



**PORTLAND
PARKS & RECREATION**

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Urban Forest Action Plan 2014 Implementation Update

April 2015

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Cover photo:

Urban Forestry Arborist Todd Keeland digs up a pine tree from the Portland Parks & Recreation nursery for replanting.

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In FY2013-2014, volunteers contributed 65,448 hours valued at \$767,699 to diverse urban forestry activities, from tree planting (above) to pruning (below), an increase of over 4,000 hours from the previous year.

BACKGROUND

In 2007, a City of Portland inter-bureau team created the *Urban Forest Action Plan* to meet the goals established in the 2004 *Portland Urban Forest Management Plan*. The *Urban Forest Action Plan*, accepted by City Council on March 15, 2007, contains the major goals and desired outcomes of the management plan, along with 63 action items to attain those goals. Each action item was initially assigned a priority and time frame (current, early, 5-year, and 10-year).

This report summarizes annual fiscal year progress and accomplishments for the *Urban Forest Action Plan*, with efforts led by Portland Parks & Recreation Urban Forestry as well as other City bureaus. This report covers fiscal year 2013-2014, which extends from July 1, 2013 to June 30, 2014. Over half of the action items are either completed or in progress.

Key challenges remain to reach all goals in the *Urban Forest Action Plan*, and greater support is needed to achieve those goals. Many of the 5- and 10-year actions can only be initiated if so directed by the City Council and funded through the City's work planning and budget process.

URBAN FOREST ACTION PLAN

GOALS AND OUTCOMES

GOAL 1: PROTECT, PRESERVE, RESTORE, AND EXPAND PORTLAND'S URBAN FOREST.

- **Outcome A: Enhanced Canopy**
The tree canopy is optimized, meeting stocking and canopy targets.
- **Outcome B: Regulatory Program**
The City has a comprehensive, consistent, and clear regulatory program for trees.
- **Outcome C: Development**
The urban forest is enhanced through development and redevelopment.

GOAL 2: DEVELOP AND MAINTAIN SUPPORT FOR THE URBAN FOREST.

- **Outcome A: Shared Stewardship**
Stewardship of the urban forest is shared by residents, agencies, non-governmental organizations, and businesses.
- **Outcome B: Public Education**
The public has a strong awareness of tree benefits and ecosystem health issues; education opportunities are abundant.
- **Outcome C: Stable Resources**
Stable resources support the urban forest.

GOAL 3: MANAGE THE URBAN FOREST TO MAXIMIZE COMMUNITY BENEFITS FOR ALL RESIDENTS

- **Outcome A: Street Tree Distribution**
Street trees are equitably distributed throughout the City.
- **Outcome B: Livability**
The urban forest contributes to the health and well-being of Portlanders.
- **Outcome C: Watershed Health**
The urban forest contributes to improved watershed health, including water quality, stream flow, floodplain function, habitat, and biological communities.

ACCOMPLISHMENTS

Overhauled the Approved Street Tree Planting Lists

Portland Parks & Recreation (PP&R) Urban Forestry updated the approved street tree planting lists, an activity that occurs approximately every five years. PP&R Urban Forestry is excited to unveil the new planting lists because of the greatly expanded selection, including more evergreen and drought-tolerant trees.

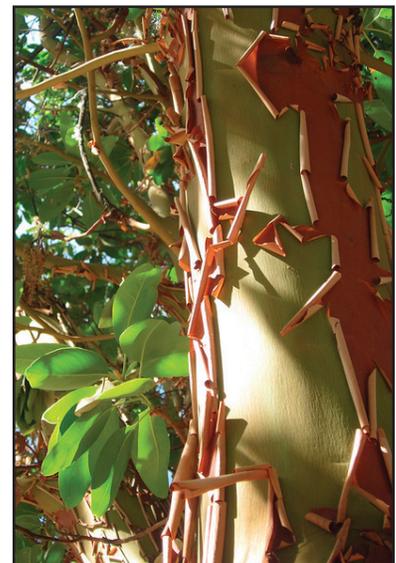
More than 150 unique tree species have been approved for street tree planting in Portland. The staggering diversity of this selection will offer something for everyone, from brilliant fall color to showy flowers, native species, interesting bark or fruits/nuts for wildlife. The final lists were developed through a collaborative process with input from PP&R and Bureau of Environmental Services staff, Friends of Trees, local tree experts, and citizen representatives. The new list of approved tree species has been available on the PP&R website and in brochure form since mid-December 2013.

