

# Tree Summit 2019





# Agenda

9:00am – 9:10am

## **Welcome**

*Jeff Ramsey, Science and Policy Specialist, PP&R Urban Forestry*

9:15 am – 10:00 am

## **Results from Portland's First Inventory of Neighborhood Park Trees**

*Bryn Davis and Bianca Dolan, PP&R Urban Forestry*

10:05 am – 10:20 am

## **Canaries in the Coal Mine:**

**Studying urban trees reveals climate impacts on native forests**

*Aaron Ramirez, Professor of Biology, Reed College*

10:25 am – 10:40 am

## ***Thuja plicata*, Hakuna Matata?**

**The Mystery of Western Redcedar Decline in the Pacific Northwest**

*Christine Buhl, Forest Entomologist, Oregon Department of Forestry*

10:45 am – 11:00 am

## **Break**

11:00 am – 11:15 am

## **Art and Activism in the Urban Forest: The Tree Emergency Response Team**

*Ashley Meyer, Elisabeth Art Center*

11:15 am – 11:30 am

## **Film Screening: *82<sup>nd</sup> and Verdant***

*Filmmaker James Krzmarzick and Dave Hedberg of the Canopy Stories Film Project*

11:35 am – 11:45 am

## **Bill Naito Community Trees Award Ceremony**

*Jenn Cairo, City Forester, PP&R Urban Forestry*

11:50 am – Noon

## **Growing Portland's Future Forest Together**

*Angie DiSalvo, Science and Outreach Supervisor, PP&R Urban Forestry*

Noon – 1:00pm

## **Lunch and Breakout Session**



*Hamilton Park*





*Alberta Park*



*Alberta Park*

# The Tree Inventory Project







UNDESIRABLE TREES FOR PARK USE

- 1. Silver Maple (*Acer saccharinum*) - Breaks up.
- SAVE — 2. London Plane (*Platanus acerfolia*) - Anthracnose.
- 3. Tulip Poplar (*Liriodendron tulipifera*) - Bacterial Canker.
- 4. American Elm (*Ulmus americana*) - Dutch Elm Disease.
- 5. Siberian Elm (*Ulmus pumila*) - Breaks up and short lived.
- 6. Tree-of Heaven (*Ailanthus altissima*) - Breaks up.
- 7. Red Sunset Red Maple (*Acer rubrum* 'Red Sunset') - Highly susceptible to bacterial canker.
- 8. Box Elder (*Acer negundo*) -
- 9. Lombardy Poplar (*Populus nigra italica*) -
- 10. Red Alder (*Alnus rubra*) - Short lived.
- 11. Oregon Ash (*Fraxinus oregona*) - Dirty Tree.
- 12. Bigleaf Maple (*Acer Macrophyllum*) - Highly susceptible to Verticillium Wilt.
- SAVE — 13. Sweetgum (*Liquidambar styraciflua*) - Breaks up.
- 14. Native Willow (*Salix*) - Highly susceptible to borers.
- SAVE — 15. Sunburst Locust (*Gleditsia tricanthos inermis* 'Sunburst') - Branching habit.
- SAVE — 16. Pin Oak (*Quercus palustris*) - Branching habit.

Overlook Park

No. 72

TREES

<i>Abies grandis</i>	Grand Fir
<i>Acer macrophyllum</i>	Bigleaf Maple
<i>Acer palmatum</i>	Japanese Maple
<i>Acer palmatum</i> BLOODLEAF	Bloodleaf Japanese Maple
<i>Acer platanoides</i>	Norway Maple
<i>Aesculus hippocastanum</i>	Common Horsechestnut
<i>Ailanthus altissima</i>	Treeofheaven Ailanthus
<i>Betula pendula</i>	European White Birch
<i>Juglans nigra</i>	Eastern Black Walnut
<i>Liriodendron tulipifera</i>	Tuliptree
<i>Malus spectabilis</i> RIVERS	Rivers Flowering Crabapple
<i>Picea pungens</i>	Colorado Spruce
<i>Populus trichocarpa</i>	California Poplar
<i>Tilia tomentosa</i>	Silver Linden
<i>Ulmus americana</i>	American Elm

