



# TITLE 13 – NATURE IN NEIGHBORHOODS

## Request for Metro Determination of Substantial Compliance

### Summary Report

### Overview

This report summarizes the City of Portland’s draft request for determination of substantial compliance with Metro’s Title 13, Nature in Neighborhoods. The full request is presented in the report called *Title13, Nature in Neighborhoods Request for Metro Determination of Substantial Compliance, July 2012*.

Title 13 establishes regional requirements to protect, conserve and restore significant natural resources, specifically river, stream and drainageways, riparian areas, and wildlife habitat areas. Cities and counties must demonstrate to Metro that they have established regulatory and/or non-regulatory programs that substantially comply with Title 13 requirements.

Portland’s proposed Title 13 compliance request relies on existing City regulatory and non-regulatory tools. Tools include zoning regulations (e.g., overlay zones and plan districts), non-zoning regulations (e.g., Stormwater Management Manual, tree codes), and non-regulatory programs (e.g., watershed restoration, willing-seller land acquisition, capital projects and incentives). Together these programs protect, conserve and/or restore the vast majority of designated Title 13 Habitat Conservation Areas in the City, helping to maintain cool clean air and water, reduce risks associated with flooding and landslides, and protect fish and wildlife habitat. No new regulations are proposed with this compliance package.



Portland’s request for determination of substantial compliance applies to the area within city limits and specific urban pockets of Multnomah County. Because West Hayden Island is not currently within city limits and an annexation decision is pending, West Hayden Island is not included in this compliance request.

A determination of substantial compliance does not mean that the City has finished its work to protect and restore natural resources. The City will continue these efforts through projects currently underway, future projects and ongoing programs. Metro’s determination of substantial compliance will recognize the importance of existing City programs in helping to meet local and regional watershed health goals.

## Context

Metro adopted Title 13 of the Urban Growth Management Functional Plan in 2005. Title 13 establishes regional requirements to protect, conserve, and restore regionally significant Habitat Conservation Areas or HCAs. Approximately 12,800 acres of Title 13 HCAs are located in the City of Portland and county urban pockets. Title 13 also designates the Willamette and Columbia Rivers as HCAs.

Metro designated High, Moderate, or Low HCAs, reflecting different levels of natural resource value and development potential. For example, High HCAs are areas with high resource value and relatively low development potential, while Moderate HCAs generally have high or medium resource and high or medium development potential. Title 13 generally requires that detrimental impacts on the HCAs be avoided where possible, and that unavoidable impacts are mitigated. Title 13 calls for more stringent programs to protect High HCAs and less stringent programs to address Moderate and Low HCAs.

In 2007 the Oregon Land Conservation and Development Commission (LCDC) acknowledged Title 13 as in compliance with specified portions of *Statewide Land Use Planning Goal 5 Open Spaces, Scenic and Historic Resources and Natural Resources and Goal 6 Air, Water and Land Resources Quality*. Metro-area cities and counties must demonstrate that they have established programs that are in substantial compliance with Title 13. Local jurisdictions may rely on existing plans and ordinances, or may adopt new plans and ordinances to comply with Title 13. They may also achieve compliance through alternative regulatory or non-regulatory programs, or by adopting



*Columbia Slough*

customized district plans designed to meet Title 13 requirements for specific parts of the city or county.

The City of Portland participated actively in the development of Title 13, serving on regional technical and policy advisory committees and providing natural resource GIS data. By the time Title 13 was adopted, the City had already established long-standing regulatory and non-regulatory programs that protect and restore natural resources, including Title 13 HCAs, in Portland. However the City chose not to request a determination of substantial compliance before the initial 2009 compliance deadline.

Rather, the City requested additional time to make significant progress on several large projects that would, among other objectives, update programs that address Title 13 requirements (e.g., Natural Resource Inventory update, Airport Futures, Citywide Tree Project, West Hayden Island, Portland Plan). The most recent Title 13 extension ended on June 30, 2012. Accomplishments are listed in Table 1 at the end of this report.





## Summary of Portland’s Title 13 Compliance Package

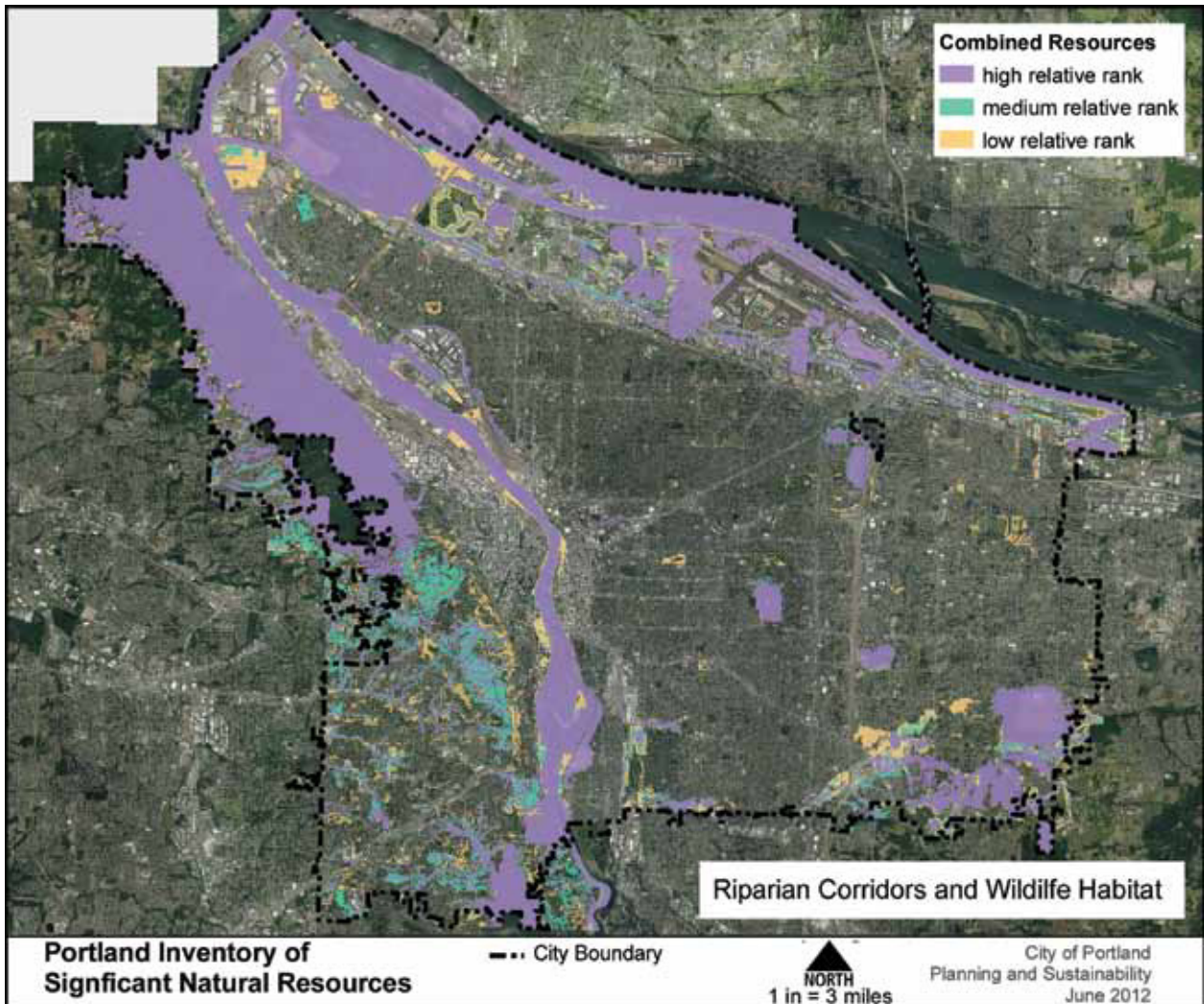
The City’s Title 13 compliance strategy is multifaceted, featuring a natural resource inventory update, and existing zoning regulations, non-zoning regulations and non-regulatory programs. In combination, these City programs apply protections to the vast majority of Title 13 HCAs in Portland, and involve actions to enhance and restore Portland’s significant riparian corridors, wildlife habitat and overall watershed health, see Table 2 at the end of this report. The building blocks of the City’s compliance package are outlined below.