The approved street tree planting lists guide property owners in selecting trees that are appropriate for their site and contribute to the diversity of the city's tree canopy. Species are approved for planting based on several criteria, including: the space available for planting, status on the nuisance plant list, threats of pests and disease, how the species has fared in the urban environment in the past, current canopy diversity, climate considerations, and desirable tree characteristics. Approved tree species for planting are listed by planting strip size and presence of overhead, high-voltage power lines. Certain species are approved for planting strips of specific sizes in order to maximize tree benefits while minimizing potential infrastructure conflicts, such as sidewalk damage from tree roots.

Integrated Permit Database with Online Database

PP&R Urban Forestry updated the tree permit database to standardize and streamline the permit input process and integrate the internal permit system with an online database that is available to the public at www.PortlandMaps.com. Now applicants can check the status of their permit online, find Tree Inspector contact information, or check if a neighbor has a permit to do tree work.

Standard comments and categories have been programmed in the updated permit system to facilitate permit set-up. These improvements will enhance customer service by making permitting more efficient and permit information more easily accessible.



More native trees, such as madrone, are among options in the new Approved Street Tree Planting Lists



Community Tree Care volunteers prune young neighborhood street trees to promote good structure and health

Established the Community Tree Care Program

In partnership with Friends of Trees and the Bureau of Environmental Services (BES), PP&R Urban Forestry developed the Community Tree Care Program to harness volunteers to prune young neighborhood street trees. Friends of Trees was interested in expanding their purview from enhancing the urban forest by planting new trees to maintaining the urban forest by pruning young trees. Young tree pruning is essential to achieve a healthy, long-lasting tree structure and provide maximum urban forest benefits. Through its Urban Tree Canopy project, BES provides the majority of the funding for Friends of Trees' participation in the Community Tree Care Program.

Volunteers were trained as crew leaders to lead the seven neighborhood pruning events in the 2013-2014 season; volunteers committed a total of 410 hours. These events benefit the community by enhancing the urban forest resource and providing social opportunities for neighbors to meet and share their passion for trees. The city benefits greatly from citizen involvement in tree stewardship as more people become aware of the proper ways to maintain trees to reduce future structural problems.

Presented “Trees & Development” Workshops

In partnership with the Bureau of Development Services (BDS), PP&R Urban Forestry created educational workshops to inform staff and developers about tree planting requirements during development. Citywide Tree Project Program Coordinator Mieke Keenan worked with Urban Forestry Tree Inspectors Myles Black and Charley Davis and Urban Forestry Outreach Coordinator Autumn Montegna to create a presentation to explain when a permit is needed to remove trees on private property and how to achieve smart solutions for replanting after site development. Charley and Myles discussed how to select the right tree species for the site and the importance of species diversity in supporting a healthy urban forest.

A smart planting plan has long-term value for property owners and neighbors, as well as a healthy urban forest. Contractors, permit applicants, property owners, neighborhood representatives, and urban forestry volunteers were invited to the presentation. It was evident by the number of attendees (32) that there is a strong interest in learning more about trees and development in Portland.

Expanded the Tree Inventory Project

Seeking to empower residents to better care for their neighborhood's tree canopy, PP&R Urban Forestry organized neighborhood

stakeholders to conduct volunteer-led street tree inventories in Arbor Lodge, Brooklyn, Cathedral Park, Downtown, Piedmont, Portsmouth, Richmond, and Woodstock in 2013. This was the most ambitious year yet for the project, and staff were pleased to see that the volunteer model held up to the increased volume. 250 volunteers donated over 4,000 hours to project mapping, measuring, and identifying nearly 30,000 trees. In addition to collecting data in the field, volunteers entered all data into UF's ArcGIS database.

This year the project ventured into new territory by inventorying trees in unimproved rights-of-way, including planting sites without curbs, sidewalks, and paved roads. Trees were inventoried if they fell within ten feet of the curb line. Inventorying trees in unimproved areas allows the project to more accurately measure street trees throughout the City.

On November 9, 100 participants convened at a "Tree Inventory Summit" to discuss results and begin creating tree plans. After presentations on the data and hearing from several guest speakers on species diversity and tree maintenance needs, participants broke into neighborhood groups to draft tree plans. The tree plans include a vision statement, goals, action items, and recommendations for property owners.

