

Salem Tree Report: 2018 Summary of Tree Projects

CITY OF *Salem*
AT YOUR SERVICE
Public Works Department
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1 THE URBAN TREE CANOPY

Benefits of Trees

Trees make cities more livable, improve business, and encourage people to walk and get outside. Extensive research has been done over the last decade on the multiple economic, environmental, and social benefits that trees provide. Some of these benefits can be quantified, even monetarily, such as stormwater reduction, air quality promotion, and carbon sequestration that helps reduce greenhouse gases. Trees also help reduce the urban heat island effect by providing shade and reducing temperatures. They provide “green infrastructure” that grows and increases in value over time.

Trees also provide less tangible but equally important benefits, such as natural beauty, a sense of place and identity, increased social interaction, and reduced crime. Healthy cities have healthy tree canopies.

Significant Trees and Heritage Trees

White oaks, although reduced in population over the years because of development, are still found in the area. The native white oak is, to this day, a signature tree of Salem and has a special place in Salem’s history. Larger diameter (24-inch or greater diameter at breast height) Oregon white oaks are classified as “significant trees” and are given special protection under Salem’s Tree and Vegetation Preservation Code (Salem Revised Code Chapter 808), which is administered by Community Development Department. In addition to white oaks, other trees located along riparian areas (streamside areas) are also protected under this code.

Trees can be designated as “heritage trees” under SRC Chapter 808. Heritage trees must be nominated by the property owner and approved by resolution of the City Council. Heritage trees are so rec-

ognized due to their location, size, age, botanical interest, commemorative planting, or historic significance. Once designated, heritage trees receive protection under SRC 808.

Strategic Plan

In 2013, Council adopted the Community Forestry Strategic Plan. This plan provides specific goals and actions to protect and increase Salem's urban tree canopy. The six goals of the Strategic Plan are:

Goal 1: Protect, increase, and enhance Salem's tree canopy;

Goal 2: Increase education and outreach about tree benefits, community forestry program, tree regulations, and incentives;

Goal 3: Develop support at political, management and public levels;

Goal 4: Improve City coordination, communication, and codes related to trees;

Goal 5: Develop and implement a Community Forestry Management Plan; and

Goal 6: Establish a stable funding for the Community Forestry Program.

The Strategic Plan sets a goal of 23% canopy and focuses tree planting efforts on City properties and low canopy neighborhoods. Public Works measures the urban tree canopy every 10 years to monitor and track change over time. In 2010 Salem had 18.3 percent canopy.

See the [Community Forestry Strategic Plan](#) for additional information.

2018 Program Participation



Figure 1: Street trees provide many aesthetic benefits.

Salem has a variety of programs and initiatives that help to promote and enhance our urban tree canopy. Initiatives like "Tree City USA" and "Cities4Forests" connect Salem with national and international municipalities and experts.

Our Urban Forestry program within the Parks Operations Division maintains, removes, and plants trees along our city

streets, in public parks, and in other City properties. Contracts and partnerships with nonprofits and contractors such as “Friends of Trees” and “Treecology” expand our planting capacity while also providing outreach, education, and volunteer opportunities.

