



PORTLAND PARKS & RECREATION

Healthy Parks, Healthy Portland



Exhibit B: Urban Forest Action Plan 2009 Implementation Update

February 2010

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Compiled by:

Angie DiSalvo, Portland Parks and Recreation

Urban Forest Action Plan Implementation Team:

Dave McAllister, City Forester, Portland Parks and Recreation

Rob Crouch, Portland Parks and Recreation

Angie DiSalvo, Portland Parks and Recreation

Roberta Jortner, Bureau of Planning and Sustainability

Jennifer Karps, Bureau of Environmental Services

Dave Kliewer, Bureau of Environmental Services

Kim Tallant, Bureau of Development Services

Morgan Tracy, Bureau of Planning and Sustainability

John Warner, Urban Forestry Commission

Portland Parks & Recreation

1120 SW Fifth Avenue, Suite 1302

Portland, Oregon 97204

(503) 823-PLAY

www.PortlandParks.org



Commissioner Nick Fish
Director Zari Santner

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A 1989 planting on East Burnside with Portland Mayor Bud Clark (center), Multnomah County Sheriff Bob Skipper (left), Neil Kelly of Portland Development Commission (behind the tree) and Bob Harr (right), president of the Lower East Burnside Boosters (top photo, courtesy of the Oregonian). After only 20 years, the street trees stretch above the two story building, providing much needed canopy cover along this busy thoroughfare and business district.

BACKGROUND

Momentum is building in urban forestry as cities turn to trees as low cost, green solutions to more complex, expensive problems of storm water treatment, climate change, and community livability. Portland came early to the game as a leader: this year marks 37 years since the City established a Tree Ordinance and formed Portland Parks and Recreation's Urban Forestry division. 2009 was an important year - the Arbor Day Foundation held their national Partners in Community Forestry Conference in Portland, highlighting the City as a leader in innovative forestry solutions. Tree planting and capacity building activities were on the forefront: this year also marks the twentieth anniversary for the non-profit Friends of Trees with 375,000 trees planted. The City's Grey to Green program ramped up in its second year, with goals of planting 83,000 new trees within five years. 2009 was a time to celebrate early achievements in what will be a long journey towards building and maintaining a healthy urban ecosystem.

In 2007, a City of Portland interbureau team created the *Urban Forest Action Plan* to implement the goals established in the 2004 *Portland Urban Forest Management Plan*. The *Urban Forest Action Plan* 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 progress and performance measures for the *Urban Forest Action Plan*, with efforts led by PP&R Urban Forestry in cooperation with multiple City bureaus. Over half of the action items are either completed or in progress.

Key challenges remain, and greater support is needed to achieve all the goals set by the *Urban Forest Action Plan*. Many of the 5- and 10-year actions can only be initiated if so directed and funded through the City's work planning and budget process. In 2010 the interbureau team will dedicate time to examining the prioritization, funding, and feasibility of remaining action items.

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 wellbeing 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.

CURRENT AND EARLY ACTIONS

COMPLETED PROJECTS

Revisioning of the Neighborhood Tree Steward Program

The Neighborhood Tree Steward (NTS) program, formerly known as the Neighborhood Tree Liaison program, was revised after a two-year hiatus. The NTS program is a volunteer training course that gives participants knowledge and tools to lead local urban forestry projects. Portland Parks & Recreation (PP&R) partnered with the Urban Forestry Commission (UFC), Bureau of Environmental Services (BES), Friends of Trees (FOT), and Portland State University, to create a new curriculum taught by 17 expert speakers. The 2009 program added 23 NTS graduates to a total of 170 in the past eleven years. The new course will continue to be offered annually.

Title 20 Mitigation Policy Updated

Tree loss mitigation standards were developed to help restore the loss of canopy during development and other site changes. The City established \$150.00 per diameter inch for tree mitigation more than ten years ago. Over time, the City's costs have increased for planting and establishing new trees for mitigation. After reviewing the actual costs, the mitigation fee was increased to \$300 per diameter inch to cover true costs for planting and establishing 2" caliper trees. Starting July 1, 2009, the new mitigation fee went into effect for all trees regulated under City Code.