South ark Blocks

No. 44

TREES

Acer saccharum	Sugar Maple
Ailanthus altissima	Tree-of-heaven / Milanthus
Fraxinus americana	White Ash
Juglans nigra	Eastern Black Walnut
Pinus contorta	Shore Pine
Platanus occidentalis	American Planetree
Prunus serrulata KWANZAN	Kwanzen Oriental Cherry
Prunus yedoensis AKESONO	Akesono Yoshino Cherry
Quercus coccinea	Scarlet Oak
Taxus occidentalis PYRAMIDAL EASTERN	Pyramidal Eastern Arborvitae
Tilia tomentosa	Silver Linden
Ulmus americana	American Elm



**South Park Blocks**



# Tree Inventory Project Goals



# Urban Forestry Goals



*J. Wood Hill Park*

## Understand

Species distribution in parks

## Plan

New parks and maintenance needs

## Target

Parks for additional plantings

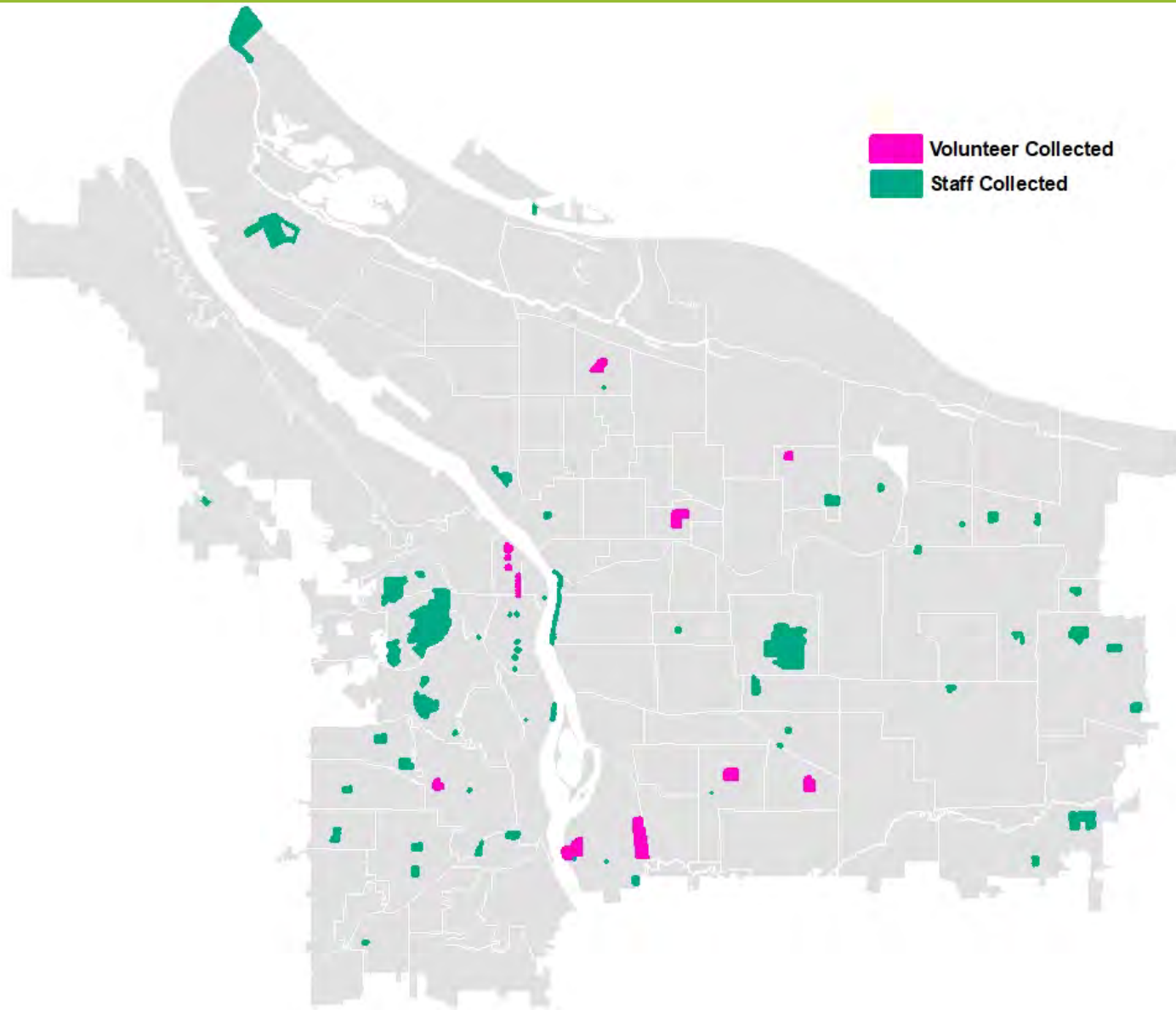
# Where Do We Inventory?