Urban Forestry AmeriCorps member Natasha Lipai, serving as the Tree Plan Coordinator, worked with each neighborhood tree team to plan two stewardship events between November 2013 and June 2014 to help groups stay organized and help meet tree plan goals. At the summit, Natasha presented a menu of stewardship workshop options to participants to choose from, including planting, pruning, and maintenance events.

Urban Forestry staff continues to work with tree teams to provide tree plan guidance and ongoing support. Staff is exploring how to best integrate tree plans into ongoing stewardship efforts, as well as expand the program. Staff is currently conducting an analysis of neighborhoods so that efforts can be prioritized to those that are low canopy, low income, and racially diverse, which aligns with the *Urban Forestry Management Plan* goal of achieving greater equity.



The 2013 Street Tree Inventory Project was expanded to encompass 8 neighborhoods and ongoing community tree plan events

ONGOING PROGRAMS AND PROJECTS

Planting Programs (Table 1):

In FY2013-2014, 7,311 street and park trees were planted through the PP&R Urban Forestry permit process by all tree planting partners.

Property Owner and Development Planting: Permits to plant 2,840 street trees were issued to property owners and developers by PP&R Urban Forestry in FY2013-2014.

Bureau of Environmental Services Urban Tree Canopy Program (formerly Grey to Green): 4,269 street trees were planted by the Environmental Services Tree Program (ESTP). In partnership with Friends of Trees, other planting contractors, public partners, and Portland residents, the ESTP has planted nearly 35,000 trees over the past six years.

The Bureau of Environmental Services (BES) manages a team of seasonal canvassers who locate planting spaces in the right-of-way, assist property owners in signing up to plant with Friends of Trees, and conduct planting inspections under the guidance of PP&R Urban Forestry. BES staff have collected existing and potential street tree data for most of the City of Portland east of the Willamette River and for some neighborhoods west of the river. BES has used these data to develop and manage tree planting efforts in industrial and commercial areas, to target low-canopy, low-income neighborhoods, and to target areas that offer opportunities to plant large canopy trees. In FY2013-2014, the ESTP undertook an equity scan of its outreach and planting programs to ensure equitable service delivery in low-income communities and communities of color.

BES continues to promote forest diversity and resilience to pests and pathogens by avoiding over-planted species, planting a wider variety of species, and investigating promising new species and cultivars. The bureau is also implementing planting standards to promote tree health and reduce infrastructure conflicts. The greatest challenges to planting street trees in Portland, however, are finding appropriate planting locations and then securing agreement from adjacent property owners to plant and care for them. BES staff signed up more than 2,200 customers for Friends of Trees and 926 participants for BES planting projects. Outreach staff talked with 1,200 interested people about trees at community events, signing up 100 customers and 25 Friends of Trees volunteers.



Urban Forestry permitted 4,269 street tree plantings with Friends of Trees through the Bureau of Environmental Services in FY2013-2014

TABLE 1: INSPECTIONS AND PERMITS ISSUED BY PP&R URBAN FORESTRY IN FY2013-2014

STREET TREES				
	INSPECTIONS COMPLETED*	TREES INSPECTED	PERMITS ISSUED	TREES PERMITTED
Planting, property owner	674	1,902	627	1,471
Planting, Environmental Services	3,448	5,903	2,364	4,269
Planting, development requirements	3,183	n/a	1,128	1,369
Pruning	680	3,269	2,011	5,874
Removal**	1,099	2,128	1,107	2,128
Root pruning	726	1,429	604	1,328
General	1,195	2,451	130	589
PARK AND SCHOOL TREES				
Planting, Parks	35	76	35	111
Planting, School Arboreta	8	91	8	91
Pruning	127	544	110	589
Removal***	89	233	92	313
Root pruning	15	50	9	29
General	101	915	11	284
PRIVATE TREES				
Removals, Tree Cutting Ordinance	418	793	327	479
Planting, mitigation	n/a	n/a	n/a	385
EMERGENCY				
Emergency response	583	609	n/a	n/a
TOTALS				
Planting	7,348	7,972	4,162	7,696
Pruning	807	3,813	2,121	6,463
Removals	1,606	3,154	1,526	2,920
Root pruning	741	1,479	613	1,357
General	1,296	3,366	141	873
Emergency	583	609	n/a	n/a
Totals	12,381	20,393	8,563	19,309

**Because not all inspections result in permit issuance, metrics of both inspections and permits issued are included.*

***Street tree removal includes removal for development projects, such as street improvements, light rail, and greenstreet facilities.*

****Park tree removal includes removal of a large number of invasive tree species, such as English holly and European hawthorn.*

Additionally, 248 trees were the recipient of Treebate credits. The Treebate program offers an incentive in the form of a utility bill credit for stormwater fee ratepayers in Portland who plant trees on their residential private property. Because larger trees intercept more stormwater, Treebate credits 50% of the tree's purchase price up to \$50, \$25, or \$15, depending on mature tree size and stormwater management potential.

