



**City of Grants Pass
Urban Forestry Plan
for the City of Grants Pass and Urbanizing Area**

**Technical Memorandum #5:
Review of Examples From Other Communities,
Best Practices, and Technical Resources**



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Introduction

This is fifth in a series of eleven Technical Memoranda that will comprise the Urban Forestry Plan for the City of Grants Pass and the Urbanizing Area. It summarizes available literature with recommended best practices and approaches for urban forestry planning. It also provides samples of plans and programs of other communities and organizations as examples of best practices put into action that can serve as models and provide guidance for the Grants Pass Urban Forestry Plan.

Purpose

Staff has reviewed a variety of documents, research, and plans. The best examples of the various types of plans and programs are described in this memo. This document is intended to provide the advisory bodies and decision-makers with information about best practices which can serve as a model for the Grants Pass urban forestry plan. Many of the documents represent various components of a plan and its implementing elements, so some attributes of each plan can be used together in one cohesive action plan. Other plans present different approaches to urban forestry planning, and there may be more than one desirable approach, and it will be necessary to decide which will be the best approach or approaches for Grants Pass. This memo presents information to help advisors and decision-makers with those decisions.

The memo provides an opportunity for members of the Urban Forestry Advisory Committee to provide further input regarding plans and programs that they are familiar with, which they recommend should be included as models. This document is intended to help identify pros and cons of the different approaches, and where possible, identify what the communities and organizations have learned from experience with the various models, both successes and failures, which would be useful to Grants Pass in developing a plan.

Executive Summary

Defining Urban Forestry Plans

A review of the literature revealed two prominent meanings of the term “urban forestry plan” or “urban forestry management plan.”

1. In the first case, the term refers to what would be considered a public street tree operations and maintenance plan. This usually involves an assessment of street tree health and development of a regular maintenance cycle for street trees. Some of these plans also include other public trees, mainly trees in public parks.

In some cases, this type of plan also includes identification of street tree age and species, and the plan will assess needs to plant trees to provide for species and age diversity of the public trees.

2. In the second case, an urban forestry plan is something substantially more comprehensive. This type of plan considers opportunities throughout the planning area, for both public and private properties, to use a variety of methods to achieve a variety of benefits that can be realized through tree retention, reforestation, and establishment of trees that comprise the urban forest.

Statistical Information

Much of the statistical information that was originally intended to be included in this plan was already provided to some degree in the Technical Memo #1, which identified benefits and functions of the urban forest. However, the Center for Urban Forest Research document summarized in this memo quantifies those benefits for individual trees based on size and species. Additional statistical information about specific functions performed by the urban forest in Grants Pass will require an inventory and analysis.

Urban Forestry Plans, Manuals, and Programs Summarized in this Memo

The documents summarized in this memo include different plans, programs and ordinances that fit into different aspects of an overall urban forestry plan.

Some of the documents described below are not plans, but are rather manuals or guidelines prepared to help communities develop urban forestry plans or achieve urban forestry goals. Others represent different types of plans or planning documents. A comprehensive plan may identify general goals and policies related to urban forestry, while an action plan describes specific steps to be taken to implement the policy. Other plans may be used as management tools by public agencies for management of publicly-owned trees. Some of the documents, such as tree guides, may be regulatory and may also help owners understand the different characteristics, needs, and issues associated with different species in order to help them with choices and decisions. This memo also includes some ordinances from various communities; although the research for this memo did not include a comprehensive review of ordinances. Other documents included or referenced are examples of voluntary, incentive, or educational programs, either from communities or nonprofit organizations.

A review of literature indicates that many cities, metropolitan areas, and regions are following some variation of the planning practices presented by *American Forests* and described in the Urban Watershed Forestry Manual published by the US Forest Service. This approach recommends communities set targets for percentage of tree canopy to be achieved within a specified timeframe. One benefit of this approach is that it provides a quantifiable measure that can be monitored over time. The Urban Watershed Forestry Manual is a comprehensive three-part document that describes a step-by-step approach for this type of planning.