**Woodstock Park**



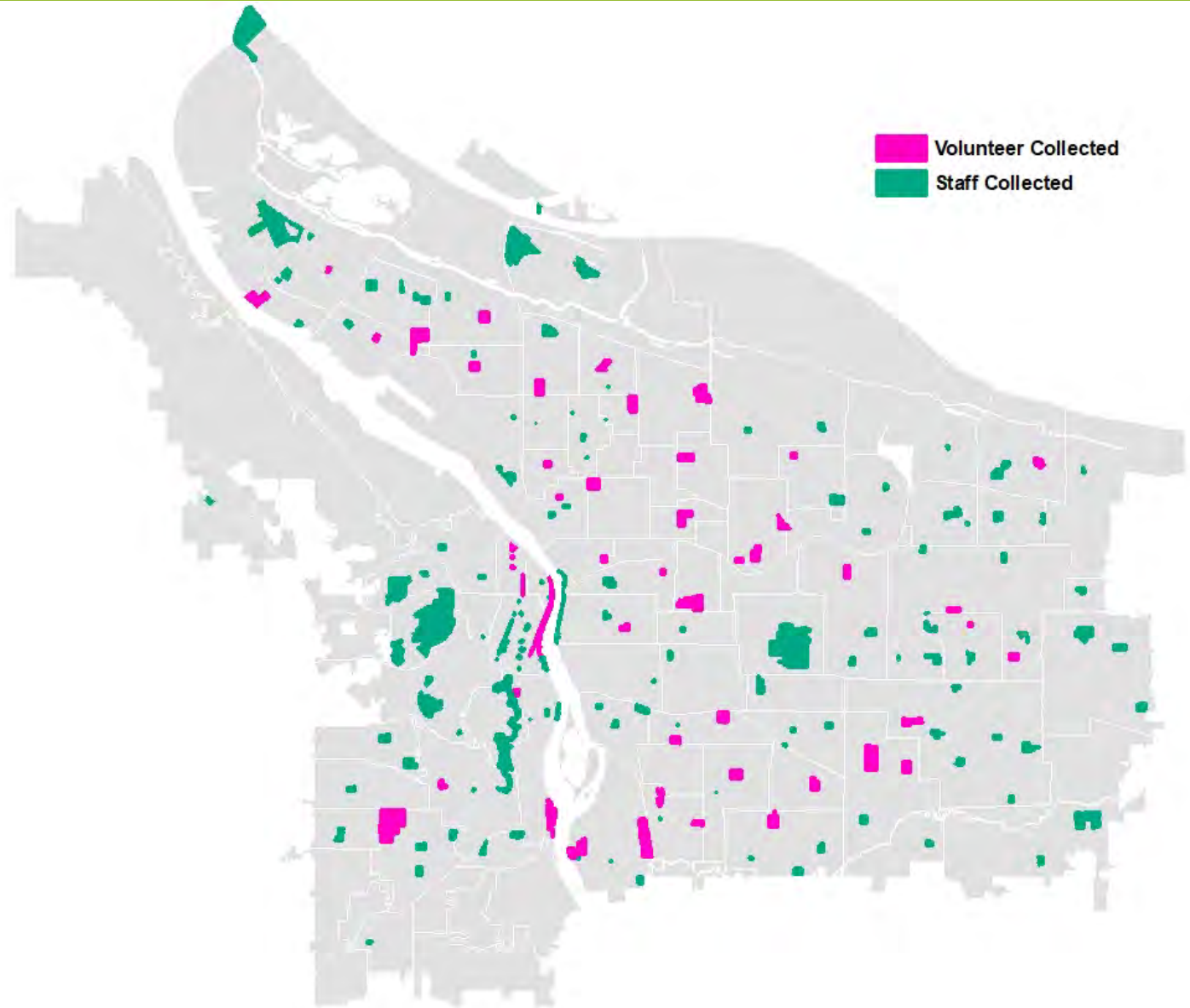
# 2019 Parks







# All Parks



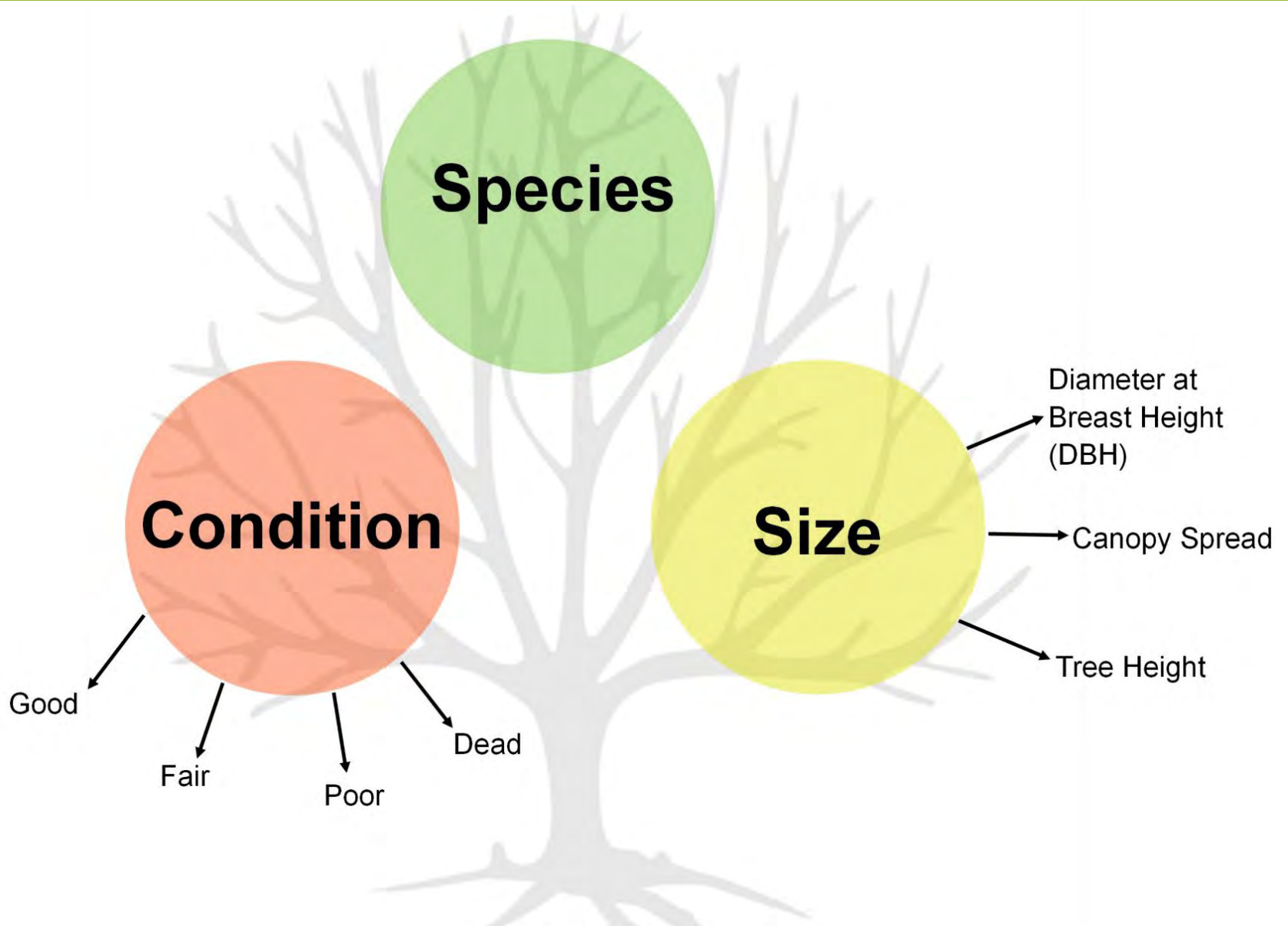


**2019**  
Over 200 volunteers  
1,500 hours volunteered  
Nearly 10,000 trees

**All of the Park Tree Inventory**  
Over 800 volunteers  