Treebate trees must be at least 1 inch caliper and 6 feet tall (4 feet for conifers) at time of planting and may not be otherwise subsidized by the City (e.g., trees planted through Friends of Trees), required by a condition of mitigation or development, or on the City's nuisance plant list. The program relies on local retail nursery partners, utility bill inserts, Treebate web pages, media coverage, and word of mouth to get the word out about the offer. Over the past five years, the program has granted credits to 1,160 Environmental Services customers for planting 2,408 trees.

Parks Planting: 111 large-caliper trees were planted by PP&R Urban Forestry in parks in FY2013-2014, predominately as replacements for trees lost due to old age, structural failures, vandalism, and car accidents.

School Arboreta: 91 trees were planted at eight sites as school arboreta, called Learning Landscapes, with the help of 723 students and volunteers. Arboreta were planted at schools in the Portland and Centennial districts and at a charter school. PP&R Urban Forestry installs Learning Landscapes at schools using volunteers, students, and Neighborhood Tree Stewards. These Learning Landscapes provide educational opportunities for students, teachers, and neighbors to learn about different tree species and the importance of urban trees.

Regulatory Programs

PP&R Urban Forestry issues permits for all street, park, and City tree work, including planting, pruning, and removal. In certain cases, PP&R Urban Forestry issues permits for private tree removals. Efforts were guided under City Code 20.40 Street Tree and Other Public Tree Regulations and 20.42 Tree Cutting, now replaced by Title 11 Trees.

Implementing Tree Rules: 12,381 tree inspections were completed for health assessments, planting, pruning, removals, and other regulated activities in FY2013-2014 under PP&R Urban Forestry (Table 1). PP&R Urban Forestry enforces City tree code regulations related to street trees and some private trees, depending on the development situation. Much inspection time is dedicated to educating property owners about code requirements and proper tree care. The Bureau of



Urban Forestry staff Jim Gersbach (right) teaches children how to plant a tree for a Learning Landscape in the Centennial school district

Development Services (BDS) continues to administer tree preservation requirements when certain types of development are proposed, including new land divisions and development in environmental zones.

Education and Outreach Programs

PP&R Urban Forestry teams up with public and non-profit partners to provide education for the public on the importance of trees in the city. BES also provides substantial financial support for various City education and outreach programs.

Tree Inventory Project: Seeking to empower residents to better care for their neighborhood's tree canopy, PP&R Urban Forestry began organizing neighborhood stakeholders to conduct volunteer-led street tree inventories in 2010. In 2013, PP&R worked in Arbor Lodge, Brooklyn, Cathedral Park, Downtown, Piedmont, Portsmouth, Richmond, and Woodstock neighborhoods, and 250 volunteers gave over 4,000 hours inventorying 30,000 trees. Inventory results, including species diversity, stocking level, site conditions, and ecosystem benefits, were presented to neighborhood stakeholders alongside recommendations to improve the neighborhood's trees. Neighborhood tree teams created tree plans that included a vision statement, goals, action items, and recommendations for property owners. Tree teams presented information to their Neighborhood Associations for community input.

As a result of the project, the majority of neighborhoods with tree inventories have recognized tree teams to address neighborhood tree concerns, and most are associated with their Neighborhood Association. In 2013, Urban Forestry partnered with Confluence Environmental Center to sponsor an AmeriCorps member for an 11-month project to coordinate neighborhood Tree Plans and associated stewardship activities. The AmeriCorps member worked closely with tree teams and coordinated 15 stewardship events with over 300 volunteers participating. Events included young tree pruning, sharing inventory results with community stakeholders, tree walks, and tree plantings. Additionally, the AmeriCorps member conducted outreach to low-income and low-canopy neighborhoods to encourage participation in the inventory project with positive results.