### Natural Resource Inventory update

The City has produced an updated inventory of significant natural resources. The updated inventory incorporates and builds on the scientific basis and methodology Metro used to develop the Title 13 inventory of regionally significant riparian corridors

and wildlife habitat. The City has improved the accuracy and local applicability of the inventory by including newer, higher resolution data, refining the modeling criteria based on additional scientific literature analysis, and conducting targeted field visits. The City’s natural resource inventory identifies 26,235 acres of significant riparian corridors and wildlife habitat, nearly 2,600 acres more significant natural resources than was identified in the Title 13 inventory.

The Natural Resource Inventory (NRI) is part of the factual basis for updates to the City’s Buildable Lands Inventory and Comprehensive Plan. The NRI has been recommended for adoption by the Planning and Sustainability Commission, and will be submitted to the City Council with the rest of the factual basis documents in August 2012.



## Zoning Regulations



### Portland’s Natural Resource Overlay Zones

The City’s existing natural resource overlay zones provide the foundation of the City’s Title 13 compliance package. Combined, the environmental (p-zone, c-zone), greenway (n-zone, q-zone), Pleasant Valley natural resource (v-zone) and scenic resource overlay zones apply to the vast majority of Title 13 HCAs in the City, as shown in the table on the next page.

Portland’s *environmental overlay zones*, Pleasant Valley Natural Resource Overlay zone, greenway overlay zones and scenic resource overlay zone form the foundation for compliance with Title 13.

The *environmental overlay zones* are the City’s major tool for complying with Statewide Planning Goal 5, and also a cornerstone of the City’s program to comply with the water quality requirements of Metro Title 3. The environmental overlay zones were established for specific areas of Portland between the late 1980s and the early 2000s. They currently apply to roughly 17,800 acres of significant natural resources plus portions of Portland’s major river channels.

The City established two types of environmental overlay zones. The environmental protection overlay zone strictly limits development while the environmental conservation zone allows development providing meets standards or discretionary review

criteria designed to avoid, minimize or mitigate adverse impacts on identified natural resource values and functions. The requirements of the environmental overlay zones comport well with the provisions of Title 13. The regulations limit disturbance, promote planting of native plants and prohibit the planting of invasive plants, and provide flexible standards to encourage avoidance of natural resource areas. Mitigation is required to compensate for unavoidable adverse impacts on natural resource values and functions. Enforcement is an important element of the environmental zone program.

The *Pleasant Valley Natural Resources overlay zone* applies to a much smaller area, or about 90 acres in urbanizing southeast Portland. These regulations are similar to environmental zone regulations; however, new development within resource areas is more strictly limited throughout the zone.

The City of Portland established the *greenway overlay zones* in 1987 to protect, conserve, enhance and maintain the natural, scenic, historical, economic, and recreational qualities of lands along the Willamette River. The Greenway Overlay Zones are the City’s primary tool for implementing Statewide Planning Goal 15, Willamette River Greenway.

Five greenway overlay zones — (river general, river industrial, river natural, river recreational, and river water quality) contain regulations addressing development in and near the Willamette River. Two standards, a setback from the river and a standard requiring landscaping within the setback, work together to protect and enhance the land directly adjacent to the Willamette River.

Further, most development must meet approval criteria through greenway review. The approval criteria address natural resource protection and enhancement, public access to and along the river, and scenic views. Beyond these general regulations, the river natural and river water quality zones apply additional regulations to prevent adverse impacts on natural resources and require mitigation where impacts occur.

The *scenic resource overlay zone* provisions require and encourage additional tree preservation and planting.



**Title 13 HCAs Covered by City Natural Resource Overlay Zones\***

<b>HCAs within City NRI High and Medium Riparian Corridors</b>	<b>83.6%</b>
All HCAs	83.6%
High HCAs	94.1%
Moderate HCAs	59.1%
Low HCAs	52.1%

\*Excludes major rivers. Includes additional HCA covered by Drainage Reserves; additional area <1%

As shown above, nearly 84 percent of the Title 13 HCAs within City High and Medium ranked riparian corridors are within existing natural resource overlay zones. Notably, 94 percent of the High HCA are within existing City overlay zones.

As shown in Table 2 at the end of this report, roughly two-thirds of these areas are within the most stringent environmental protection overlay zone. Moderate and Low HCAs are covered by a greater proportion of environmental conservation zone, which allows development that meets specific standards or criteria, and requires mitigation for detrimental impacts.

The Title 13 HCAs located outside existing City natural resource overlay zones include some tributary streams, flood areas and upland habitat areas. Most of these areas have at least some level of protection through other local, state or federal regulations. Some are publicly owned and are not at risk of development (e.g., land the City has purchased to reduce flood hazard and help restore the Johnson Creek floodplain).

It is important to note that Portland’s existing overlay zones extend beyond Title 13 HCAs, providing protection for an additional 2,890 acres of riparian resources. How Portland’s natural resource overlay zones apply to Title 13 HCAs is shown in Figures 1 and 2.

**Plan Districts**

The City has established area-specific zoning regulations that supplement, augment or supersede overlay zones. These plan districts provide additional protection for 5,780 acres of Title 13 HCAs, as shown in Figure 3 and summarized below:

**Johnson Creek Basin** – limits on development, land divisions, tree cutting, impervious area in flood risk

area or steep slopes; transfer of development rights to protect resources.

**Columbia South Shore** – balances natural resource and development goals; fewer uses allowed by standards; more uses subject to review, more focus on limiting and mitigating impacts rather than avoidance; mitigation must increase function of the resource.