Initial Cost Assessment for Managing All Street Trees Completed

The City of Portland Bureau of Planning and Sustainability (BPS), in collaboration with PP&R and BES, contracted with the Davey Resource Group to assess the costs of assuming full maintenance and liability of the City's street trees, and a final report was published in June 2009. Davey Resource Group developed a cost model for essential and desired services for the estimated 250,000 street trees on 3,175 street miles throughout the city. The study estimated annual costs for essential services of inspection, infrastructure, hazard limbs, maintenance pruning, removals, and planting to be 10.8 million dollars. Annual costs for desirable services of sidewalk repair, leaf and debris cleanup, pest control, fertilizing, establishment care, and post-establishment care were estimated to be 3.7 million dollars. Estimated costs were compared to nine other cities that assume some level of care of street trees. While the City has not committed to assuming all



Neighborhood Tree Stewards organized a planting in the Omaha blocks after five mature trees were lost to Dutch elm disease. Faced with lack of funds from the City, neighbors volunteered to water young trees for three years and recruited 25 people to plant.

street tree maintenance, this study will help inform that discussion and evaluate potential options for funding such an effort.

Summer Youth Crew Hired

Thanks to stimulus package monies, PP&R staff hired youth from SE Works, a GED and career program, to conduct much needed maintenance and establishment tree work. Summer Youth Crew projects centered around maintaining 260 trees planted by Neighborhood Tree Stewards at ten different schools, the Ainsworth Park Blocks, and the Roseway Park Blocks. The five member crew provided over 1400 hours as they mulched, pruned, watered, and removed and replaced dead trees during a very hot summer.

Tree Care Providers Certification Workshop Created

PP&R Urban Forestry staff developed a Tree Care Providers Certification Workshop for local tree care professionals. The program consists of free workshops offered on a quarterly basis that provide training on City rules and regulations involving trees and approved pruning standards. After completing the workshop and providing proof of a valid business license, workshop participants are listed on the Urban Forestry web site as a “Local Tree Care Provider.” In 2009, three workshops were offered and attended by 27 participants from 22 landscape, consulting, and tree care companies. A total of 17 tree care companies were added to the website list in 2009. Workshops will continue to be refined and offered in 2010.

Street Tree Removal Process Updated

PP&R Urban Forestry implemented a new process for street tree removals that includes a formal application, \$35 application fee, and clear guidelines for removal. Street trees can only be removed if they are dead, dying, diseased, or dangerous. As a result of the new program, requests for unnecessary removals have dropped, and the application fee has generated additional funds for tree plantings.

Utility Collaboration Established

PP&R Urban Forestry established regular meetings with Portland General Electric to review the pruning of trees under power lines and to discuss cooperative strategies that meet both the City’s canopy and utility needs. Citizen complaints about utility pruning have declined.

Invasive Plant Policy Reviewed

In an effort to review the City's policies related to managing invasive plants, a three year Invasive Plant Policy Review and Regulatory Improvement Project was completed by the Bureau of Environmental Services and led by the Bureau of Planning and Sustainability. The Nuisance Plant List and Prohibited Plant list have been consolidated, with 43 species added to the list and 24 species removed from the list. Priority ranks were assigned to species on the list, and staff recommended that the Portland Plant list be reauthorized by City Council as an administrative rule rather than an ordinance. The project also evaluated opportunities to improve invasive plant control through updates to City Code and rules, coordinated efforts on invasive plants with the Portland Plan, and researched the feasibility of establishing a local noxious or invasive weed law.

Fruit/Nut Tree Report Written

The Portland Multnomah Food Policy Council created a Fruit/Nut Tree Report that examined the benefits of fruit and nut trees for human and environmental health. The report included a list of appropriate trees, a case study, and review of current policy and regulations, as well as recommendations for promoting fruit trees in current projects.

ONGOING PROJECTS

Planting Programs:

3,823 trees were planted through the PP&R Urban Forestry permit process in FY08-09 by citizens, Friends of Trees, Grey to Green, and Parks plantings (Table 1).