Neighborhood Tree Steward Program: The Neighborhood Tree Steward program is a volunteer training course that provides participants with the knowledge and tools to lead local urban forestry projects. In 2013, PP&R Urban Forestry partnered with members of the Tree Steward Coalition, including the Urban Forestry Commission, BES, Friends of Trees, Portland State University, and the Portland Fruit Tree Project.



Volunteers measure, map, and identify a tree for the Woodstock street tree inventory



Urban Forestry Tree Inspector Charley Davis leads a public workshop on solutions for tree planting in development projects

The course included seven classes for a total of 26 hours. The course was taught by 18 instructors from 16 different organizations. A wide variety of topics were covered, including tree identification, permitting, tree biology, inventory, and planning projects. Thirty people from 22 neighborhoods and three neighboring cities participated, bringing the total number of Neighborhood Tree Stewards to 174 trained over the past five years.

General Public Educational Workshops: Workshops are offered to give continued support for Neighborhood Tree Stewards and neighborhoods that have completed a street tree inventory, and to encourage additional involvement from Portland communities. Workshops were given on a variety of topics, including young tree pruning, fruit tree pruning, heritage tree walks, and tree planting.

Tree Care Providers Workshops: PP&R Urban Forestry staff offer a Tree Care Providers Workshop for local tree care professionals. The program consists of free workshops offered on a semi-annual basis, providing training on City regulations involving trees and approved pruning standards. After completing the workshop and providing proof of a valid business license and ISA Certification, workshop participants are listed on the PP&R Urban Forestry website as a local tree care provider. In 2014, one workshop was offered, with 35 professionals from 17 different landscape, consulting, and tree care companies participating.

Professional Training: PP&R Urban Forestry provides training to other City bureaus and agencies on pruning, tree care, high climber emergency rescue, and planting permit inspections. In the fall of 2013 Urban Forestry offered a, first ever, Trees & Development workshop to BDS staff and the development community. In the winter of 2014 a brown-bag lecture was held at the Portland Building to review the roles of and responsibilities of Urban Forestry. In addition to the brown bag, an internal Tree Maintenance and Best Practices Workshop was given to PP&R North Zone Maintenance staff.

Events: Portland celebrated its second annual Arbor Month in 2014, with tree events held nearly every day in April. Events included workshops, lectures, bike rides, tree walks, workdays, bucket truck rides, and an Urban Forestry Open House. Arbor Day was held on Saturday, April 26 in the South Park Blocks in partnership with Portland Farmers Market. The Arbor Day celebration included the presentation of the 37th Tree City USA award and the announcement of the Bill Naito Community Tree Award winners. The award winners were Mark Franklin, for managing 800 acres of Portland Public

School's grounds, and Anne Downing and David Douglas High School's English as a Second Language class, for planting more than 1,000 trees in their communities.

Volunteer work hours: 65,448 volunteer hours valued at \$767,966 were provided to the urban forest in FY2013-2014, as reported by PP&R. Volunteers planted, pruned, and maintained trees in parks, natural areas, and rights-of-way; removed invasive species; and worked at environmental education events, among other activities. Volunteers contributed over 4,000 more hours than the previous fiscal year.

Citywide Tree Care and Maintenance Programs

PP&R Urban Forestry oversees tree maintenance for parks and some additional City-owned properties through inter-agency agreements. In FY2013-2014, maintenance activities included establishment care and watering, pruning, canopy raising, removals, and hazard abatement for PP&R, BES, Portland Fire & Rescue, Bureau of Transportation, Portland International Raceway, and Water Bureau properties.

Parks Tree Maintenance: 111 trees were planted in parks in FY2013-2014. Over 600 trees were established in parks with regular watering schedules. PP&R Urban Forestry Arborists pruned 589 park trees. Some 313 park trees were removed.

Dutch Elm Disease (DED) Control: 37 public and private elms were removed due to DED in 2013 as part of the PP&R Urban Forestry Elm Protection Program. The program includes vigilant monitoring, timely diagnoses, and preventative maintenance of elms, as well as public education on symptom recognition, proper pruning, and elm wood disposal. Staff arborists worked with neighborhood associations and friends' groups to provide workshops on DED inoculation, inoculating approximately 170 street trees and 137 park trees in 2013.