The Urban Watershed Forestry Manual is included in this review, providing the most detailed guide. This memo includes examples of this planning approach, such as the plan for Roanoke, Virginia. There are also examples of street tree master plans, such as the plan for Olympia, Washington, which sets targets for planting in areas available for street trees, but it does not address planting private properties. Documents from Pacific Power and the City of Ashland are good examples of tree selection guides because they are informative and provide a wide array of alternatives for homeowners and customers. Finally, successful nonprofit programs are summarized, such as the very successful Tree City USA Program of the National Arbor Day Foundation, in which Grants Pass participates.

Technical Memo #3 summarizes grant programs that are available, so those are not repeated in this memo.

There may also be some types of programs of interest to Grants Pass that are not specifically described in detail in this document. One example is a Heritage Tree program. This idea is mentioned in Technical Memo #4. Any other types of programs that have not been identified can also be mentioned in that document. It may be necessary to find good models for those programs if they have not been included in this memo.

Summary of Plans, Manual, and Programs

Below is a summary of plans from selected cities from across the country that represents a good cross-section of plan types. These run the gamut from simple municipal tree planting guides, such as those in place in Lincoln, Nebraska to more comprehensive tree canopy cover plans like Roanoke, Virginia. Ashland, Oregon utilizes a street tree guide with sketches and planting requirements for easy reference. Olympia, Washington utilizes trees and the cover they create as a place-maker. Salem, Oregon uses trees to meet environmental requirements of the federal government and purify stormwater runoff. The United States Department of Agriculture has guidelines for utilizing trees for watershed management that is a very useful starting point for an urban forestry plan. Roanoke and Salem were reviewed, in part, because of their success with American Forests' CITYgreen software. Ashland, Eugene, and Olympia were reviewed because of their perceived "green" attitudes and because they could be seen as good comparison cities in the Pacific Northwest. Lincoln was looked at because it includes implementing elements that utilize a security deposit that requires the establishment of street trees before security is released. The USDA Forest Service manual was examined because of

There is no one best practice in these plans; rather each plan reflects the basic objectives that each community seeks to achieve. For the purposes of the *City of Grants Pass Urban Forestry Plan*, each plan or ordinance reviewed represents possible models to address certain issues. Each of the plans reviewed addresses one or more issues likely to be important to Grants Pass. That said, it is possible to find guidance for creating a plan by following the recommendations in documents such as the Forest Service document or the National Arbor Day Foundation document. Other details, such as species lists, best planting practices, and maintenance programs, can be gleaned from the other plans that have been reviewed once overall policy direction has been decided.

Principle Scope and Type of Various Plans

Type of Plan	Eugene, Oregon	Olympia, Washington	Ashland, Oregon	Lincoln, Nebraska	Roanoke, Virginia	Salem, Oregon
Street Tree		X	X	X		
Management	X			X		X
Comprehensive					X	

The above matrix is to illustrate the focus for each reviewed plan. For the purposes of this document, each plan can roughly be categorized based on the plan’s attributes. Street tree plans deal, primarily, with city ordinances and how they relate to trees in public rights of way or other public spaces. Management plans are tools to ensure that trees are not adversely impacted by development. They also often have aspects that mandate some sort of maintenance schedule to ensure the health and safety of city trees. Comprehensive plans are those that recognize the inherent value of trees and seek to promote a culture that values trees for their own intrinsic value.

Eugene, Oregon

In December, 1992, the City of Eugene adopted their *Urban Forest Management Plan* to guide the city of Eugene in its actions and decisions affecting trees within the city limits.

“The Urban Forest Management Plan provides direction to develop regulations and incentives to manage tree-related issues in a proactive manner. The plan addresses trees on both public and private property. It also discusses planting, maintenance, and removal of trees along streets and other public properties, such as parks and riparian areas and the addition of trees on private property; and the preservation and maintenance of heritage trees on all properties.”