Property Owner Planting: 1,520 street trees permits were issued to property owners by PP&R Urban Forestry in FY2008-2009.

Grey to Green: 1,746 street trees were planted by the Grey to Green program in cooperation with Friends of Trees in FY2008-2009. The five-year BES planting project is progressing well and meeting tree planting targets. FY2009-2010 goals are to plant 3,450 street trees. In coordination with PP&R Urban Forestry, BES hired a crew to assist Friends of Trees in canvassing neighborhoods for planting sites, and the crew is conducting street tree permit inspections.



A school arboretum, or “Learning Landscape,” waits to go in the ground at Mt. Tabor Middle School.

TABLE 1: INSPECTIONS AND PERMITS ISSUED BY PP&R URBAN FORESTRY IN FY08-09

STREET TREES				
	INSPECTIONS	TREES	PERMITS	TREES
Planting, property owner	1093	1822	771	1520
Planting, Friends of Trees	1070	1716	1110	1746
Pruning	1052	2257	1018	1956
Removal	1051	1482	422	497
Root pruning	748	1160	672	1041
General	533	1407	226	333
PARK AND SCHOOL TREES				
Planting, Parks	90	285	70	168
Planting, School Arboreta	5	0	5	185
Pruning	256	1598	247	1488
Removal*	217*	928*	177*	1761*
Root pruning	74	460	41	88
General	168	1815	25	128
EMERGENCY				
Emergency response	865	992	415	505
TOTALS				
Planting	2258	3823	1956	3619
Pruning	1308	3855	1265	3444
Removals	1268	2410	599	2258

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

Parks Planting: 168 large caliper trees were planted by PP&R Urban Forestry in parks in FY2008-2009, predominately as replacements for trees lost due to old age, failures, vandalism and car accidents. PP&R grows the majority of trees planted at their Mt. Tabor nursery.

School Arboreta: 185 trees were planted at five schools as school arboreta, called Learning Landscapes. PP&R installs Learning Landscapes at schools using volunteers, students, and Neighborhood Tree Stewards. These Learning Landscapes provide educational opportunities for students and neighbors to learn about tree genera and the importance of urban trees. Portland Public Schools staff are amenable to tree plantings, and have ensured that community infrastructure is in place to care for, water, mulch and replant the trees as needed.

REGULATION

Tree Code Enforcement

5,699 tree inspections were completed for health assessments, planting, pruning, removals, and other regulated activities in FY2008-2009 by PP&R Urban Forestry (Table 1). PP&R Urban Forestry enforces City tree code regulations related to street trees and some private trees, depending upon the development situation. Much inspection time is dedicated to educating property owners about code requirements and tree care issues.

Citywide Tree Policy and Regulatory Improvement Project

The Bureau of Planning and Sustainability, in collaboration with PP&R, BDS, BES, and numerous other community stakeholders, has been heading up the effort to review, revise, and update the City's tree-related policies and regulations. The primary project charges come directly from UFAP: 1) establish a clear, consistent and cohesive framework of regulations pertaining to trees in the city; and 2) enhance the urban forest through development and redevelopment.

In early 2009 staff brought a package of preliminary conceptual recommendations to the Urban Forestry Commission, Planning Commission, and others for feedback prior to developing a detailed proposal and code language. The revised code will be a new Title 11, "Trees," and recommendations for future administrative rulemaking. Upon receiving general support for the preliminary recommendations and completion of the project, staff initiated work on the detailed project proposal and draft code language for review and refinement with City bureaus. Staff produced an initial code package and fiscal impact assessment for review by City bureaus and the City Attorney. Staff is working with the City bureaus to finalize the draft project proposal. Public review will start in January 2010. A public hearing and work sessions with the Urban Forestry Commission and Planning Commission are scheduled for February and March of 2010. Council hearing and adoption is anticipated in May 2010.

Street Tree Permit Tracking

Urban Forestry has contracted with CSDC Systems to create a permit tracking system in TRACs, the software platform used by many City bureaus to track permitting. The new system will greatly improve workflow, tracking, and accountability for permits. The project is in progress and will be tested in early 2010.