Emergency Response: PP&R Urban Forestry responded to 583 emergency situations in FY2013-2014. PP&R Urban Forestry is the first responder to all tree-related emergencies within the city, providing immediate response to hazards around the clock. The majority of incidents involve tree failures on City property that pose a hazard to people, traffic, or infrastructure.

Youth Conservation Crew Tree Crew: In the summer of 2013, PP&R staff hired six high-school students plus one crew leader to conduct much needed maintenance and establishment tree work. The Youth Conservation Crew (YCC) Tree Crew watered and mulched over 450 small trees and pruned City trees throughout Portland.

Protect the Best: PP&R's Protect the Best program, with funding from BES, is designed to prevent small patches of invasive, non-native plant species from spreading in ecologically healthy natural areas. In FY2013-2014, the crew performed treatments in Forest Park, Maricara Park, Powell Butte Nature Park, Buttes Natural Area, Mitchell Creek Natural Area, Oaks Bottom Wildlife Refuge and Elk Rock Island. In FY2013-2014, 161 acres received initial treatments and 620 acres were re-treated. Since fiscal year 2008, a total of 3,900 acres have been treated at least once, and approximately 14,700 individual invasive trees (greater than one inch in diameter) have been removed. The majority of non-native tree species removed were English holly, European hawthorn, and non-native cherry. Removal helps stop the spread by eliminating seed sources.

Watershed Revegetation Program: BES' Watershed Revegetation Program (WRP) works on over 2,000 acres of public and private property throughout Portland. WRP removes invasive vegetation and plants native vegetation as part of site management. WRP planted trees on nearly 275 acres in both natural areas and stormwater maintenance facilities during FY2013-2014.

PERFORMANCE MEASURES

The *Urban Forest Action Plan* Performance Measures Task Force began meeting in 2007 to establish a set of performance measures for the *Urban Forest Action Plan* to gauge progress in meeting the goals and objectives of the plan. This report contains compiled performance measures using credible existing data for FY2007-2008 through FY2013-2014. Urban Forestry continues to work to establish targets, reporting frequency, and review performance measures.

TABLE 2: BASELINE MEASUREMENTS AND INDICATORS OF PROGRESS IN ACHIEVING URBAN FOREST ACTION PLAN GOALS FOR FY2007-2008 THROUGH FY2013-2014

PROTECT, PRESERVE, RESTORE, AND EXPAND PORTLAND'S URBAN FOREST							
	FY07-08	FY08-09	FY09-10	FY10-11	FY11-12	FY12-13	FY 13-14
Urban forest canopy cover* % of total city	26%*	-	-	29.9%	-	-	-
Urban forest canopy coverage* % of public property	27%*	-	-	-	-	-	-
Urban forest canopy coverage* % of private property	26%*	-	-	-	-	-	-
Ratio of street tree plantings to removals	-	6.6	11.1	5.9	3.6	3.6	2.6
DEVELOP AND MAINTAIN SUPPORT FOR THE URBAN FOREST							
Volunteer hours, Friends of Trees (FOT)	17,860	17,003	18,307	22,482	25,518	29,002	20,713.25
Neighborhood Tree Stewards trained	0	0	23	11	29	32	30
Website visits, PP&R Urban Forestry	32,440	46,959	90,831	70,844	118,292	152,345	374,206
Arboreta developed at Portland schools (total trees planted)	2 (54)	5 (185)	9 (152)	5 (160)	6 (78)	9 (57)	8 (91)
Total funding from grants in PP&R Urban Forestry budget	\$21,702	\$74,804	\$3,660	\$5,096	\$5,096	\$0	\$0
Total budget, PP&R Urban Forestry	\$2.52M	\$2.42M	\$2.47M	\$3.06M	\$3.01M	\$3.38M	\$3.34M
MANAGE THE URBAN FOREST TO MAXIMIZE COMMUNITY BENEFITS FOR ALL							
Trees planted in low-income and low-canopy neighborhoods by FOT	962	1,510	1,261	1,597	2,044	1,843	2,016
Carbon sequestration, lbs**	24,854,356	-	-	-	-	-	-
Air pollutants removed, lbs **	599,023	-	-	-	-	-	-
Stormwater retained, gallons**	413,676,636	-	-	-	-	-	-
Canopy cover in riparian areas	-	66.6%	-	-	-	-	-

*Urban forest canopy cover data uses imagery for year 2002 as a baseline, but were reported in FY2007-2008.

