



**PORTLAND
PARKS & RECREATION**

Healthy Parks, Healthy Portland



Urban Forest Action Plan

2017 Implementation Update

March 2018

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Cover photo:

Heritage Tree #257, a California buckeye in North Portland

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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 2016-2017, which extends from July 1, 2016 to June 30, 2017.

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.

PLANTING PROGRAMS

Urban Forest Action Plans Goals and Outcomes Impacted:

- *Goal 1, Outcome A: Enhanced Canopy*
- *Goal 2, Outcome A: Shared Stewardship*
- *Goal 2, Outcome B: Public Education*
- *Goal 3, Outcome A: Street Tree Distribution*
- *Goal 3, Outcome B: Livability*

PP&R Developed Parks

PP&R Urban Forestry planted 92 trees in parks during the 2016-17 fiscal year. These trees are primarily replacements for trees lost in past years due age, structural failures, and storm damage. Nearly half of the planted trees were natives, including Oregon white oak, Western hemlock, and Douglas fir.

Learning Landscapes

A Learning Landscape is a dynamic collection of trees that are planted and cared for by students and Portland Parks & Recreation (PP&R) Urban Forestry staff and volunteers. The Learning Landscapes program provides an outdoor educational experience for students, as well as environmental and aesthetic benefits for a school or other public place. The program is designed to connect youth and community members to places they live, work, and play, and to promote responsible stewardship of our shared spaces.

Number of trees planted: 61

Percentage of large-form, evergreen or native trees planted: 56%

Number of student volunteers: 556

Number of community volunteers: 128

Percentage of trees planted in low canopy neighborhoods: 82%

PP&R Natural Areas

PP&R Land Stewardship staff planted more than 1,800 trees through the City's many natural areas, including Marquam Nature Park, Whitaker Ponds Nature Park, and Oaks Bottom Wildlife Refuge. The Land Stewardship division conducts tree planting activities under a programmatic permit from PP&R Urban Forestry.

Environmental Services Tree Program

The Environmental Services Tree program planted 2,269 street trees and 1,010 yard trees this year. This planting program operates under a PP&R



Heritage Tree Committee members admire Heritage Tree #324, a Madrone in SE Portland.

Urban Forestry programmatic permit, and in partnership with Friends of Trees, other planting contractors, public partners, and Portland residents,

Of the 1,010 yard trees, 219 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 properties. Because larger trees manage 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 Plants 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 eight years, the program has granted credits to 1,562 Environmental Services customers for planting 3,083 trees.

Citywide Tree Planting Strategy

Portland's existing tree canopy is not equitably distributed throughout the city: lower income neighborhoods have significantly lower tree canopy coverage and fewer street trees than other neighborhoods.

In order to better provide equitable access to trees and improve planting efforts, PP&R contracted with Portland State University to develop a Citywide Tree Planting Strategy. The project seeks to identify barriers, challenges, and opportunities to tree planting in underserved areas of the City and create an interactive map that identifies plantable areas based on City and community priorities. The final report will be available in spring 2018 and will guide future planting efforts and expenditures of the Tree Planting and Preservation Fund.



PP&R Urban Forestry's Learning Landscapes program plants trees at Peninsula Elementary in North Portland.