**Northwest Hills** – seasonal limits on ground disturbance, addresses flows and water quality, prioritizes habitat migration corridor.

**Pleasant Valley** – maximum densities and transfer of development right allowances complement strict limitations on development in the v zone.



*Pleasant Valley*

**Portland International Airport and Cascade Station/ Portland International Center** – balances resource protection with airport safety needs; facilitates off-site mitigation and conversion to habitats that do not pose aircraft safety issues; serves as Title 13 district plan.

**Portland International Raceway** – requires master plan to meet goals for natural resources and recreation; seasonal limitations on events and lighting to protect wildlife.

**Central City** – South Waterfront Subdistrict increases greenway setback, manages river access and recreation to sustain riverbank functions; ecoroof bonus.

**Natural Resource Management Plans** – establishes policies, procedures and actions to meet long term goals for Smith and Bybee Lakes, Forest Park, Peninsula 1 Drainage District.

**Land Division Code** – requirements to protect natural resources include tree preservation flexible lot sizes, reduced minimum densities, identification of seeps and springs.

Figure 1: Comparison of City of Portland Resource Overlay Zones and Metro Title 13 Habitat Conservation Areas

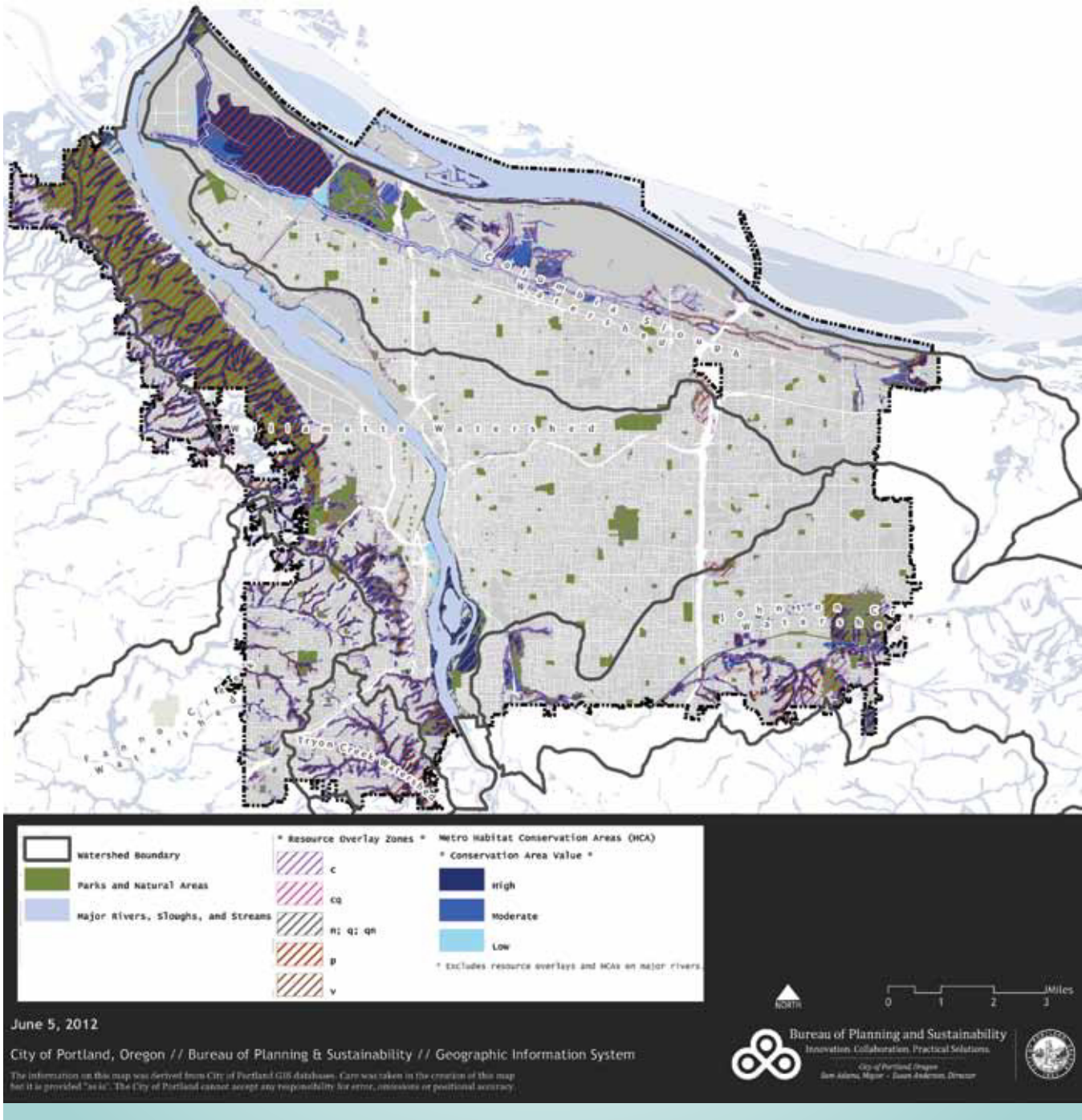
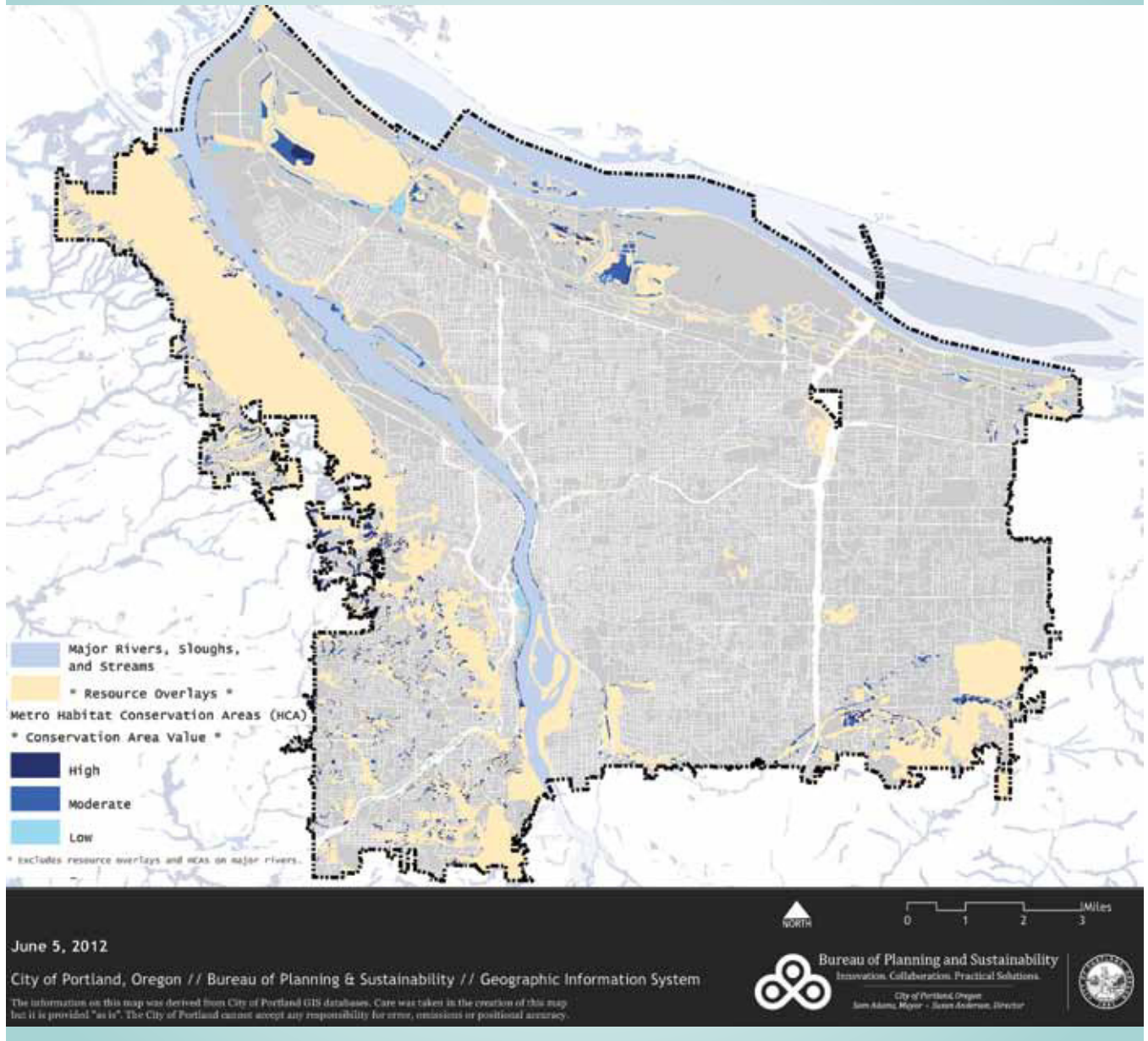
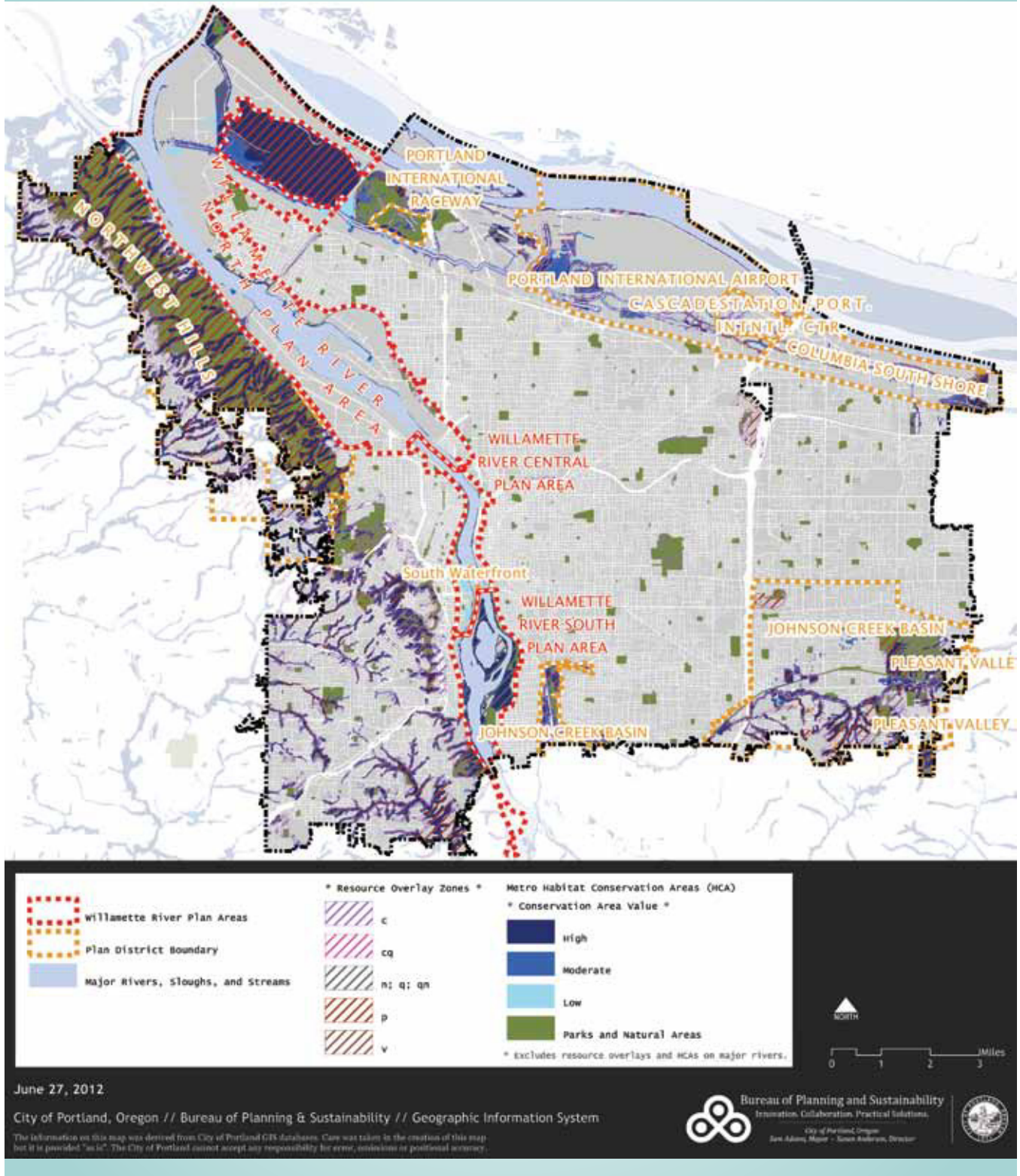




Figure 14: Title 13 Habitat Conservation Areas Located Outside the City of Portland Resource Overlay Zones



**Figure 15: City Plan Districts that Augment Overlay Zone Protections for Title 13 HCAs**



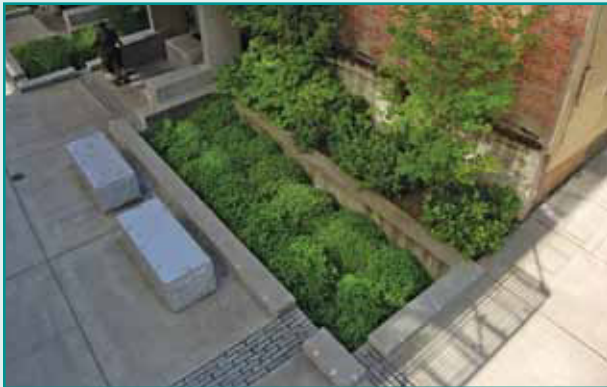


## Non-zoning regulations

The following non-zoning regulations individually and collectively help protect and restore Portland’s natural resources including Title 13 HCAs.