**Carbon sequestration, air pollutants, and stormwater retained are baseline data derived from 2002 conditions and reported in FY2007-2008.

DATA SOURCES FOR PERFORMANCES MEASURES

Urban forest canopy cover: PP&R's *Tree Canopy Monitoring: Protocol and Monitoring from 2000-2010* (2012) calculated canopy cover using point interpretation of aerial photos.

Ratio of street tree plantings to removals: PP&R Urban Forestry tracks street tree removal and planting permits. Net change is determined by dividing planting permits issued by removal permits issued.

Volunteer hours with Friends of Trees: FOT tracks total volunteer hours each planting season.

Website visits for PP&R Urban Forestry: The City of Portland Urban Forestry website (www.portlandoregon.gov/parks/trees) tracks total visits.

Arboreta developed: PP&R Urban Forestry's Outreach and Education program creates Learning Landscapes at willing partner schools in the city. Arboretums developed involve planting multiple trees, creating a volunteer network for establishment care, and working with teachers to use the arboreta for class lessons.

Total funding from grants: Amount of funding in the PP&R Urban Forestry budget received from grants.

Total budget, PP&R Urban Forestry: Total budget for PP&R Urban Forestry.

Trees planted in low-income and low-canopy neighborhoods by Friends of Trees: Trees planted in rights-of-way and yards in neighborhoods with <25% canopy (Poracsky and Lackner 2004) and where >51% of individuals are at or below 80% of the median income according to the Federal Department of Housing and Urban Development (2003).

Carbon sequestration, air pollutants removed, and storm water retained: *Portland's Urban Forestry Canopy Report* (2007) used CITYgreen software to calculate the environmental benefits provided by trees based upon stratified aerial imagery derived from a 2002 multi-spectral image.

Canopy cover in riparian areas: Reported in the *State of the Watersheds 2008 Environmental Indicators Report* issued by Metro. Corresponds to Indicator 2, the percentage of trees within 50 feet of streams and wetlands. Data were derived from 2007 aerial photographs using Feature Analyst software.

KEY CHALLENGES AND OPPORTUNITIES

Staff retirements and vacancies

Several staff members retired this year. With over 53 years at Urban Forestry combined, their wisdom, experience, and connections to the public and other bureaus will be missed. With these changes came redistribution of work and increased workload on some staff as new staff were hired and trained. Bringing new staff on board represents an opportunity to have deeper connections to the diverse public we serve. New staff undergo orientation and extensive training before taking on their full workloads.

Urban Forestry also had a staff vacancy in the Education & Outreach group. This caused some outreach programs to be put on hold during the 2014-2015 fiscal year. These programs include the Neighborhood Tree Steward training program, which educates and involves approximately 30 people a year, and the Urban Forest Workshop series, for professional and general interests. Neighborhood Tree Stewards learn how to care for trees and lead urban forestry-related projects in their neighborhood. Workshops offer continuing education credits for Certified Arborists.

The Education & Outreach vacancy provided the opportunity to re-classify the position and integrate the potential work with other groups in Urban Forestry. The new position will be involved in developing a long-term education and outreach strategy to guide efforts to engage with residents and make urban forest issues relevant to the general public.

Updating the 2004 *Urban Forestry Management Plan*

This fiscal year marks ten years since the adoption of the 2004 Urban Forestry Management Plan. The Plan integrates Federal, State, and Metro mandates and details specific goals and action items for managing the urban forest. The Plan is set to be updated on a ten-year cycle. Work on a new Urban Forest Management Plan has been delayed due to the priority of implementing the new tree code, Title 11 Trees, which reduced resources to focus on the update.

PP&R may utilize the expertise of a consultant when more resources are available to begin updating the Plan. The process will take several months, and a funding source will need to be established. This will be a critical opportunity to assess the City's strategies for improving the urban forest as well as collaborate with other bureaus and the public. The public will be notified of opportunities for input and comment throughout the update process.

New tree code implementation

Starting in January 2014, staff geared up to implement the new tree code, Title 11 Trees. The new code consolidates tree regulations across several bureaus, creates customer service enhancements, and is more equitable than the old codes. Title 11 took effect on January 1, 2015. Urban Forestry drafted policies to help implement the new code, recruited for new permitting staff to help serve the public, and trained existing staff on the new code.

Although preparing for a new tree code was a lot of work, it was very important to our future forest management. After a lengthy collaboration with other bureaus and the public, the intent of the code is to do a better job of protecting and enhancing the urban forest while streamlining the permitting process.