TABLE 1: INSPECTIONS AND PERMITS ISSUED BY PP&R URBAN FORESTRY IN FY2016-2017

STREET TREES			
	INSPECTIONS COMPLETED	PERMITS ISSUED	TREES PERMITTED
Planting, Total Street Trees	6,304	1,910	5,082
Planting, Non-Development*	199	153	1,632
Planting, Development**	3,152	595	1,181
Planting, Environmental Services	2,953	1,162	2,269
Pruning***	647	2,580	6,788
Removal	1,148	1,078	1,633
Removal, Non-Development	1,148	1,005	1,527
Removal, Development	n/a	73	106
Root Pruning	754	721	1,285
Other****	509	75	1,201
PARK AND SCHOOL TREES			
Planting, Parks	0	0	92
Planting, School Arboreta	11	11	61
Pruning	81	43	332
Removal	117	54	91
Root pruning	0	0	0
Other	81	8	17
PRIVATE TREES			
Removals	2,787	2,661	3,894
Planting, mitigation	n/a	n/a	3,427
Other	48	23	28
EMERGENCY			
Emergency response	2,597	n/a	n/a
TOTALS			
Planting	6,304	1,921	8,662
Pruning	728	2,623	7,120
Removals	4,052	3,793	5,618
Root pruning	754	721	1,285
Other	638	106	1,246
Emergency	2,597	n/a	n/a
Totals	15,073	9,476	24,319

*Number of trees permitted includes trees required to be planted as part of other permits

**Includes RS, CO, FP, and SD street street reviews as well as OTC street tree reviews. Does not include Land Use

***Includes online pruning permits

****Does not include Code Compliance Inspections

REGULATORY PROGRAMS

Urban Forest Action Plans Goals and Outcomes Impacted:

- Goal 1, Outcome B: Regulatory Program
- Goal 1, Outcome C: Development
- Goal 3, Outcome A: Street Tree Distribution
- Goal 3, Outcome B: Livability

Development Permits: Urban Forestry's primary role in development situations is to regulate Street and City Trees. The Bureau of Development Services (BDS) regulates privately owned trees in development situations. Urban Forestry assists BDS when requested by conducting tree preservation inspections and providing peer reviews of arborist reports for private trees. Here is a summary of typical permit types:

Early Assistance (EA): Early Assistance reviews are optional reviews that allow the applicant to receive documentation of City requirements for a proposed development.

Pre-Application (EA): Pre-Application conferences occur prior to submittal of a land use review, and are required for all Type III and IV land use reviews.

Land Use: Land Use reviews are required when the zoning code triggers a review for a specific use or development project.

Building Permit: The Building Permit is where onsite work is reviewed and approved. Work within the Right-of-Way is attached to the building permit when there is not an associated Public Works Permit.

Public Works: The Public Work Permit is where work within the Right-of-Way is reviewed and permitted.

In FY 2017, PP&R Urban Forestry Tree Inspectors and Tree Techs processed more than 2,576 development permits.

Non-Development Permits: PP&R Urban Forestry issued 3,793 permits for tree removal in non-development situations, 1,921 street tree planting permits, 2,623 street tree pruning permits, and 721 root pruning inspections in 2017.

Programmatic Permits: Programmatic Permits are issued to public agencies and utilities conducting routine tree work in the City of Portland. These permits are not subject to normal Type A or B permit review factors, and are instead intended to prevent cumulative adverse impacts to the urban forest, including no net reduction in canopy coverage over time, and to support the goals of the Urban Management Plan. PP&R Urban Forestry administered 18 programmatic permits in fiscal year 2017.



PP&R Urban Forestry staff leads volunteers in a young tree pruning workshop.

EDUCATION & POLICY

Urban Forest Action Plans Goals and Outcomes Impacted:

- *Goal 1, Outcome A: Enhanced Canopy*
- *Goal 2, Outcome A: Shared Stewardship*
- *Goal 2, Outcome B: Public Education*
- *Goal 3, Outcome B: Livability*



Heritage Tree #134, a Douglas fir in Lower Macleay Park, is Portland's tallest tree. Estimated to be between 300 and 450 years old, the tree was measured to be 242 feet tall in 1997.

Tree Care Providers Workshops: PP&R Urban Forestry staff offer a Local Tree Care Provider 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 arborist certification, workshop participants are listed on the PP&R Urban Forestry website. In 2016/17, three workshops were offered, with 58 professionals from 42 different landscape, consulting, and tree care companies participating.