6,600 hours volunteered  
25,643 Trees!



# What is Collected?



# Data Collection Methods



# The Results Are In!

**305 Different Species**

**Largest DBH:**

**99" *Giant sequoia, Mt. Tabor Park***

**Tallest:**

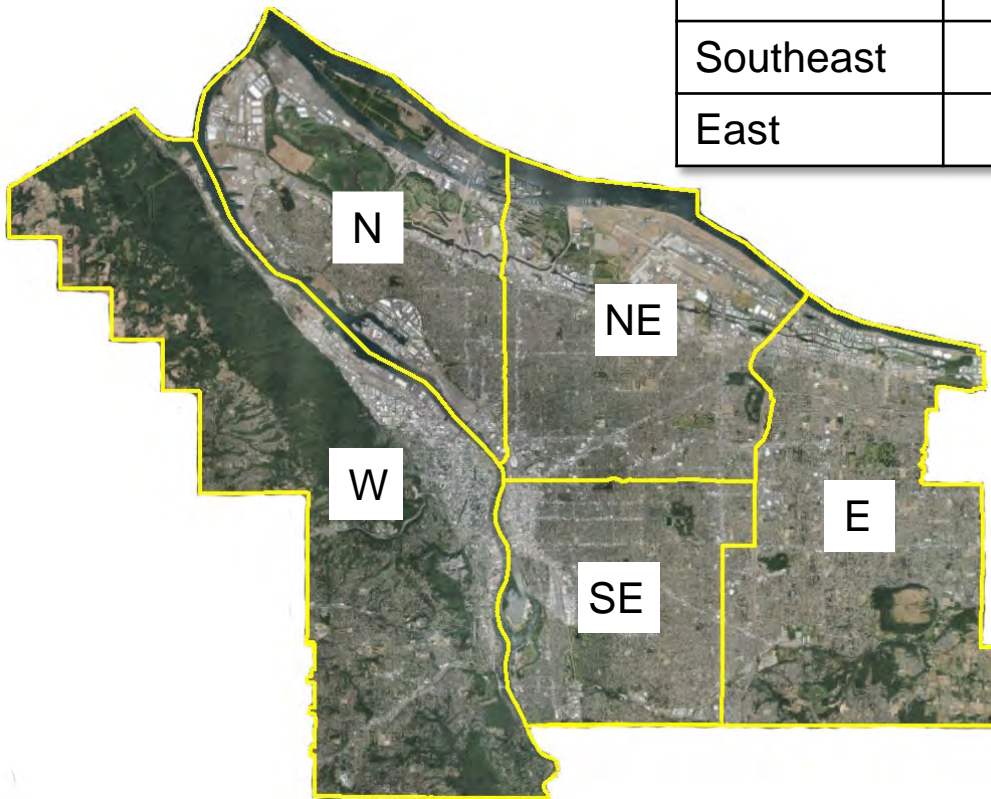
**190' *Douglas-fir, Mt. Tabor Park***

**Largest Crown Spread:**

**140' x 100' *Northern red oak, Powell Park***

# Distribution of Park Trees

Region	# Parks	Average Park Canopy Cover	Total Tree Count
West	47	48%	5,310
North	30	42%	4,527
Northeast	26	39%	3,471
Southeast	36	40%	6,230
East	36	32%	5,731