### Stormwater Management Manual

The Stormwater Management Manual (SWMM) establishes requirements for new development and redevelopment. The SWMM contains water quality, flow and volume control design standards, emphasizing principles and techniques that preserve or mimic the natural hydrologic cycle, minimize sewer system impacts and improve water quality.



*Green stormwater management facilities provide design amenities.*

### Drainage Reserve Rules

An appendix to the Stormwater Management Manual, the Drainage Reserve Rules, protect flow conveyance in natural and manmade surface channels (drainageways), minimizing scouring and erosion in local stream systems and protecting property. The drainage reserve is generally a no-build area for 15 feet on both sides of the stream centerline, providing a 30-foot protected corridor and a safety net for waterways located outside City environmental overlay zones.

### Title 10, Erosion Control and Erosion Control Manual

Title 10 was adopted to control creation of sediment and prevent erosion during construction and development. The Erosion Control Manual prohibits visible or measurable sediment or pollutants from exiting sites or entering public rights of way, water bodies or the storm drainage system.

### Floodplain regulations (Title 24, Building Regulations, 24.50 Flood Hazard Areas)

These provisions require balanced cut and fill in flood hazard management areas, except areas exempted from the requirements. These provisions are intended to reduce risk to public health, safety, and property, and provide opportunity to protect and restore the floodplain functions.

### Tree codes (Title 11, Trees, Title 33, Planning and Zoning)

Title 13 identifies existing tree ordinances as acceptable elements of local Title 13 compliance programs. Portland currently requires permits to plant, remove or prune all trees on City property and rights-of-way. The City also requires permits to remove trees on private properties that are vacant or may be further subdivided. The City requires tree preservation and replacement in environmental zones, in conjunction with land divisions and through the landscaping requirements.

In 2011, the City Council approved the Citywide Tree Project, a major overhaul to the City’s tree rules. The project clarified requirements for trees in environmental zones. A new consolidated code, *Title 11, Trees*, establishes a standardized tree permit program and new tree preservation and planting standards for development. Changes to the Zoning Code will improve the quality of trees preserved by focusing on large healthy trees and groves. The City projects that more than 100 acres of future tree canopy per year will occur through additional tree preservation and planting. Full implementation is scheduled for July 2013.



*East Portland neighborhood characteristics include mature conifers.*

### Invasive Plants/Required Eradication List

Portland manages invasive plants through a combination of regulatory and voluntary programs. The City recently established a new *Required Eradication List* in *Title 29, Property Maintenance*. The intent of this new rule is to control the spreading of highly invasive plants that have not yet become widespread in Portland. If one of the species on this list is discovered, the property owner must remove the plant. The City will offer to assist with the removal; however, the removal is mandatory.

### Illicit Discharge Elimination Program

The City's Illicit Discharge Elimination Program (IDEP), initiated in 1994, involves identifying and eliminating illicit cross-connections to the stormwater system, monitoring the storm drainage system, and tracking stormwater outfalls added or removed from the system. In 2006, the City completed a two-year update of City Code and administrative rules for the City's enforcement program for illicit discharges to stormwater and sanitary systems.

### Spill Response Program

The City's Spill Response Program was developed in 1994 to provide immediate response to emergency spills (liquid and solid) and investigate pollution complaints. Staff investigate reports of stormwater pollution and problems in the sewage and drainage collection system, as well as monitor sewage cleanups. The spill response hotline is staffed 24 hours a day, 365 days a year, responding to reported spills, slicks and other unknown discharges.

## Non-regulatory programs

The regulatory programs described above provide critical protections for Title 13 HCAs in Portland. The following non-regulatory programs provide additional protection and also provide significant enhancement and restoration of these valuable resources.

### Protection

#### Willing Seller Land Acquisition

City land acquisition programs address Title 13 by preserving the functions and values of significant riparian corridors and upland habitats in perpetuity. In 1997, the Bureau of Environmental Services (BES) launched the Johnson Creek Willing Seller

Land Acquisition Program. The program helps move people and development out of frequently flooded areas, reducing risk to life and property, and creating opportunities to increase flood storage capacity, improve fish and wildlife habitat, restore wetlands, and create passive recreation opportunities. The City has acquired 261 acres through the program.



*Acquisition of frequently flooded properties reduces hazard risk and allows restoration of East Lents section of Johnson Creek.*

In 2006 the City Council adopted a citywide Natural Area Acquisition Strategy. The protected system of natural areas will consist of green ribbons along major waterways and feature large natural area parks and preserves, adding to and connecting habitats, and providing access to nature from neighborhoods and trails. The Bureaus of Environmental Services and Portland Parks and Recreation, with local partners, have purchased 289 acres. Planning is underway for a second phase of Capital Improvement Program funded land acquisition beyond 2016.



**Resource Management and Restoration**

**City Nature**

The City Nature Program, administered by the Bureau of Parks and Recreation (PP&R) was formed in 2004 to raise awareness of the importance of natural areas and their contribution to the livability of our city. City Nature promotes the stewardship of City-managed natural areas in natural and hybrid parks, overseeing a variety of activities that enhance their ecological and recreational functions and values. This program manages over 8,000 acres of natural areas within the city limits ranging from Forest Park (at more than 5,000 acres) to a web of small but important natural areas along the Willamette River.



*Portland's jewel – the 5,000 plus acre Forest Park*

**Invasive Plant Management**

Portland's invasive plants management programs contribute to compliance with the Clean Water Act, Endangered Species Act and Title 13. Ongoing activities include:

- **Early Detection Rapid Response (EDRR) Program** – Removes small patches of highly invasive plants and prevents new invaders from becoming established. Eight hundred acres treated by 2011.
- **Protect the Best** – Removes invasive plants in natural area parks. The program has treated over 2,300 acres and monitors on hundreds of additional acres.
- **Portland Plant List** – Includes lists of native plants and nuisance plants. The list is an educational resource used to implement a number of City regulations.

- **Outreach and Stewardship** – Works with volunteers to replace invasive plants with native plants.
- **Coordination** – The City of Portland partners with many agencies to address invasive plants, including Clean Water Services, Columbia Land Trust, East and West Multnomah Soil and Water Conservation Districts, 4 County Cooperative Weed Management Area, SOLV and Metro.



*Removing invasive plants before they become widespread is key to protecting rivers and streams.*

**Watershed Revegetation**

The Bureau of Environmental Services program actively establishes public and private partnerships to build awareness and community stewardship, and leverage resources to make the most effective use of public and private dollars to restore degraded stream banks and upland areas. Since its inception in 1996, the program has planted 2,327 acres, including 645,004 lineal feet of stream bank with 1,395,457 broadleaf trees, 709,718 conifers, and 1,114,295 shrubs. Work has started on more than 2,800 new acres, including ivy removal on more than 1,000 acres in Forest Park. Over 110,000 tree seedlings have been planted in natural areas.