Neighborhood Tree Teams: Confluence AmeriCorps member Mason Wordell served as Urban Forestry Tree Plan Coordinator from September 2016 through July 2017. In this capacity, Mason worked closely with Neighborhood Tree Teams with the goal of increasing community awareness and support of Tree Plan goals and to encourage greater community interest in urban forest stewardship. Workshop topics included structural pruning of young street trees, tree identification, heritage trees, tree history, a broadleaf evergreen walk, general tree care, invasive species, the tree code, and tree planting. In all, Mason worked with 22 Tree Teams to plan 23 workshops with an effort to bring workshops to east Portland neighborhoods. Through these workshops, a total of 469 volunteers/participants dedicated 1,188 hours to education and stewardship, including pruning 488 young street trees under the guidance of ISA certified volunteer and staff arborists. Additionally, Tree Teams contributed an extra 1,287 hours to independent projects. These projects included tree removal and replanting projects, planting projects, canvassing and outreach, and developing stronger networks among teams.

Evaluations were collected after all workshop events and 191 out of 205 (93%) people reported that they “felt more committed to their neighborhoods after participating in an Urban Forestry workshop.”

Neighborhood Tree Stewards: Thirty community members representing 23 different neighborhoods graduated from the fall 2016 Neighborhood Tree Steward (NTS) Program. Classes were held at the East Portland Community Center and Mt Scott Community Center, in an effort to make the classes more accessible to residents in East Portland. The theme for this year's NTS program was “Urban Forestry and the Growing

Metropolis.” Over the course of seven class sessions (22 hours) students learned about the importance of trees in the novel urban ecosystem. Class topics included: intro to tree biology; tree identification; socio-economic/public health benefits of trees; pruning and tree care workshop; history of Portland’s urban forest; trees, development and the City Tree Code; wildlife habitats in the urban forest; and for the first time, a session with the Environmental Justice Director from the Asian Pacific American Network of Oregon (APANO) on equity and environmental justice. The graduation/tree planting class involved planting 8 trees, including broadleaf evergreens, at Floyd Light Park. Our 2016 graduates join nearly 300 NTS alumni helping care for our city’s trees since the program began in 1997. Here are some of the things that students identified as the most enriching aspect of NTS:

“History of Portland Trees. The enthusiasm of the Urban Forestry Department and Commission”

“How sensitive trees are to improper care.”

“How essential the urban forest is to the health of all people. Importance of diversity.”

“Equity related to the urban forest.”

Arbor Day: Portland celebrated Arbor Day on April 20, 2017 at Mt Scott Park, with over 450 visitors throughout the day. For the first time in years, Urban Forestry broke from the tradition of holding the fest downtown at the PSU Portland Farmers Market and instead moved the celebration to this east Portland neighborhood making it more easily accessible to a multitude of diverse communities of Portlanders. The Arbor Day celebration included the presentation of the 40th consecutive Tree City USA Award to Portland- presented by Jim Gersbach (Oregon Department of Forestry) and accepted by Mike Abbaté, on behalf of Portland Parks & Recreation; the presentation of the Tree Campus USA Award to Portland State University, and the announcement of the Bill Naito Community Tree Award winners. Catherine Clark received the Individual Naito Award for her contributions as a Neighborhood Tree Steward and Roseway Tree Team Leader in organizing events in Roseway, including an extensive replanting of the 72nd Avenue Park Blocks. Thirteen hundred volunteers that contributed to the success of the Street Tree Inventory Project (2010-2016) by inventorying nearly 220,000 street trees, were honored with the Group Naito Award. The Arbor Day celebration also included a tree giveaway (275 seedlings), bucket truck rides, tree climb with ropes, a scavenger hunt, musical performances, a workshop for Neighborhood Tree Stewards and Tree Teams, 18 community and/or ecologically focused organizations tabling and providing educational activities for visitors, and local food vendors.



Volunteer Neighborhood Tree Stewards learn how to plant a tree at a training event.