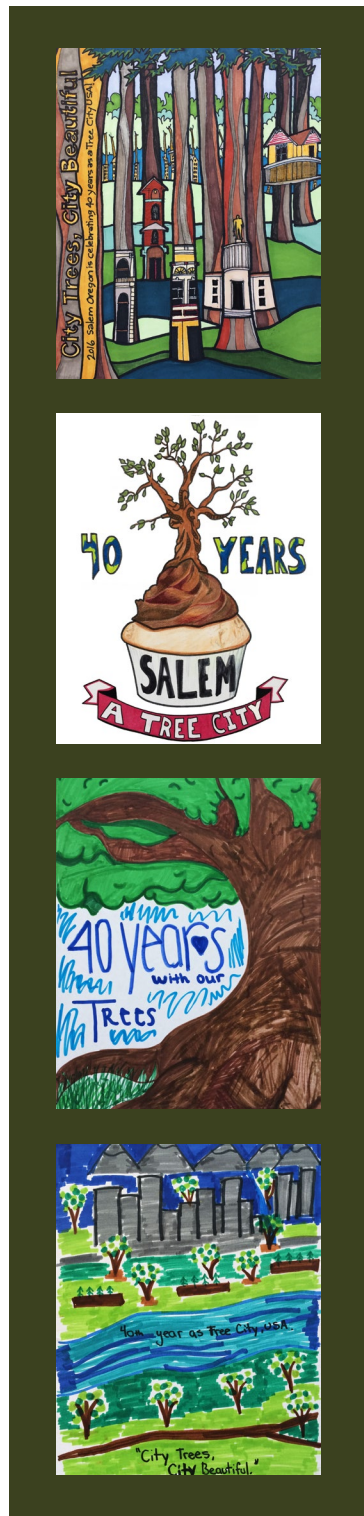


Figure 2: Winners of 2016 Tree City poster contest.

Tree City USA

The City of Salem has been a Tree City USA for 42 years. Tree City USA is a program from the Arbor Day Foundation that began in 1976. The program recognizes and guides achievement in four core standards of sound urban forestry management: 1) maintaining a tree advisory board; 2) having a community tree ordinance; 3) spending at least \$2 per capita on urban forestry; and 4) celebrating Arbor Day and having an Arbor Day Proclamation.

The City of Salem is proud to be one of only 17 cities in the country to have been a charter participant in the Tree City USA program and in 2018 celebrated 42 consecutive years of participation. In 2015 Salem became a “Sterling City,” having received 10 Arbor Day Foundation “Growth Awards” in recognition of innovative and/or increased program participation.

Arbor Day in the US was started in Nebraska in 1872 “to inspire people to plant, nurture, and celebrate trees.” Each year, Salem hosts an Arbor Day tree planting event for community volunteers that improves Salem’s urban tree canopy. In recent years, the Arbor Day planting event has been coordinated by Friends of Trees, an Oregon-based nonprofit that coordinates volunteer tree planting events. The 2018 Arbor Day planting was at Weathers Park and involved 84 volunteers.

Cities4Forests

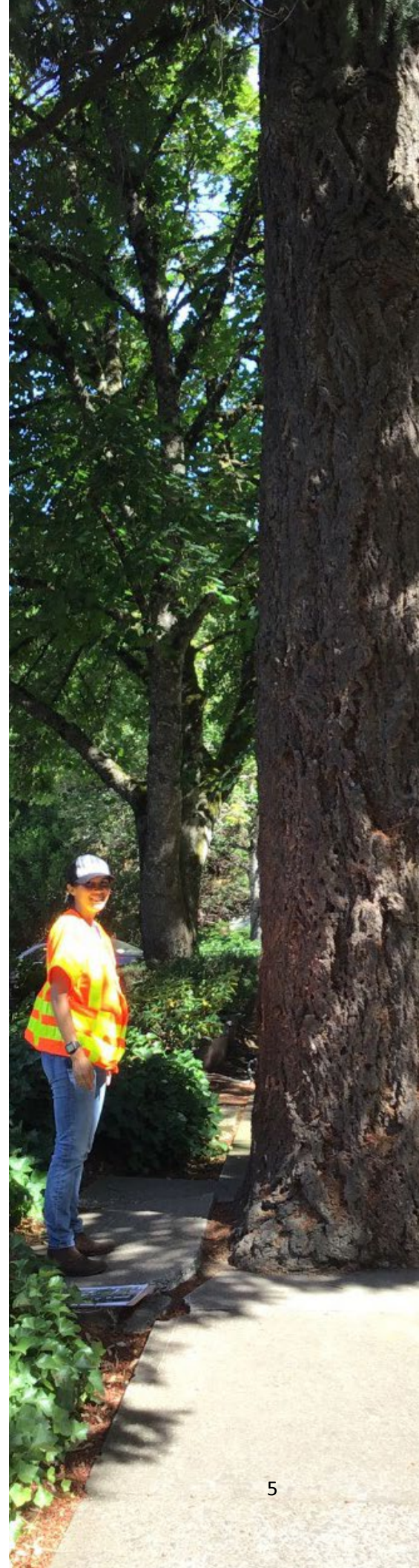
In 2018, the City of Salem signed on as a founding member to Cities4Forests, a new initiative that focuses on the value and benefits of trees in cities and forests across the globe. It is an international effort spearheaded by the World Resources Institute. It