# Ten Most Common Trees

Common Park Trees	% of population
Douglas-fir	27%
Norway maple	6%
Western redcedar	4%
Northern red oak	3%
Pin oak	2%
Incense cedar	2%
Bigleaf maple	2%
Flowering cherry	2%
American elm	2%
Giant sequoia	1%
<b>Total</b>	<b>53%</b>

# Native Trees in Parks

Common Park Trees	% of population
<b>Douglas-fir</b>	<b>27%</b>
Norway maple	6%
<b>Western redcedar</b>	<b>4%</b>
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Flowering cherry	2%
American elm	2%
Giant sequoia	1%



*Oregon White Oaks in  
Sellwood Park*





**Sellwood Park**

# Common Family & Genera

Family	% of population
Pinaceae	36%
Sapindaceae	15%
Fagaceae	9%
Rosaceae	9%
Cupressaceae	7%

Genus	% of population
<i>Pseudotsuga</i>	27%
<i>Acer</i>	14%
<i>Quercus</i>	8%
<i>Prunus</i>	5%
<i>Pinus</i>	4%

# Functional Types

Deciduous

Broadleaf



Conifer



Evergreen

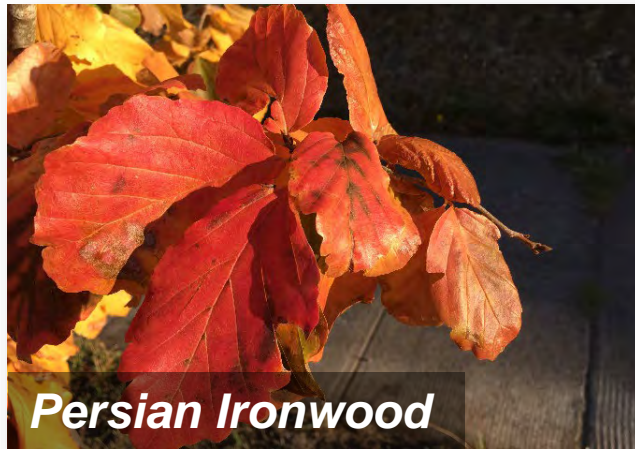


# Functional Types in Parks

## Broadleaf

## Conifer

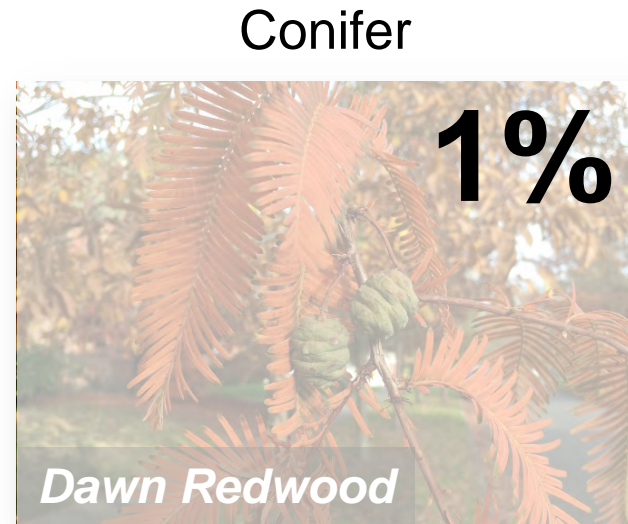
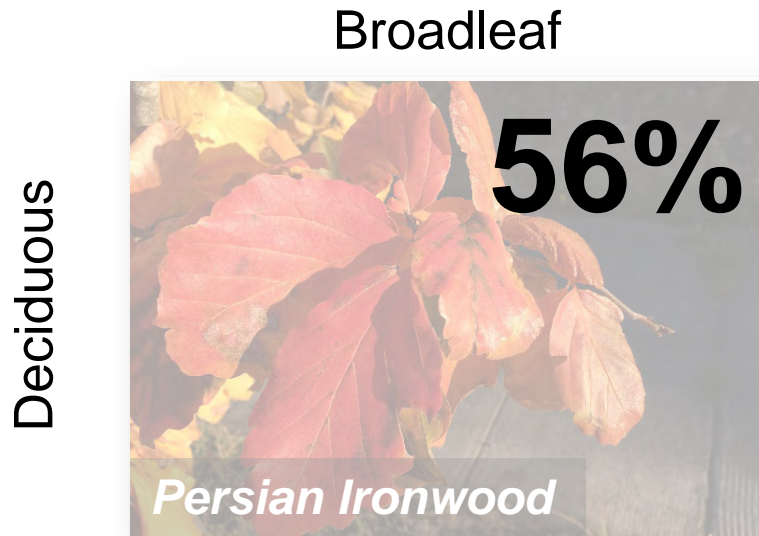
Deciduous