PUBLIC EDUCATION AND OUTREACH

PP&R City Nature provides urban forestry education for the public on the importance of trees in the City.

General Public Workshops: Workshops were given on a multitude of topics, including general and mature tree care, young tree pruning, Dutch elm disease prevention, fruit tree pruning, professional arborist training, high climbing demonstrations, and tree planting. Staff regularly coordinate neighborhood and Heritage Tree walks, volunteer work days, and other workshops as requested.

Professional Training: PP&R Urban Forestry provided training to other City bureaus and agencies on pruning, tree care, high climber emergency rescue, and planting permit inspections.

Events: Arbor Week events occurred over a weeklong period in April, and included workshops, tree walks, and culminated in the Annual Arbor Day Celebration at Hayhurst Elementary. The celebration included the presentation of the 32nd Tree City USA award to the City, a community planting, and educational activities. The Second Annual “Dig-It” event kicked off the 2009-2010 planting season by planting 28 trees at Mt. Tabor Middle School, presenting the Bill Naito Community Tree Award, and graduating the 2009 Neighborhood Tree Steward class.



Volunteers contributed 67,049 hours to urban forestry activities, valued at \$939,956 during FY2008-2009.

Volunteer work hours: 67,049 volunteer hours valued at \$939,956 were provided to the urban forest in FY2008-2009, as reported by Portland Parks and Recreation. Volunteers planted, pruned, and maintained trees throughout parks and right-of-ways at a wide variety of events, from Friends of Trees plantings to “Arborists in the Arboretum” to pruning on bicycle workshops.

CITYWIDE TREE CARE AND MAINTENANCE

PP&R Urban Forestry provides tree maintenance for Parks and some additional City-owned properties through inter-agency agreements. In FY2008-2009, maintenance activities included establishment care and watering, pruning, canopy raising, removals, and hazard abatement for Parks, BES, Comnet, Fire Bureau, General Services, Golf, Maintenance Bureau, Portland Department of Transportation, Portland International Raceway, Department of Traffic Management, and the Water Bureau.

Dutch elm disease control: 30 public and private elms were removed due to Dutch elm disease or symptoms suggesting Dutch elm disease in 2009 as part of the PP&R Urban Forestry Elm Protection program. The program includes vigilant monitoring, timely diagnoses, and preventative maintenance of elms. Staff arborists worked with neighborhood associations and friends groups to provide workshops on DED inoculation, symptom recognition, proper pruning and elm wood disposal.

Emergency Response: PP&R Urban Forestry Tree Inspectors responded to 865 emergency call outs in FY2008-2009. PP&R Urban Forestry is the first responder to all tree-related emergencies with the City, providing immediate response to hazards around the clock. The majority of incidents involved tree failures that posed a hazard to people, traffic, and infrastructure.

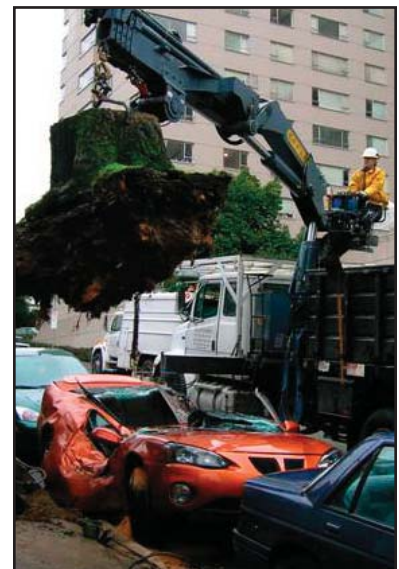
Heritage Tree Program: The Heritage Tree program seeks particularly to protect old and significant trees. In 2009, 12 trees were recommended for Heritage Tree status and approved by City Council.

Invasive Weed Removal

Protect the Best: Portland Parks & Recreation's *Protect the Best* program is designed to prevent small patches of invasive, non-native species from spreading in ecologically healthy natural areas. In FY2009-2010, 780 acres were treated and 500 acres were retreated. Approximately 4500 individual invasive trees (>3" DBH) were removed in FY 2008-2009 and FY 2009-2010. The majority of non-native species removed were English holly, European hawthorn, and cherry.