**Tree Planting in the Built Environment**

The Watershed Revegetation Program also plants trees in the built environment. Since 2008 when the Grey to Green Initiative enabled increased investment in the program in partnership with Friends of Trees – planted more than 37,000 trees along city streets

and highways, on school grounds and in residential yards. The program will continue to focus on planting in underserved neighborhoods, planting large native trees, and supporting stormwater management.

**Green Streets**

Green streets are facilities such as curb extensions, planters or rain gardens that naturally manage stormwater runoff, using vegetation and soil to filter pollutants and that either allows the water to soak into the ground or slows it before it flows to other stormwater management facilities. Approximately 1,200 green street facilities are currently in operation. Construction has started on several dozen green streets as part of the Eastside Streetcar and Multnomah Village projects.



*Vegetated green street facilities in the Tabor to the River area will help reduce pollution and basement flooding.*

**Culvert Replacement**

Between 2007 and 2011, the City retrofitted or removed several culverts to improve fish passage, hydrology and/or water quality along Errol Creek, Tryon Creek, Forest Park and the Columbia Slough. Recently, BES has partnered with other agencies and community partners to replace one culvert (SE 28th Ave.) on Crystal Springs Creek in southeast



*Crystal Springs Steelhead*

Portland (tributary to Johnson Creek) and will replace the remaining eight over the next two years. BES CIP funding is planned through 2016 to leverage partnerships to replace other high-priority culverts.

**Portland Ecoroof Program**

The Portland Ecoroof Program has been in existence since 1996. Since the program was bolstered by the Grey to Green initiative in 2008, Portland has added 330 ecoroofs covering more than 14 acres. Program components include both direct incentives and resources and technical assistance to property owners, businesses and professionals interested in getting involved in the ecoroof industry. Ecoroof Program funding is currently forecasted through 2016 as part of the Grey to Green initiative, and budget planning is underway for future years.



*Ecoroofs help manage stormwater and bring nature into the South Waterfront area.*

**Watershed Investments – Large Projects**

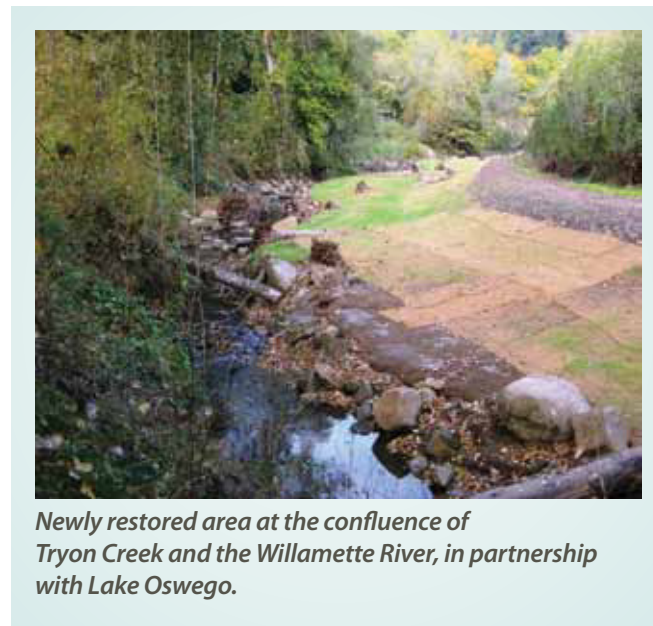
**Capital Improvement Projects**

Recently completed major Capital Improvement Program (CIP) projects for watershed health include the green street and culvert projects mentioned above, as well as the East Lents floodplain restoration project, the SW Texas green street and wetland project, and a partnership with the Army Corps of Engineers on multiple restoration projects along the Columbia Slough. Current and upcoming projects include work in every Portland watershed.



**Watershed Investment Fund**

In 2006, the Portland City Council adopted *Actions for Watershed Health: The Portland Watershed Management Plan* and established the Watershed Investment Fund (WIF). These projects often leverage additional funding from grants or other agencies, and demonstrate best practices and new approaches for urban watershed restoration. Recent examples include confluence enhancement projects on the Columbia Slough, Stephens Creek, Tryon Creek and Errol Creek, SW Marigold Green Street, Inverness Wetland Enhancement, and the Willamette Park Boat Ramp Swale Retrofit.



*Newly restored area at the confluence of Tryon Creek and the Willamette River, in partnership with Lake Oswego.*

**Subwatershed and Stormwater System Planning**

The Bureau of Environmental Services works with local citizens and community partners to recommend actions to improve watershed health in Portland subwatersheds. Actions include building green streets, ecoroofs and rain gardens; planting trees; removing invasive plants and replanting native vegetation; and protecting and restoring river, stream, wetland and upland habitats. BES has completed subwatershed reports for six of the Willamette watershed’s southwest Portland subwatersheds. Projects are implemented in collaboration and partnership with willing landowners, neighborhood groups, nonprofits, other city bureaus and local agencies.

**Tabor to the River**

The Tabor to the River-Brooklyn Creek Basin Program began in 2009. It is a key example of Portland’s evolution from conventional infrastructure solutions to multi-objective projects that incorporate green infrastructure and natural systems to meet multiple goals and regulatory mandates. The program improves sewer system reliability and promotes natural watershed functions in SE Portland, from Mt. Tabor to the Willamette River. Resolving these problems with pipe-only solutions would cost an estimated \$144 million; the alternative stormwater management systems used by the program reduces the estimated cost to \$86 million, a 40 percent (or \$58 million) reduction. The City is partnering with multiple organizations in the Tabor to the River project.

**Financial Incentives**

**Stormwater Discount Program – Clean River Rewards**

In 2006 BES launched a stormwater utility discount program called Clean River Rewards. The program gives ratepayers a discount on the stormwater portion of their utility bill for managing some or all of their stormwater on site.

Treebate Trees intercept and capture stormwater that would otherwise head to the wastewater treatment plant for costly processing or require other management facilities. The Treebate program gives ratepayers a rebate on their sewer bills for trees planted on residential properties. The rebate amount ranges from \$15 to \$50 and depends on the size of the tree at maturity and associated stormwater management potential.

**Ecoroof Incentive Program**

BES offers building owners and developers an incentive of up to \$5 per square foot for an approved ecoroof project, in order to offset some or all of the costs for construction of the ecoroof. This incentive has helped spur utilization of ecoroofs on both new and existing development in Portland as part of the overall Ecoroof Program discussed above.

**Education and Stewardship**

The programs featured below illustrate the importance of community partnering to leverage resources and achieve City goals, including compliance with Title 13 and other regulations.

