the specific features that distinguish them from other areas. The results provide the City of Portland with information that will be useful when more certainty is desired regarding planning, permitting and enforcement actions. The work also will help define properly functioning conditions in this reach of the river. The City also is working with the Oregon Department of Fish and Wildlife, Ducks Unlimited and others to conduct fish research in the area's tributary streams. All of Portland's watersheds are being sampled seasonally to determine when fish are present.

Illicit Discharge Controls. The City of Portland has developed an illicit discharge elimination program to prevent, search for, detect and control illicit discharges to the City's stormwater systems and surface waters. The program includes identification and tracking of public and private outfalls, verification of commercial and industrial connections to the City storm system, monitoring to detect non-permitted discharges and evaluation of non-stormwater discharges to the storm system. The City also maintains a Spill Protection and Citizen Response (SPCR) Team to reduce the frequency and impact of spills and inappropriate discharges to the combined sewer system and the storm system.

Industrial/Commercial Controls. The City of Portland oversees facilities that discharge to the City's storm systems from industrial and commercial properties with specific Standard Industrial Classification (SIC) codes. The City reviews all nonresidential facility stormwater pollution control plans and performs site inspections to ensure compliance with the plan and permit conditions. The City also provides technical assistance and programs to identify additional activities and BMPs to minimize pollutants in stormwater runoff.

Integrated Pest Management Program. Portions of Portland Parks and Recreation's Integrated Pest Management Program have been acknowledged by NOAA Fisheries as protective of listed salmon under ESA Section 4(d). Other City bureaus also follow the program to ensure effective and environmentally sound pest management. The City is working with NOAA Fisheries and a variety of environmental and other organizations to continue its ongoing efforts to refine, improve and expand its integrated pest management practices.

Johnson Creek Culvert Replacements. The City of Portland is working with Multnomah County, Clackamas County, Gresham and Milwaukie to coordinate the replacement of culverts throughout the Johnson Creek watershed. The jurisdictions are developing a unified prioritization scheme to identify the culvert replacements that provide the maximum benefit for salmonids. The City of Portland also worked with Metro and state and federal resource agencies to remove a culvert that blocks access to high-quality steelhead habitat in Kelly Creek, a tributary to Johnson Creek, and is working with the U.S. Army Corps of Engineers to remove culverts in Crystal Springs, a tributary to Johnson Creek.

Johnson Creek Restoration Plan. The City of Portland and the Johnson Creek Watershed Council developed a plan to restore habitat, improve flows and reduce flooding in Johnson Creek. The plan, which is aimed at managing floods, includes more than 60 activities that will restore corridor function. An action plan that is based in part on City analyses will help inform City and private protection and restoration priorities.

Natural Resources Inventories and Protection. The City developed and adopted eight natural resources inventories and protection plans:

- Johnson Creek Basin Protection Plan (including the Boring Lava Domes Supplement)
- Columbia Corridor Industrial/Environmental Mapping Project
- Balch Creek Watershed Protection Plan
- Northwest Hills Natural Areas Protection Plan
- Southwest Hills Resource Protection Plan
- East Buttes, Terraces and Wetlands Conservation Plan
- Fanno Creek and Tributaries Protection Plan
- Skyline West Conservation Plan
- Forest Park Natural Resource Management Plan

The adoption of these plans established the City's environmental overlay zones to help ensure protection of important natural features, functions and public health and safety. Environmental overlay zoning regulations help protect waterways and upland natural resource areas by limiting development or requiring development to meet certain standards and criteria to avoid or mitigate impacts on natural resources. Other land use and zoning

tools that contribute to the conservation of natural resources include the Greenway Overlay Zone, Natural Resource Management Plans and District Plans.

The Bureau of Planning is updating citywide natural resource inventory information for rivers, streams, drainageways, wetlands, riparian resources and wildlife habitat, along with a natural resource inventory for the Willamette corridor. This new information can be used to help inform many City and community programs and projects such as the *River Plan* for the Willamette corridor, updating existing land use and zoning tools; and watershed management, including setting land acquisition and restoration priorities, and developing strategies to comply with emerging regional and state regulations.

Office of Sustainable Development (OSD). The City of Portland created the OSD to provide leadership and create policies and programs to promote environmental, social and economic health in Portland and to encourage sustainable development to protect our environment and economy for future generations. OSD integrates efforts related to energy efficiency, renewable resources, waste reduction and recycling, green buildings and sustainable practices and education.

Parking Lot Landscaping. The Planning Bureau, Bureau of Environmental Services and Endangered Species Act Program developed new parking lot landscaping requirements designed to reduce water quality and stormwater impacts.

Public Education and Outreach about Stormwater. The City of Portland offers a variety of public education programs about stormwater. Examples include free education programs to schools and community groups and technical assistance and partnerships with businesses and industry groups. The City's education programs also provide community service projects, stewardship grants and curriculum resources.

River Plan. The *River Plan* – a plan for the land along the Willamette River in the City of Portland – will include an update to the *Willamette Greenway Plan*, zoning map, Zoning Code, and design guidelines; development of a working harbor reinvestment strategy for the North Reach; and other implementation strategies. It will be developed in three phases – North Reach (underway) followed by South Reach and Central Reach. Sequencing will allow the plan to be synchronized with projects and planning efforts that affect different sections of the river. The *River Concept* is a document that will provide policy guidance for the River Plan. A draft *River Plan* is expected to be presented to the Planning Commission and City Council in 2007, and will address Greenway trail alignment, river-dependent/river-related industrial uses, watershed health, natural resources, landscaping and riverbank design issues.