aims to cultivate awareness and stimulate action on the part of urban residents to recognize the importance of trees and forests to human well-being. In urban areas, the “inner forest” is a critical component of a healthy city. City trees improve public health, reduce air pollution, protect water quality, store carbon, and help a city become climate resilient. Cities4Forests has a goal of integrating trees into the ways cities develop and grow, and of harnessing the value of trees to meet multiple objectives, such as: improving public health; protecting drinking water supplies; and providing benefits for air quality, water quality, and heat island mitigation.

Membership in the Cities4Forests complements the City’s current urban forestry programs. Cities4Forests is a voluntary coalition involving mayors’ offices from around the world. Salem was among the 50 founding cities, which also included: New York (NY), Philadelphia (PA), Seattle (WA), Portland (OR), Eugene (OR), Salt Lake City (UT), Sacramento (CA) Oakland (CA), Manchester (UK), Oslo (Norway), Rio de Janeiro (Brazil), Bogota (Columbia), Mexico City (Mexico), Johannesburg (South Africa), Amman (Jordan), and Mumbai (India).

2018 Street Tree Sample Inventory

During the summer of 2018, the City of Salem conducted its first street tree inventory. This initial effort was not a full inventory, but rather a 4% sample of the city’s total street segments (250 street segments). The street segments inventoried were randomly selected and are statistically representative of the total street tree population, plus or minus 10 percent. A seasonal employee with experience in tree planting and mapping spent the spring and summer of 2018 collecting information on trees along the selected street segments. The employee used a GPS-enabled tablet to map and assess each tree and upload the information into a database.



The primary objective of the street tree inventory was to gain a more detailed understanding of Salem's urban forest structure. By knowing the location, species, condition, and size of existing street trees, the City can implement more effective practices for planting and maintaining healthy trees in the future. The [Salem Street Trees: Sample Inventory](#) report has a detailed description of the survey process and results.

Key Findings

- Based on the statistical sample inventory, with an accuracy of +/- 10 percent, Salem's estimated street tree population totals 71,502 (+/- 5895) trees.
- The maple family (Aceraceae) represents the most abundant tree type among Salem's street trees. Norway maples (*Acer platanoides*) and red maples (*Acer rubrum*) are the most commonly found species. Salem's high percentage of maples is an area of vulnerability for the city, as it exceeds urban forestry guidelines for maintaining diversity and resilience in the canopy.
- The majority (76%) of street trees were found to be in good or fair condition.
- Smaller, younger trees are underrepresented in the street tree population.
- More than half of Salem's street trees are growing in sites that are not planting strips. These sites include yards, medians, and undeveloped areas without sidewalks.
- The environmental and aesthetic benefits that Salem's street trees provide annually are valued at an estimated \$6,772,170.

Recommendations

The street tree survey has provided a much better understanding of our street tree population and also produced several recommendations for the future.

- Plant more young trees to replace aging population.
- Select more diverse species for new plantings. Avoid maples and deemphasize cherries, pears and ash.
- Plant more evergreen trees to achieve greater environmental benefits from year-round canopy.
- Use location data from survey to identify planting opportunities.
- Expand inventory for greater accuracy. Focus on low canopy areas and

neighborhoods with planting strips.

Future tree plans and policy will be informed as practicable by the information and recommendations gained from the street tree survey.

2 TREE PLANTING AND MAINTENANCE

2018 Overview

Tree planting and maintenance in 2018 was performed by three groups: City Urban Forestry, Friends of Trees, and Treecology.

Trees on City-owned property are managed by the City's Urban Forestry Section staff in the Parks Operations Division of Public Works. To supplement the work of Urban Forestry, Public Works has contracted over the last six years with Friends of Trees, a nonprofit organization, for community tree planting events, primarily in parks. These events have proven to be very popular. In 2018, 660 volunteers helped plant trees in Salem. In addition, Friends of Trees has trained nearly 60 local crew leaders. These individuals receive additional training on tree planting, tree care, and how to conduct volunteer events.