**Community Watershed Stewardship Program**

The Community Watershed Stewardship Program (CWSP) is a partnership between BES and Portland State University. It funds community projects, helps with project planning and assists in connecting community groups with resources for their projects. Since 1995 CWSP has granted \$885,000 to 192 projects; these funds have been matched by \$3.1 million in community support through donations of services, materials and volunteer time. Over 39,000 people have donated 317,000 volunteer hours, planted 117,000 native plants and trees, restored over 57 acres of riparian and upland habitat, and enhanced over 36,000 linear feet of streams.

**Neighborhood Tree Steward Program /Tree Inventory Project**

In 2009 Portland Parks and Recreation (PP&R) collaborated with the Urban Forestry Commission and BES to revive the Neighborhood Tree Steward program, a springboard for community volunteers to become involved in an array of activities in support of Portland’s trees. In 2010 and 2011, 165 volunteers worked 1,800 hours inventorying 25,000 trees throughout Portland for the Tree Inventory Project. After reviewing the data, neighborhoods created tree plans to guide their stewardship efforts. In 2012, tree inventories will be conducted in Hosford-Abernathy, Northwest District, and Sunnyside neighborhoods.



*Neighborhood volunteers learn about trees in the new City Tree Inventory Program.*

**Pollution Prevention**

The Bureau of Environmental Services Pollution Prevention Program provides businesses, industries and residents with information and practical approaches to reduce or avoid polluting the environment, with an emphasis on stormwater and discharges into local waterways. The Industrial Stormwater Program works to reduce pollutants in stormwater runoff to Portland’s rivers and streams. The City also participates in the Regional Pollution Prevention Outreach (P2O) Team, a multi-agency group of air, water, wastewater, energy, hazardous waste and solid waste professionals. The P2O Team sponsors the Eco-Logical Business Program, which certifies businesses that use environmentally responsible business practices.



*Monitoring watershed conditions allows the City to track trends and prioritize program investments.*

**Monitoring and Evaluation**

The City of Portland updated its watershed monitoring approach in 2010, incorporating the best available science and protocols developed by the national Environmental Monitoring and Assessment Program. The Portland Area Watershed Monitoring and Assessment Program (PAWMAP) coordinates monitoring across city watersheds so information can be more easily compared and trends can be tracked. Elements monitored include water quality, hydrology, toxics, habitat, fish and macroinvertebrates, and will include terrestrial habitat in the future. Monitoring, which began in 2011, allows the City to identify and prioritize the most serious threats and the resources most in need of protection, measure the effectiveness of protection and restoration actions, and address regulatory requirements of the Clean Water Act, Endangered Species Act, Superfund and other state and federal environmental regulations.



**Ongoing Partnerships**

Many of the programs described here involve extensive community partnerships. Actively engaging with many organizations allows the City to join efforts that operate at a watershed scale. Long standing partners include Metro and neighboring jurisdictions, state and federal agencies, watershed councils, soil and water conservation districts, non-profit organizations, and neighbourhood and friends organizations. These partnerships allow the City and its partners to improve program efficiency and effectiveness, and leverage funding, staff, and volunteers.



*The City partners with Friends of Trees and community volunteers to increase tree canopy in all neighborhoods.*

**Habitat-friendly Development**

Title 13 requires cities and counties to identify regulatory barriers to habitat-friendly development and adopt amendments if needed. Title 13 provides examples of Design and Construction Practices to Minimize Hydrologic Impacts with an emphasis on minimizing paving.

Portland’s existing regulations allow, encourage or require many of the approaches outlined in Title 13. For example, Portland allows paving alternatives for driveways. City standards for new public streets are intended to minimize paving. Land division regulations allow alternative private streets with reduced paving. There are maximum roadway and right-of-way widths for streets in environmental zones. In 2006, the Infill Design Code Amendments allowed narrower walkways, shared driveways and shared courts designed to accommodate pedestrian and vehicles within the same space. The City has reduced the minimum parking space requirements in multi-dwelling and commercial zones and waives minimum parking requirements for sites close to frequent transit service. And within the Central City Plan District (33.510), there are generally no minimum parking requirements, while there are limits on the size and use of surface parking lots.



*Pavers give a pedestrian walkway a pervious surface.*

Title 13 also calls for practices to minimize impacts on wildlife corridors and fish passage with an emphasis on providing safe wildlife crossings and reducing impacts from stream crossings. The City regulates stream crossings primarily through environmental land use reviews that require the least environmentally damaging alternatives. For instance, the recently adopted Portland International Airport Plan District limits future crossings of the Columbia Slough to bridges only. The City has required the installation of underpasses to facilitate safe crossing for native turtles and other wildlife species in the Columbia Slough. The City is also pursuing culvert replacement to improve fish passage as described above. Through the Citywide Tree Project the City’s land division regulations were amended to strengthen the consideration of natural features, such as streams, wetlands and tree groves, when locating new streets. And the City recently partnered with the Audubon Society of Portland to develop a new Resource Guide for Bird-Friendly Building Design (2012). This new guide provides practical design and lighting approaches to reduce bird mortality associated with building collisions.



*Pedestrian footbridges can provide habitat-friendly access to nature.*

## Conclusion and Next Steps

Based on this well-established holistic program package the City is requesting Metro to find Portland in substantial compliance with the spirit, intent and letter of Title 13, Nature in Neighborhoods. Together, these citywide and area-specific regulatory and non-regulatory programs protect, conserve and restore thousands of acres of natural resources in Portland, including the vast majority of Title 13 HCAs in the city. These programs also help preserve and enhance thousands more acres of riparian and upland resources that extend well beyond the boundaries of the Title 13 HCAs.

Metro's determination of substantial compliance with Title 13 should be viewed as a milestone along this path, not an end point. Several projects are currently underway that will continue to update Portland's natural resource information, policies, programs and projects. In the future, the City anticipates making decisions regarding the potential annexation of West Hayden Island and approaches to protect and sustain the unique mosaic of habitat functions provided there. The City will update its Comprehensive Plan, establishing new policies addressing a broad range of City and State goals, including watershed health, economic prosperity, and community livability and equity. The City also anticipates completing efforts to update its 20+ year old Willamette Greenway Plan, and review and continue looking for opportunities to improve conditions in headwater areas.

The City of Portland is committed to continuing its ongoing work to maintain and enhance watershed conditions. Sustaining healthy watersheds will require a long-term resource commitment and willingness to track and adapt to changing conditions over time.