Ross Island. Ross Island Sand and Gravel and the City are negotiating the transfer of Ross Island to the City. The island presents a tremendous opportunity for habitat restoration and long-term research on the costs and benefits of various restoration measures.

Site Development Review Process. The City is undertaking a comprehensive review of all aspects of the administration and enforcement of the City's environmentally related programs. Receiving particular attention in this project are the programs concerning erosion control, stormwater management, trees and landscaping standards, subsurface drainage and the enforcement of site-related conditions and standards from the Zoning Code and Land Use Reviews. The purpose of this review is to ensure the effective

administration and enforcement of development regulations that affect the environment. The review will result in recommendations for both substantive and administrative modifications and improvements. Primary areas that will be addressed include code consolidation, regulatory coordination, clarification of responsibilities and procedures, modifications to fee structures and revenue distribution, staff training and expertise, the handling of complaints, and enforcement tools.

Stormwater Management Manual. Stormwater management is a key element in maintaining and enhancing environmental conditions within Portland. The City of Portland has developed a comprehensive stormwater management manual to provide design professionals with specific requirements for reducing the impacts of stormwater runoff and pollution resulting from new development and redevelopment within Portland. The manual's requirements apply to all development, whether public or private. The City and NOAA Fisheries are working together to develop an ESA Section 4(d) "take" limitation proposal based on the *Stormwater Management Manual* (City of Portland 2000).

Structural Controls. The City has created or retrofitted a number of stormwater management facilities to reduce stormwater quantity and improve the quality of stormwater runoff. The City offers incentives and assistance for projects that control stormwater runoff from commercial and industrial properties. This includes disconnection of downspouts, replacement of pavement with porous materials and the use of vegetated swales, planters or other landscape features that assist stormwater management.

Salmon Safe Certification for Portland Parks. The City is working with the independent, third-party environmental certification organization called Salmon Safe to evaluate how "fish-friendly" City parks management is. Certification criteria have been developed and are being applied to a variety of Portland parks. Improvements in park management identified through the certification process will be addressed on an ongoing basis. Portland is the first city to undergo a third-party certification of its parks.

Upper Tryon Creek Corridor Assessment. The Bureau of Environmental Services completed the Upper Tryon Creek Corridor Assessment in 1998 as part of the City's Public Facilities Plan. The corridor assessment analyzes stream corridors in Upper Tryon Creek Watershed and identifies high-priority areas for restorations. The report also contains an assessment of the hydrologic and hydraulic conditions in the watershed. Some actions recommended in this report have been implemented. This report also provided critical technical support to the Planning Bureau's Southwest Community Plan project.

Urban Migratory Bird Treaty. In 2003, Portland became one of four U.S. cities chosen by the U.S. Fish and Wildlife Service to participate in its Urban Conservation Treaty for Migratory Birds. Under this 3-year program, the City receives \$50,000 to protect migratory birds that nest in or fly through Portland. As part of the treaty, the City is developing and implementing bird conservation projects, providing matching dollars and in-kind support, and developing partnerships with other metropolitan-area organizations. Activities conducted under the treaty include public education and outreach, habitat improvements such as removal of invasive plants, and removal of hazards to migratory birds.

Willamette River Habitat Restoration and Enhancement Projects. The City of Portland is working to improve fish and wildlife habitats in and along the Willamette River. These

projects include, for example, improving fish access to off-channel habitat at Oaks Bottom and Smith and Bybee lakes for resting and rearing of juvenile fish migrating in both the Willamette and Columbia rivers. The City of Portland is restoring portions of the Willamette River streambank as part of the redevelopment of the South Waterfront District and is implementing a number of revegetation projects along with Willamette. Bioengineered bank treatments have been incorporated into a variety of riverfront parks and redevelopments, including the East Bank Esplanade, the Riverplace Development and South Waterfront Park.

Water Resources Development Act (WRDA). The City is partnering with the U.S. Army Corps of Engineers to develop a suite of ecosystem restoration actions under the authority of the federal Water Resources Development Act. Under the Act, the Corps will provide a 50 percent cost share for planning restoration actions and will provide a two-thirds cost-share for implementation. The City is using the analytical approach described in the *Framework* to guide the project selection effort.

Additional Projects. In addition to its programmatic work, the City is engaged in a variety of specific projects that enhance habitat for fish and wildlife in Portland's watersheds. Sample projects include the Columbia Slough 1135 project, in which the City is partnering with the U.S. Army Corps of Engineers and Multnomah County Drainage District to modify channel and culvert conditions in the slough, create wetlands and restore portions of the riparian buffer/wildlife corridor along the slough. Other examples are green street projects, in which curb extensions are landscaped to filter runoff and reduce the stormwater flowing into the sewer; eco-roofs, which replace conventional roofing with vegetated roofing that reduces stormwater runoff, pollution and erosion; and downspout disconnections, in which roof drains from commercial and institutional buildings are disconnected and stormwater is directed over the ground for filtration or for treatment and discharge. These projects are being implemented through the City's Sustainable Stormwater Program and Innovative Wet Weather Program, which is funded in part through grants from the U.S. Environmental Protection Agency. The City also has purchased properties—including riparian areas—for purposes of flood storage, natural parks and resource protection and restoration.