Creating and revising practices and policies

In order to improve forest management and promote the City's urban canopy goals, Urban Forestry has been creating and revising important policies, such as approved tree planting lists, blanket planting permits, and street tree planting standards.

The updated Approved Street Tree Planting Lists offer broader species selections in order to encourage planting a diversity of tree species. Tree diversity increases the resiliency of the urban canopy through increased pest resistance and opportunities to increase drought and extreme temperature tolerance.

Data from the street tree inventory were used to inform the selection of the species on the approved planting lists. The data show that maples make up approximately 27% of street trees, a number that is alarmingly high from an urban forest management perspective. Maples are the primary host of the Asian Longhorned Beetle (ALB), an aggressively invasive pest that causes swift tree mortality. If ALB were to show up in Portland, an outbreak could lead to the loss of a quarter or more of our tree canopy. To reduce the risk of catastrophic canopy loss due to pests or disease, the new planting lists have set aside maples as options in order to increase the planting of less vulnerable species.

The Approved Street Tree Planting Lists will be updated every three to five years, providing the opportunity to evaluate the species selections and how well they are faring in Portland's urban environment. It will also provide opportunity to evaluate existing canopy composition with more complete inventory data and to assess the current state of threats to the urban forest.

Urban Forestry also continues to encourage strategic use of city tree planting resources by issuing the Bureau of Environmental Services (BES) and their contractors a blanket planting permit. BES contractors include Friends of Trees, Verde, and Cascadia. The planting permit includes specific native and evergreen species goals as well as overall tree diversity goals. It also emphasizes planting large-maturing trees in large strips over small strips to maximize canopy benefits. Data collection and reporting requirements will also better meet forest management needs through monitoring and assessment, facilitating more integration with the Urban Forestry program.

Another policy opportunity Urban Forestry seized this fiscal year was to draft street tree planting specifications. This is a first for Portland and an attempt to standardize street tree planting procedures across many planting partners in order to increase tree establishment and meet other urban forest management goals. The planting specifications include root barrier requirements to help reduce sidewalk damage, which costs homeowners and produces negative feelings about street trees among the public. Street tree planting standards are important to protect infrastructure, ensure tree establishment and survival, and encourage species diversity to protect against pests and climate change. Street trees are public infrastructure and an investment in the future; when properly selected and established, street trees can provide multiple benefits to the public for many decades.

Other opportunities for policy development include crafting a transparent, consistent, and equitable monitoring plan, financial hardship waiver policy, and capital improvement project policy.

Citywide planning processes

Urban Forestry seeks to be actively involved in all citywide planning processes in order to represent tree and urban forestry interests. Urban Forestry continues to participate in updating the *Comprehensive Plan*, the

Climate Action Plan, and the *Citywide Systems Plan*. Reviewing and providing input on these plans provides important opportunities for evaluating existing urban forestry-related programs and determining whether changes are needed to better meet City goals for addressing climate change. These plans will guide efforts over the next ten to 20 years. By participating in these and future planning processes, Urban Forestry continues to garner support for the urban forest and ensure the actions set by the City for the future will protect and enhance the urban canopy.

Service to low tree canopy neighborhoods

The Bureau of Environmental Services (BES) partnered with the Confluence Environmental Center in sponsoring an AmeriCorps member to improve service delivery to low-income communities and communities of color with relatively low tree canopy cover. The AmeriCorps member developed a map and tree walk for Parklane Park, tabled at community events, and strengthened partnerships with East Portland neighborhoods in support of tree planting and stewardship. Over the 11-month service term, the AmeriCorps member educated 1,343 youth and 553 adults about the vital environmental benefits the urban forest provides its residents at 64 events. The AmeriCorps member worked to optimize tree canopy and support the equitable distribution of street trees throughout the city.

BES addressed low-canopy neighborhoods through canvassing and tree planting efforts. During the six years of the Environmental Services Tree Program, BES and partners planted approximately 5,300 trees in East Portland neighborhoods, which are generally lower canopy. BES has also planted in the Central Eastside and Northwest Industrial Districts, which have relatively low tree canopy cover.

BES and PP&R Urban Forestry are also extending partnership with AmeriCorps in FY2014-2015 for urban canopy programs. Bureaus are always looking for ways to increase outreach and service to low-income and low-canopy neighborhoods.