Watershed Revegetation Program: The Bureau of Environmental Services' Watershed Revegetation Program (WRP) works on over 1,500 acres of public and private property throughout Portland. WRP removes invasive vegetation as part of site management. Over 30,000 trees were planted on 70 acres in both natural areas and stormwater management facilities in 2009.

Wildfire Risk Reduction Project: PP&R, Fire & Rescue, and BES are in the midst of a multi-year project funded by the Federal Emergency Management Agency and Oregon's Office of Emergency Management to reduce the potential for significant wildfires in Oaks Bottom, the Willamette Bluffs, Powell Butte, and Forest Park. Site specific action plans and on-the-ground work are being completed to reduce flammable vegetation, remove invasive weeds, and plant native plants.



PP&R Urban Forestry is the first responder for all tree-related emergencies within the City, providing response around the clock.

FIVE AND TEN YEAR ACTIONS

Of the five and ten year actions, work has begun on approximately one-third of the items. However, most of these five and ten year actions are “big ticket” items that will require strategic planning, and most importantly, allocation of significant funds to complete. In some cases, due to recent budget restrictions, progress has halted. For example, augmenting leaf removal and composting capacity was reduced in 2009, rather than improved. Likewise, plans to enhance compliance with construction-related tree protection, upgrading city-owned parking lots by planting trees, and increasing canopied areas around open recreation spaces in developed parks are all on hold.

In 2010 the UFAP Implementation Team will revisit the all 63 action items for priority, and make recommendations for moving forward.

PERFORMANCE MEASURES

The UFAP Performance Measures Taskforce began meeting in 2007 to establish a set of performance measures for the *Urban Forest Action Plan* to measure progress in meeting the goals and objectives of the plan. This report contains the first compiled set of performance measures, using credible existing data. The taskforce will continue to work to establish targets, reporting frequency, and provide review of performance measures.

TABLE 2: BASELINE MEASUREMENTS AND INDICATORS OF PROGRESS IN ACHIEVING UFAP GOALS FOR FY2004-2005 THROUGH FY2008-2009

PROTECT, PRESERVE, RESTORE, AND EXPAND PORTLAND'S URBAN FOREST					
	FY04-05	FY05-06	FY06-07	FY07-08	FY08-09
Urban forest canopy cover* % of total city	-	-	26%	-	-
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
DEVELOP AND MAINTAIN SUPPORT FOR THE URBAN FOREST					
Volunteer hours, Friends of Trees	14,094	13,260	19,520	17,860	17,003
Neighborhood Tree Liaisons trained	33	25	16	0	0
Website visits, PP&R Urban Forestry	-	-	18,040	32,440	46,959
Arboreta developed at Portland schools (total trees planted)	1 (12)	3 (116)	3 (104)	2 (54)	5 (185)
Total funding from grants in PP&R Urban Forestry budget	\$4,623	\$2,243	\$16,944	\$21,702	\$74,804
Total budget, PP&R Urban Forestry	\$2.37M	\$2.00M	\$2.24M	\$2.52M	\$2.42M
MANAGE THE URBAN FOREST TO MAXIMIZE COMMUNITY BENEFITS FOR ALL					
Trees planted in low income and low canopy neighborhoods by FOT	616	615	739	962	1510
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 is baseline data using imagery for year 2002, but was reported in FY2006-2007

**Carbon sequestration, air pollutants, and stormwater retained is baseline data derived from 2002 conditions and reported in FY2006-2007

DATA SOURCES FOR PERFORMANCES MEASURES

Urban forest canopy cover: Portland's Urban Forestry Canopy Report (2007) derived canopy coverage from a 2002 multispectral image with one-meter resolution.

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.portlandonline.com/parks/trees) tracks total visits.

Arboreta developed: City Nature's Environmental Education program creates Learning Landscapes at willing partner schools in the City. Arboretums developed involve planting multiple trees, creating volunteer network for establishment care, and working with teachers to use the arboreta in classrooms.