The plan is primarily a management plan; that is, its main goal is to guide the city in the way its policies affect trees. The plan contains three elements: tree selection, heritage trees, and education, and each element is analyzed by goals, findings, policies, and proposed actions. Once goals have been set, policies and proposed actions are used to

guide city government to adopt ordinances, programs, and incentives to achieve those goals. **This plan is particularly strong covering trees on private property.**

Olympia, Washington

The City of Olympia set out to create a ten-year *Master Street Tree Plan* to guide the city's actions in the years between 2001 and 2011. This, which is a type of management plan, sets targets for increasing the number of street trees in available planting locations. It doesn't address trees on private property. It also sets to quantify trees in a fashion similar to how one may quantify traffic counts or stormwater runoff: by creating a Level of Service (LOS) threshold that the city must meet and maintain. The goals included in the plan are:

- Creation of healthier and safer streets by the removal of hazardous trees
- Beautification of Olympia
- Integrate natural beauty with the built environment
- Increase property values
- Increase civic pride

To achieve these ends, the Plan inventories the existing conditions of the City's street trees, broken down by sub-areas and arterials; street tree design consideration, thorough landscape design, streetscape design, and planting locations; and street tree management programs. **This plan's strength is in streetscape design standards and in quantifying the value of the city's street trees.**

Ashland, Oregon

Ashland, like Grants Pass, has a list of recommended street trees that may be planted in city Rights of Way. Unlike the current list used in Grants Pass, which doesn't specify a wide variety of species, Ashland has a very inclusive list of trees. The City of Ashland has both a heritage tree program, a yearly award for "Tree of the Year," and an intensive list of street trees. Their very detailed *Recommended Street Tree Guide*, which has an over-reaching goal to attain arboreal diversity, encourages the planters of trees to consider the constraints of the site to help guide the selection of the proper tree as well as any aesthetic considerations the planter may have. Lists of recommended street trees are rather exhaustive, and are sorted by size of parkrow that is provided in the street section. Finally, each recommended street tree has an information page that shows its height in relation to a telephone pole, a sketch of its shape, its leaf type, and drought tolerance. Many of the listed trees have an example specimen location somewhere in the city of Ashland. **The strength of Ashland's guide is that it is clear, informative, and easy to understand.**

Lincoln, Nebraska

The city of Lincoln, Nebraska is the original home of Arbor Day founder J. Sterling Morton. As he moved west, he was disappointed to see the lack of trees on the Nebraska prairie and felt that the state of Nebraska could benefit from large-scale tree plantings. Leading by example, Morton planted orchards and shade trees on his farm in Nebraska City. Following Morton's lead, Arbor Day was first celebrated in 1872, when more than a million trees were planted in Nebraska.

Codified in Lincoln's Municipal Code is the mandate that the Director of Parks and Recreation prepare and maintain a *Master Street Tree Plan* showing how trees are to be planted on city properties and along rights of way. To that end, the city has adopted "Design Standards for Street Trees," which is a management plan, that lists species requirements as well as spacing, planting standards, and arborous health indicators for newly planted trees and tree stock. One requirement for consideration of street tree design standards is the approval of a detailed street tree plan for each subdivision, with lists of each tree and its location. Part of approval of the plan is payment of a street tree surety bond that is releasable only after one year's time as to ensure that all specimens of tree have survived. Should the trees not survive the first season, they must be replanted at developer's expense. Grants Pass regulations, on the other hand, require a deposit be paid that is released once required landscaping is installed; however, in residential areas, no provisions are in place to ensure that required plantings survive. In special cases where the street improvements are deferred, a cash deposit is required for future installation of trees once the street is improved. **The strength of Lincoln's ordinance is that it requires a master street tree plan for each new subdivision and requires that plantings survive.**