In 2018, Friends of Trees organized tree planting events at Minto Island Conservation Area, Weathers Park, Eola Ridge Park, Cascades Gateway Park, and Judson Middle School/Woodmansee Park.

Recognizing the limitations of working with large groups of volunteers and the need to plant more trees along city streets, Public Works began a new five-year planting contract in 2018 with a private company, Treecology. This contract will plant approximately 150 trees each year in City rights-of-way and provide three years of watering and tree care. This will ensure that the new trees get off to a good start. After the initial three-year establishment period, City Urban Forestry will take over the maintenance of the trees.

Tree maintenance also includes tree trimming and tree removal. Trees are trimmed for health and structure, vision or access clearance, or because of damage. Tree removals occur due to development, damage, risk, or disease.

Urban Forestry

Street trees, trees in parks, and trees on other City-owned properties in Salem are maintained by the Urban Forestry Section in the Parks Operations Division of Public Works. Approximately 90 percent of their work supports City projects or is in response to requests from other public utilities, the

transit district, or the school district. The remaining 10 percent of the work of this group comes from citizen complaints or requests for services.

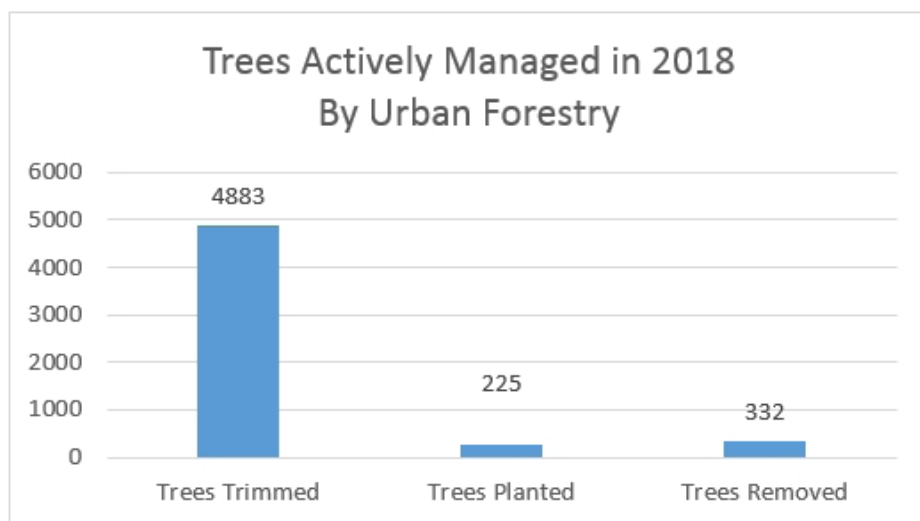


Figure 3: 2018 tree management by Urban Forestry.

Urban Forestry has worked hard to find efficiency and improvement through cooperation with other workgroups and agencies. Wood chips generated from tree removals and trimming are used for landscaping and trails in parks

and save the City around \$15,000 per year in material costs. Large wood from tree removals is collected by Marion County Youth Services and is either cut to serve their firewood for the needy program or milled into salable lumber. This partnership benefits the youth program with free materials and also saves Urban Forestry the burden of dealing with the logs themselves for an additional annual savings of \$15,000.

Figure 3 summarizes Urban Forestry's 2018 work.

Friends of Trees

Six years ago, the City of Salem contracted with Friends of Trees and began working together to enhance the City's urban tree canopy and to restore its stream banks and riparian areas. This important work engages Salem's residents and local volunteer groups who actively participate in planting trees in low tree canopy neighborhoods and along streams with limited shade.

Friends of Trees' mission is to bring people together to plant, care for, and learn about trees in communities across the Pacific Northwest. Urban trees and native vegetation are key elements in creating and maintaining prosperous, healthy, and livable communities.