CITYWIDE TREE CARE AND MAINTENANCE PROGRAMS

Urban Forest Action Plans Goals and Outcomes Impacted:

- Goal 1, Outcome A: Enhanced Canopy
- Goal 2, Outcome A: Shared Stewardship
- Goal 2, Outcome B: Public Education
- Goal 3, Outcome A: Street Tree Distribution
- Goal 3, Outcome B: Livability
- Goal 3, Outcome C: Watershed Health



A PP&R Urban Forestry arborist demonstrates a proper aerial rescue during a staff training.

PP&R Urban Forestry oversees tree maintenance for parks and many City-owned properties through inter-agency agreements. In FY2016-2017, maintenance activities included establishment care and watering, pruning, canopy raising, removals, and hazard abatement.

Dutch Elm Disease (DED) Management: As part of the PP&R Urban Forestry Elm Protection Program, 57 public, private, and park elms were removed due to DED in 2016-17. The program includes vigilant monitoring, timely diagnosis of DED, and preventative maintenance of elms, as well as public education on symptom recognition, proper pruning, enforcing the elm pruning moratorium from April 15 to October 15, and elm wood disposal.

Staff arborists worked with neighborhood associations and friends' groups to select healthy right-of-way elm candidates for inoculation, as well as permit inoculation activity. Neighborhood groups inoculated 57 right-of-way elms and 151 park trees were inoculated by Urban Forestry staff.

Youth Conservation Crew Tree Crew: In the summer of 2016, PP&R staff hired six high-school students plus one adult crew leader to conduct much needed maintenance and establishment tree work. The Youth Conservation Crew (YCC) Tree Crew weeded and mulched over 400 young trees and pruned over 150 trees at parks, schools, and public spaces throughout Portland. In addition, the YCC Tree Crew participated in the last year of the Street Tree Inventory, inventorying 270 street trees.

Protect the Best: PP&R's Protect the Best program is designed to prevent small patches of invasive, non-native plant species from spreading in ecologically healthy natural areas. In FY2016-2017, the crew performed treatments in Big Four Corners Natural Area, Buttes Natural Area, Forest Park, Maricara Park, Mitchell Creek Natural Area, Powell Butte, Ross Island Natural Area and Oaks Bottom Wildlife Refuge. In FY 2016-2017, 495.5 acres were treated. 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. PP&R tree removals, planting, and mitigation in natural areas are managed under a PP&R Urban Forestry programmatic permit.

Watershed Revegetation Program: In FY17 BES' Watershed Revegetation Program (WRP) managed over 11,00 acres of natural area projects on private and public property throughout Portland. Management by WRP includes the removal of invasive vegetation and the planting and maintenance of native plants. WRP planted 6,700 native trees and 24,600 native shrubs on 38 acres in natural areas and stormwater maintenance facilities. BES Watershed Revegetation Program tree removals, planting, and mitigation are managed under a PP&R Urban Forestry programmatic permit.

Volunteer work hours: 63,294 volunteer hours valued at \$756,996 were provided to the urban forest in FY2016-2017, 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.

Community Tree Care Program: The Community Tree Care Program, a partnership between Friends of Trees and PP&R Urban Forestry with funding from the Bureau of Environmental Services, works with volunteers to structurally prune young street trees to aid their long-term growth. The 2016-17 pruning season kicked off with a Pruning Leader training held at the Charles Jordan Community Center, followed by hands-on field work in the Portsmouth neighborhood. Thereafter, trained pruners also attended events in Centennial, Argay, Mt. Tabor, Cathedral Park, Russell, and Woodlawn neighborhoods. The fourth season of this program included pruning events run concurrently with plantings events. This model was both efficient and brought attention to the program. Approximately 1,200 young street trees were pruned for clearance, health, and structure this season with the help of about 75 trained volunteer pruners and arborist partners who worked approximately 970 volunteer hours. About 466 properties were reached and given additional education on the importance of follow up street tree care.