Roanoke, Virginia

1. The plan for Roanoke, Virginia is an example of the type of planning described in the Urban Watershed Forestry Manual published by the US Forest Service. It includes an action plan that addresses tree canopy goal, tree planting on public land, public tree management, and trees on private land. The plan includes recommendations and implementing elements designed to achieve the objectives of the action plan. There are six key recommendations of the plan:
 - a. Long-Term Goal of 40% Tree Canopy
 - b. Reverse net loss of public (City-owned) trees
 - c. Greening of non-residential corridors and gateways
 - d. Street tree-planting program in residential neighborhoods
 - e. Encourage planting of trees by citizens in their yards
 - f. Improve tree management

The City of Roanoke started with a tree canopy analysis using American Forests' CITYGreen software, and found that there was an average of 32% canopy cover, which is

below the 40% recommendation of American Forests. To rectify this situation, the city integrated into its *Vision 2001-2020* comprehensive plan policies designed to create more tree canopy cover. In fact, tree canopy cover received its own section in the comprehensive plan with *Urban Forestry Plan: An element of the vision plan* that contains major recommendations and ways to implement the plan. Furthermore, as a way to lend credibility to the public planning process, the city maintains and updates a implementation report to show timelines for proposed policy adoption as well as any other implementation tools that the city has used to achieve their goals. **Roanoke's strength is that their plan is all-inclusive and contained within the comprehensive plan for the city.**

Salem, Oregon

Salem also took advantage of American Forests' CITYGreen software to help develop a plan to use trees and riparian vegetation to protect the Willamette watershed under the federal Endangered Species Act and the Clean Water Act. City code also protects heritage and significant trees from removal, restrict the amount of trees removed on any lots greater than 20,000 square feet, requires tree conservation plans for any development proposal, requires a minimum of trees per lot based on square feet, and makes provisions for the establishment of a tree canopy preservation fund.

The Willamette Greenway ordinance recognizes the role trees play in the water quality of the Willamette watershed. To this end, the ordinance requires extra setback from the river as well as planting of native plants. The ordinance also recognizes the role trees play in the overall water quality of the watershed. To achieve the goal of better water quality, all parking lots in the watershed must have a 50% tree canopy cover within 15 years after the lot has been established. This is required so that rainwater is intercepted and filtered and to provide relief from the heat island effect that warms stormwater before it reaches the Willamette. **Salem is particularly strong in recognizing that trees affect both city heat island effects and water quality in a watershed.**

Pacific Power & Light

Utility companies have a vested interest in both the placement and species of trees planted not only in public rights-of-way, but also on private property. Overhead and underground power, cable, telephone, gas, and fiber optics can all be complicated by tree growth if branches are not trimmed, or if roots are invasive. To help facilitate preventative protective measurements, PP & L spends millions of dollars annually to prune and remove trees that interfere with power transmission. They also maintain a list of preferred tree species that are appropriate to plant near power lines. **PP&L, while a private organization, realizes that some trees have their place while others have more appropriate locations.**

Other Utilities

Franchise agreements with the City allow for the cable company to trim trees on city property that interfere with cable television transmission. Any work must be done with city approval and is subject to applicable tree ordinances. The franchise agreement with the telephone company does not include provisions similar to these provided in the cable franchise agreement.

American Forests

Founded in 1875 to protest the waste and abuse of America's forests, American Forests is the oldest non-profit conservation organization in the country. American Forests is a non-profit organization that envisions having healthy forest ecosystems for every community in the country. To achieve that goal, American Forests has set benchmarks for tree canopy covers that each community should strive to achieve. Based on geographic area of the country, American Forests set a reasonable goal that cities ought to be able to achieve. In the Pacific Northwest, for example, cities could theoretically have an 80% overall tree canopy cover; it seems reasonable, then, to assume that a 40% cover should be attainable without much change in policy of land-use. It should be recognized that each community is different, and that, in turn, causes each community to evaluate and select alternatives that best fit their character. **American Forests, as the oldest conservation organization in the country, can be vital for support, information, and consulting, for the writing of an Urban Forestry Plan.**