In 2018, Friends of Trees planted 28 large stock trees in Weathers Park for Arbor Day. Friends of Trees planted an additional 47 large stock trees and 300 trees on public properties in the form of bareroot stock and plugs. Friends of Trees also planted over 7,900 shrubs and small plants.



Figure 4: Tree planting at Weathers Park, 04/07/2018.

This planting work in 2018 involved 1950 volunteer hours. A summary of the 2018 Friends of Trees' events is available in Table 1.

Date	Site	Trees (large stock)	Trees (small stock)	Small Plants	Volunteers	Volunteer Hours
01/27/18	Minto Island Park	0	25	1975	147	386
02/24/18	Minto Island Park	0	50	1950	112	334
03/10/18	Judson Middle School	0	150	1050	62	228
03/24/18	Minto Island Park	0	75	1925	64	242
04/07/18	Weathers Park	28	0	0	84	223
11/10/18	Cascades Gate- way North	30	0	300	97	291
12/08/18	Cascades Gate- way South	17	0	725	94	246
2018 Total		75	300	7925	660	1950

Large stock is a plant in a container larger than 1 gallon.

Small stock is a bareroot tree or in a 1 gallon container or smaller.

Table 1: 2018 Friends of Trees events.



Figure 5: Tree planting volunteers at Cascades Gateway Park, 12/08/2018.

Friends of Trees will continue to work with the City, beginning in early 2019 with plantings in Minto Brown Island Park, Judson Middle School, and an Arbor Day planting at Bill Riegel Park. Planting sites for later in 2019 are being assessed based on a variety of factors including a preference for planting in neighborhoods with low existing tree canopy.

Treecology

In 2018, the City initiated a five-year contract with Treecology to supplement the City's existing tree planting work by providing additional tree plantings. The goal of this contract is to increase our street tree planting capability to increase the overall tree canopy and species diversity of street trees. Treecology is an experienced tree service and restoration contractor that has been performing similar contract tree planting work for the City of Portland. In the first planting season, winter 2018/19, approximately



Figure 6: New grove of trees at intersection of Liberty Street NE and Salem Parkway.

145 trees will be planted across the City. In 2018, 43 trees were planted by Treecology along streets in 2018. This contract has also identified opportunities where large unused right of way spaces are available to plant uncommon and large caliper street tree species. By planting less common tree species we increase the diversity of our street tree population which adds interest and increases resilience for future pests and disease.

Our first planting location was in approximately 1.5 acres of right of way at the intersection of Commercial St, Liberty St, and the Salem Parkway that consisted of large areas of bark dust and turf. We used those areas to plant 33 trees that included Western red cedar, Ponderosa pine, Bald cypress, Incense cedar, and Dawn redwood among a variety of more common street tree species. Over time, this planting has the potential to become a

prominent landmark tree grove at a popular entrance point to Salem and a welcome to this tree city.



Figure 7: New street trees adjacent to State Capitol parking.

Also planted in late 2018 was the right of way surrounding one of the main parking lots for State of Oregon employees adjacent to the Capitol Mall.

Treecology is on contract through 2022 to continue with street and right of way tree planting.

3 SUMMARY

Salem is involved in a variety of projects, programs, and initiatives and is working to achieve the goals of the Community Forestry Strategic Plan. Community outreach and planting events, primarily in partnership with Friends of Trees, spread the message of tree benefits and give an opportunity for the community to be involved with growing the urban forest. Programs like Tree City USA and Cities4Forests provide opportunities for Salem to be recognized for our urban canopy work and to keep informed of innovative urban forestry programs around the world.

The Urban Forestry section works daily to maintain a healthy tree canopy, address safety issues with trees, and respond to weather emergencies that

damage trees. Contracting with experienced arboriculture companies like Treecology expands our tree planting capabilities and allows more street trees to get planted and established. Table 2 summarizes the number of trees planted and removed in 2018.

Salem Public Works will continue to promote tree planting efforts to enhance the City's tree canopy.

	Trees (large stock)	Trees (small stock)	Trees Removed
Urban Forestry	225	0	300
Friends of Trees	75	300	0
Treecology	43	0	0
2018 Total	343	300	300

Table 2: Summary of 2018 tree planting.