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 Portland Parks and Recreation's Urban Forestry division.

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 HUD (2003).

Carbon sequestration, air pollutants removed, and stormwater retained: *Portland's Urban Forestry Canopy Report (2007)* used CITYgreen software to calculate the environmental benefits provided by trees based upon classified 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

Bureau of Development Services Funding

In 2009, the Bureau of Development Services underwent major budget cuts that resulting in the layoff of 150 employees, ending of interagency agreements, and many programs being put on hold. Because the BDS budget is tied to fees paid by developers and homeowners, the situation will not improve until the general economy recovers and construction activities are on the rise. Urban forestry activities were greatly impacted, as BDS coordinates private tree issues in building and land-use permit situations. A pilot Zoning Inspection Program, aimed at providing improved inspections for tree preservation during development, was put on hold. Preserving trees and mitigating for tree loss during development activities is necessary to prevent canopy loss, and is a key component of a successful urban forest management strategy. Without adequate funding, however, BDS is unable to track the number of trees removed during development activities, thus it is difficult to say with certainty the impacts on the greater canopy.

Citywide Tree Project: Policy and Program Decisions Ahead

The Citywide Tree Project is nearing its completion date after more than two years in process. The proposal is a comprehensive package that addresses tree related activities in development and non-development situations. The community has a lot at stake in this proposal and the City Council has big decisions ahead regarding proposed changes to city programs and associated costs. One key decision relates to where and how the City requires permits for removing trees on private property, and whether or not to retain existing exemptions for tree removal on single family property. Other elements of the proposal relate to how trees are addressed during land use reviews and building permits. Also proposed is development of a Community Tree Manual, a single point of contact for public inquiry and a 24-hour Tree Hotline Pilot Project. Given the comprehensive nature of the proposal it will be challenging to ensure a broad public understanding of the issues and implications. It is also critical that decisions be accompanied with sufficient resources for implementation.

Inventory

Of major concern is the lack of a comprehensive inventory of City-owned trees in rights-of-way and developed parks. A full inventory has never been completed, due to its prohibitive cost. Managing an

estimated 250,000 street trees is already a challenge, and not knowing specifics about the trees, their condition, and stocking levels further confounds the issue. In the long term, an inventory will make the most effective use of limited budgets and resources. Completing a public tree inventory has become a chicken and egg scenario: funding is needed to conduct and maintain the inventory, yet the inventory is needed to justify funding.

Benefits of maintaining an inventory include:

- Strategic planning, budgeting, and management decisions are informed by real data.
- Street tree stocking goals can be set, planting plans established, and appropriate species recommended.
- Well planned removals and replacements of declining trees can be scheduled over time to prevent large scale losses due to storm events or failure.
- Staff can work with property owners to plan for maintenance costs. Mature tree care is often delayed due to cost and lack of understanding of needs.
- Forest managers move towards proactive response rather than reactive.
- Stewardship activities and outreach can be focused on actual needs of the local community.

Maintenance of Street Trees

To maximize benefits provided by street trees and minimize associated costs and hazards, trees require proper maintenance and preservation. A key recommendation of the UFAP is to fund and provide adequate staff and resources to maintain, preserve, restore, and increase the health, function, and size of the urban forest. The 2009 Davey Report provided some baseline cost estimates if the City were to assume all maintenance of Portland's street trees, and while this is unlikely at this time, it is worthwhile to define what the baseline maintenance needs of the urban forest are.

The 2007 *Portland's Urban Forest Canopy* report confirms that maintenance is a good investment: for every dollar invested in trees, over three dollars in benefits are returned. Yet funding for maintenance and preservation is very limited, and costs for street trees are assumed by the adjacent property owner. Most tree funding occurs at the beginning and end of a tree's life: first for planting and establishment, and then for removal due to failure. Maintaining existing trees is a more effective strategy for ensuring stable canopy and ecosystem



Removal of a hazardous tree.

services. When a mature tree is removed and replanted it takes many years before the replacement provides the same level of services as its predecessor. Determining minimum maintenance and preservation needs for existing trees, and conducting a cost-benefit analysis, would allow for more effective use of limited resources.