*Western scrub jay*



**Table 1: Key Accomplishments during Portland Title 13 Compliance Extension Periods**

Completed Projects	Impact	Status
<b>Airport Futures (Title 13 District Plan)</b>	<ul style="list-style-type: none"> <li>▪ Updated Natural Resources Inventory – increased significant natural resources (drainageways, wetlands, grasslands, sensitive species)</li> <li>▪ New/updated plan districts - ~205 acres additional overlay zones</li> <li>▪ Up to 300 acres of grassland mitigation on Government Island (triggered by development)</li> <li>▪ Future Tree Planting - ~ \$730,000 over 25 years</li> <li>▪ Watershed Enhancements ~ \$1 million over 25 years to Columbia Slough W.C. or MCDD</li> <li>▪ PIC Wetland Conversion to native scrub/shrub ~\$150,000 (w/in 2 years)</li> </ul>	Adopted April 2011 Effective May 2011
<b>Citywide Tree Project</b>	<ul style="list-style-type: none"> <li>▪ New Tree Code Title</li> <li>▪ Standardized Tree Removal/Replacement Permit System</li> <li>▪ New Development Standards (Tree Preservation/Tree Density) – Ltd exemptions</li> <li>▪ Improved tree replacement on 17,800 acres existing environmental overlay zones</li> <li>▪ Improved riparian protection in existing environmental zones (10s of miles of streams)</li> <li>▪ &gt;100 acres of future tree canopy per year</li> </ul>	Adopted April 2011 Phase 1 effective July 2011 Phase 2 effective July 2013 (requires funding) Ramp up underway
<b>Invasive Plant Project</b>	<ul style="list-style-type: none"> <li>▪ Strengthened invasive plant removal requirements on development sites</li> <li>▪ New removal/replacement requirements in Environmental Overlay Zones</li> <li>▪ Updated, ranked Nuisance Plants List in Portland Plant List</li> <li>▪ New Required Eradication Plant List and code provisions in Title 29, Property Maintenance</li> </ul>	Adopted Feb 2010 Effective March 2010
<b>Portland Plan</b>	<ul style="list-style-type: none"> <li>▪ 2035 Objectives for watershed health</li> <li>▪ Guiding Policies – watershed health</li> <li>▪ 5-year Actions - natural resource protection/program updates, investments in urban forest, access to nature, culvert replacement, addressing natural resources in development decisions)</li> <li>▪ Tree Canopy established as Measure of Success</li> </ul>	Adopted April 2012
<b>NRI/Periodic Review/</b>	<ul style="list-style-type: none"> <li>▪ Buildable Lands Inventory</li> <li>▪ City NRI builds on Metro Title 13 inventory – incorporates current data for streams, wetlands, flood area, topography; special status species and habitats of concern (Special Habitat Areas)'</li> <li>▪ ~2,580 acres additional significant resources</li> </ul>	PSC hearings nearly complete; to City Council summer 2012
<b>Land Acquisition</b>	~300 acres purchased from willing sellers	
<b>Watershed Revegetation</b>	<ul style="list-style-type: none"> <li>▪ ~435 new acres planted or inter-planted; 5,824 acres managed</li> <li>▪ ~64,266 bank feet (12.2 miles) planted, 551,468 bank feet (104.4 miles) managed</li> </ul>	
<b>Tree Planting</b>	~37,000 trees	

## TITLE 13 – NATURE IN NEIGHBORHOODS SUMMARY REPORT

Projects Underway	Impact	Status
<b>River Plan/North Reach (Title 13 District Plan)</b>	<ul style="list-style-type: none"> <li>▪ Updated Natural Resource Inventory and ESEE Analysis</li> <li>▪ Updated Environmental Overlay Zones and New River Environmental Overlay Zone</li> <li>▪ Net + 250 acres overlay zone coverage</li> <li>▪ Strengthened/expanded overlay protections for Willamette bluff habitat</li> <li>▪ Restoration sites</li> </ul>	<p>Adopted</p> <p>Appealed – pending decision at Oregon Supreme Court</p>
<b>River Plan Central Reach (Title 13 District Plan)</b>	<ul style="list-style-type: none"> <li>▪ Updated Draft Natural Resource Inventory</li> </ul>	<p>North/NE Quadrant Plan under development</p>
<b>West Hayden Island (T 13 District Plan)</b>	<ul style="list-style-type: none"> <li>▪ Updated draft Natural Resource Inventory and draft ESEE Analysis</li> <li>▪ Public Benefit/Cost Analysis</li> <li>▪ Potential land split – 300 acres deepwater marine terminal/500+ acres open space and passive recreation</li> <li>▪ Draft Plan District w/environmental regulations and IGA</li> <li>▪ Mitigation and enhancement on-island and off-island</li> </ul>	<p>To PSC summer 2012; to City Council fall 2012</p>
<b>Comprehensive Plan</b>	<ul style="list-style-type: none"> <li>▪ Will update City policies relating to watershed health and the environment</li> <li>▪ Will direct specific actions including potential updates to City natural resource protection and enhancement programs</li> </ul>	<p>Policy development phase underway</p>



**Table 2: Resource Overlays and Drainage Reserves on Title 13 HCAs in High and Medium Ranked Riparian Corridors (City NRI)**

Resource Overlays and Drainage Reserves on Title 13 HCAs in High and Medium Ranked Riparian Corridors (City NRI)													
Overlays	High HCA		Moderate HCA		Low HCA		All HCA		No HCA		Total HCA+No HCA		
	acres	%	acres	%	acres	%	acres	%	acres	%	acres	%	
pzone	5,154.6	65.5%	683.2	24.4%	57.5	12.7%	5,895.3	53.0%	1,881.7	52.1%	7,777.0	52.7%	
czone	1,775.7	22.6%	890.7	31.8%	155.4	34.3%	2,821.8	25.4%	937.1	25.9%	3,758.9	25.5%	
vzone	18.4	0.2%	12.8	0.5%	2.0	0.4%	33.2	0.3%	32.9	0.9%	66.1	0.4%	
nzone	3.8	0.0%	2.7	0.1%	1.0	0.2%	7.5	0.1%	4.9	0.1%	12.4	0.1%	
qzone	212.5	2.7%	40.5	1.4%	8.9	2.0%	261.8	2.4%	19.6	0.5%	281.4	1.9%	
q & n	217.0	2.8%	5.3	0.2%	0.1	0.0%	222.4	2.0%	13.7	0.4%	236.2	1.6%	
Area with Overlay	7,382.0	93.8%	1,635.1	58.3%	225.0	49.6%	9,242.1	83.0%	2,889.9	79.9%	12,132.0	82.3%	
Drainage reserve	28.0	0.4%	21.9	0.8%	11.4	2.5%	61.3	0.6%	9.6	0.3%	70.8	0.5%	
Area with Overlay & Drainage Reserve	7,410.0	94.1%	1,657.0	59.1%	236.4	52.1%	9,303.3	83.6%	2,899.5	80.2%	12,202.8	82.8%	
No overlay or drainage reserve	461.2	5.9%	1,148.0	40.9%	216.9	47.9%	1,826.1	16.4%	715.4	19.8%	2,541.5	17.2%	
<b>Total</b>	<b>7,871.2</b>	<b>100.0%</b>	<b>2,804.9</b>	<b>100.0%</b>	<b>453.3</b>	<b>100.0%</b>	<b>11,129.5</b>	<b>100.0%</b>	<b>3,614.8</b>	<b>100.0%</b>	<b>14,744.3</b>	<b>100.0%</b>	