Center for Urban Forest Research

The Pacific Southwest Research Station of the USDA Forest Service published *Western Washington and Oregon Community Tree Guide: Benefits, Costs, and Strategic Planting* in 2002. This publication explores the true costs and benefits of an urban tree canopy and determines that there is indeed a monetary benefit to having canopy cover. To achieve a better synergy between people and trees, this publication outlines best tree maintenance as well as planting practices. There is also a tree selection list for species that grow well in the western Oregon and Washington region; however it is important to note that Grants Pass is not in this region, so these species may not flourish as well in the Rogue Valley as they would, say, in the Willamette Valley. **This instructional manual, while not precisely designed for the Rogue Valley, contain enough conceptual practices that it can be applied to an Urban Forestry Plan for Grants Pass.**

National Arbor Day Foundation

In *Urban and Community Forestry: A Practical Guide to Sustainability*, the National Arbor Day Foundation (NADF) reviews critical steps needed to prepare a viable urban



forestry plan. The most important aspect, according to this publication, is ensuring that any plan adopted is a collaborative effort between elected officials, city support staff, volunteer organizations, and community stakeholders. Secondly, NADF presents the case that there are best practices that must be followed to create a plan with attainable goals. These include an inventory of existing conditions, a vision of desired outcome, then creating a plan to attain these outcomes. **This manual could be instrumental in formulating a framework for an Urban Forestry Plan for Grants Pass when used in conjunction with the USDA publication reviewed above.**

United States Department of Agriculture (USDA) Forest Service

This agency manages 193 million acres of public lands in national forests and grasslands and is the largest forestry research organization in the world and the national and international leader in forest conservation. The Forest Service is focused on minimizing threats of growing fire danger due to hazardous fuel buildups; the spread of invasive species; loss of open space; and unmanaged recreation, particularly the unmanaged use of off-highway vehicles.



The USDA prepared a three-part manual, entitled Urban Watershed Forestry Manual, with recommended best practices to use trees as protection and enhancement of urban watersheds. The first part outlines methods for increasing forest cover in urban watersheds, how to measure cover, and how to quantify its benefits. The second part illustrates how to incorporate tree cover into developing sites through conservation of existing trees and the planting of new specimens. The third part is an urban tree planting guide that provides technical assistance for planting trees in urban areas. The manuals rely on data collected in cities of the Mid-Atlantic and Northeastern United States; however the implications can just as easily apply to cities of the Pacific Northwest. **The USDA manual, like the City of Salem plan, recognizes the integral role trees play in the providing multiple functions and benefits, with emphasis on quality of water in a watershed. The manual provides a useful step-by-step guide for communities.**

American Rivers

In July 2001, American Rivers forged a partnership with the National Oceanic and Atmospheric Administration's Community-based Restoration Program that will provide financial and technical assistance for dam removal and fish passage projects in the Northeast, Mid-Atlantic and California. Since the Spring of 2005, they have also made funding available to the Northwest with an emphasis on projects in the interior of Oregon, Washington, and Idaho. (Northeast- ME, VT, NH, MA, RI, CT, & NY; Mid-Atlantic- PA, NJ, DE, MD, DC, VA; Northwest- OR, WA, & ID)

Over the first three years of the partnership, about \$1.4 million has been provided for community-driven dam removals and fish passage projects that restore habitat of anadromous (migratory) fish such as alewife, American shad, coho salmon, and

steelhead, all of which spend their adult lives in salt water before returning up rivers to spawn.

Entering the fourth year of the partnership, the National Oceanic and Atmospheric Administration (NOAA) awarded American Rivers with more than \$330,000 to distribute for river restoration projects in the Northeast, Mid-Atlantic, Northwest and California. NOAA, an agency of the Commerce Department, and American Rivers will jointly evaluate proposals and disperse this money as grants to implement fish passage, selective dam removal, and other associated habitat restoration projects that benefit anadromous and marine resources. The average grant will fall within the range of \$5,000 to \$25,000.

These grants are designed to provide support for local communities that are utilizing dam removal or fish passage to restore and protect the ecological integrity of their rivers and improve freshwater habitats important to migratory (anadromous) fish.

There may be opportunities to explore eligibility of forestry-related habitat restoration.