KEY OPPORTUNITIES

A Future for the Capitalization of Trees

As the urban forest gains recognition as being necessary city infrastructure, a shift in thinking about how trees are managed and accounted for is necessary. Trees are being utilized as infrastructure: providing measurable benefits for stormwater retention, clean air, and other functions, yet, they are continually undervalued and undermaintained. Traditional funding sources for trees are insufficient to provide needed maintenance and maintain stocking levels.

Reporting street trees as capital assets would provide access to new funding, as capital assets may be financed with capital improvement funds, capital grants, and debt or bond proceeds. As capital assets, the status of trees is elevated in importance, raising awareness of their true value. Trees reasonably meet capital asset criteria: they are used in operations with persistent benefits beyond one reporting period. Yet trees do not fit the traditional capital asset model, particularly as traditional assets depreciate over time, and trees appreciate over time. Challenges to capitalizing trees include accounting principles, ownership and control of trees, tracking and inventory, and measuring benefits.

The discussion around accounting for trees as capital assets has gone on for years, with no local examples of successes. However, in 2009 Metro awarded Friends of Trees the largest capital grant in its history to plant 1,300 native trees and 16,000 native shrubs along Interstate 205 between the Columbia River and Gladstone. Partnering in the three-year, \$415,436 grant is the Oregon Department of Transportation, which owns and maintains the land. Trees planted will be considered capital assets, but only at their value at time of planting, which still leaves the asset heavily undervalued. This early success story represents a shift towards recognizing trees as capital assets, but more momentum is needed to help include trees, at their full value, as part of the City's capital infrastructure.

Connecting with the Portland Plan

The Portland Plan, the City's strategic plan for the next 25 years, is being updated. Sustainability and the Environment is one of the nine action areas of the plan, and many other critical issues relate to urban forestry. The Plan will establish strategic policy directions for growth management, sustainability, and other areas that directly affect the urban forest. A valuable opportunity exists to work with the Portland Plan to give priority to urban forest issues.

Partnerships in Public Health

Well managed urban forests provide critical environmental services that can improve public health, yet there are currently few partnerships with public health officials. Green environments are positively linked with improving many health concerns including active transportation, obesity rates, air quality, asthma, ADHD, stress, urban heat island effects, and worker productivity. Opportunity exists to partner with agencies and organizations working toward health related issues.

Federal Stimulus Funding

Green initiatives were heavily funded through the federal stimulus package. Stimulus money may provide future funding for urban forest projects, such as tree planting projects, deferred maintenance, and projects in partnerships with transportation agencies. Such was the case in 2009 with the Youth Conservation Corps, who provided 1400 hours of urban forestry maintenance. Potential projects should be developed to the "shovel-ready" stage should funding become available.



Youth Conservation Corp members replacing dead trees alongside volunteers, thanks to stimulus package funding. Few projects are more "shovel ready" than planting trees!

Capacity is Built: What Next?

Large investments in planting and invasive species management are being made through many multi-bureau projects. Now is the time to plan to determine what baseline maintenance these projects will need, and how additional work will be funded. Benefits from these urban forest projects are meant to be long term, but without early planning investments may be lost.

CONCLUSIONS

The City of Portland has made significant progress in meeting urban forestry goals. 2009 was a time to celebrate successes, and give thanks to our many partners: non-profits, government agencies, and most importantly, our citizens. In many ways, progress has been easy due to these partnerships, a growing environmental ethic, and the popularity of the green movement.

Often the initial stages of building an urban forestry program are the most exciting and easiest to sell - showy tree planting projects are enjoyable for everyone. It is the steps and projects following planting that are more difficult, less visible, and harder to engage the public in. Inventory, maintenance, and code revision are not as exciting and feel-good as tree planting, but they are as important, if not more. Success in managing the behind-the-scenes work reveals the true character of a city's commitment to a healthy urban ecosystem.

Now is the time to refocus on the end goals, and determine what resources and partnerships are needed to make progress towards remaining action items.