Volunteers collect tree data in Humboldt as part of PP&R Urban Forestry's Street Tree Inventory.

PERFORMANCE MEASURES

The Urban Forest Action Plan Performance Measures Task Force established performance measures for the Urban Forest Action Plan to gauge progress in meeting the goals and objectives of the plan.

TABLE 2: MEASUREMENTS AND INDICATORS OF PROGRESS IN ACHIEVING *URBAN FOREST ACTION PLAN* GOALS

PROTECT, PRESERVE, RESTORE, AND EXPAND PORTLAND'S URBAN FOREST					
	FY08	FY09	FY10	FY11	FY12
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
DEVELOP AND MAINTAIN SUPPORT FOR THE URBAN FOREST					
Volunteer hours, PP&R		67,049	68,439	63,277	66,548
Volunteer hours, Friends of Trees (FOT)	17,860	17,003	18,307	22,482	25,518
Neighborhood Tree Stewards trained	0	0	23	11	29
Website visits, PP&R Urban Forestry and www.portlandoregon.gov/trees	32,440	46,959	90,831	70,844	118,292
Arboreta developed at Portland schools (total trees planted)	2 (54)	5 (185)	9 (152)	5 (160)	6 (78)
Total budget, PP&R Urban Forestry (\$)	2.52M	2.42M	2.47M	3.06M	3.01M
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
Carbon sequestration, lbs**	24.8M	-	-	-	-
Air pollutants removed, lbs**	599,023	-	-	-	-
Stormwater retained, gallons**	413.7M	-	-	-	-
Canopy cover in riparian areas	-	66.6%	-	-	-

*Canopy data uses imagery for year 2002 as a baseline, but were reported in FY2008-2008.

**Baseline data derived from 2002 conditions and reported in FY2007-2008.

PERFORMANCE MEASURES CONT.

**TABLE 2 CONT.: MEASUREMENTS AND INDICATORS OF PROGRESS IN ACHIEVING
URBAN FOREST ACTION PLAN GOALS**

PROTECT, PRESERVE, RESTORE, AND EXPAND PORTLAND'S URBAN FOREST					
	FY13	FY14	FY15	FY16	FY17
Urban forest canopy cover* % of total city	-	-	-	30.7	-
Urban forest canopy coverage* % of public property	-	-	-	-	-
Urban forest canopy coverage* % of private property	-	-	-	-	-
Ratio of street tree plantings to removals	3.6	3.3	3.5	3.0	3.1
DEVELOP AND MAINTAIN SUPPORT FOR THE URBAN FOREST					
Volunteer hours, PP&R	61,082	65,448	71,682	68,024	63,294
Volunteer hours, Friends of Trees (FOT)	29,002	20,713	21,279	41,540	
Neighborhood Tree Stewards trained	32	30	20	30	30
Website visits, PP&R Urban Forestry and www.portlandoregon.gov/trees	152,345	374,206	442,839	680,440	1,730,000
Arboreta developed at Portland schools (total trees planted)	9 (57)	8 (91)	9 (95)	8 (69)	11 (61)
Total budget, PP&R Urban Forestry (\$)	3.38M	3.34M	3.93M	4.06M	\$4.6M
MANAGE THE URBAN FOREST TO MAXIMIZE COMMUNITY BENEFITS FOR ALL					
Trees planted in low-income and low-canopy neighborhoods by FOT	1,843	2,016	2,061	1,666	1,780
Carbon sequestration, lbs**	-	-	-	-	-
Air pollutants removed, lbs**	-	-	-	-	-
Stormwater retained, gallons**	-	-	-	-	-
Canopy cover in riparian areas	-	-	-	-	-

*Canopy data uses imagery for year 2002 as a baseline, but were reported in FY2008-2008.

**Baseline data derived from 2002 conditions and reported in FY2007-2008. Updated data expected in FY19.