Evergreen



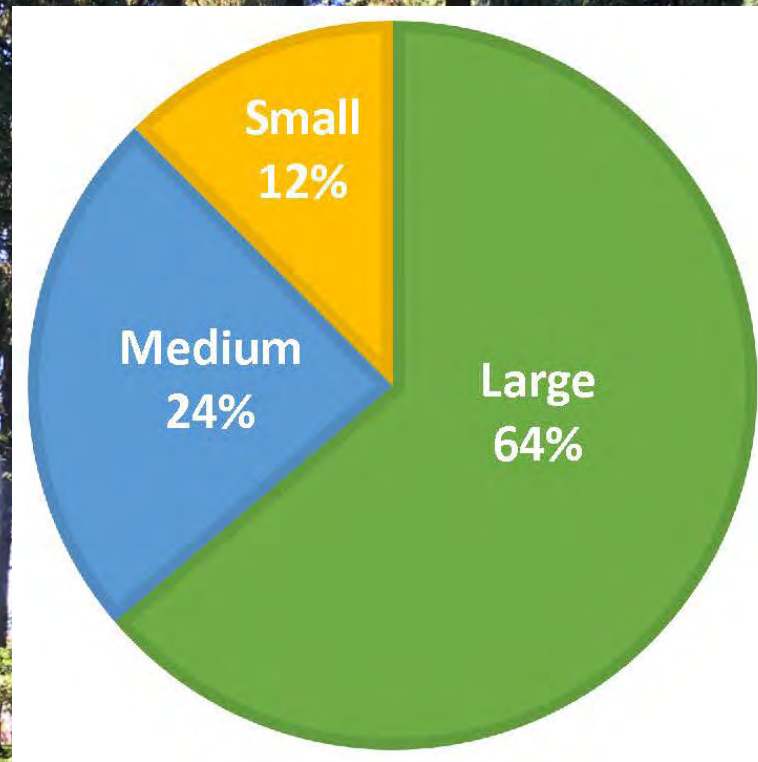
# Functional Types in Parks



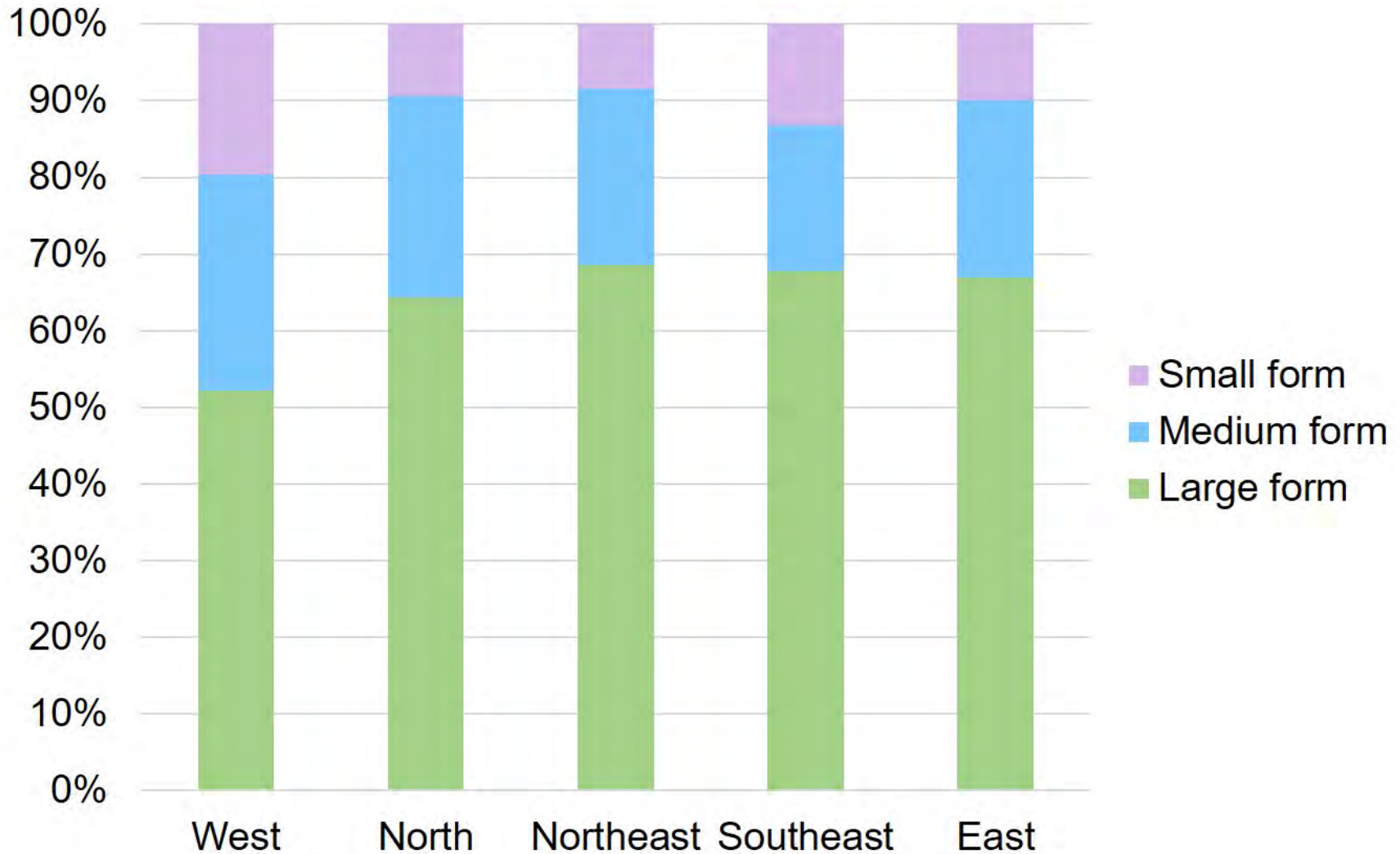
# Mature Tree Size



# Mature Tree Size



# Mature Tree Size







*Lynchwood Park*



*Spring Garden Park*

# Park and Street Trees

Most Common Park Trees	% of tree population N = 25,269
Douglas-fir	27%
Norway maple	6%
Western redcedar	4%
Northern red oak	3%
Pin oak	2%
Incense cedar	2%
Bigleaf maple	2%
Flowering cherry	2%
American elm	2%
Giant sequoia	1%

Most Common Street Trees	% of tree population N = 218,610
Norway maple	9%
Red maple	7%
Cherry	6%
Pear	5%
Plum	5%
Maple, other	5%
Ash	4%
Dogwood	4%
Oak, deciduous	3%
Crabapple	3%

# Park and Street Trees

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# Age and Class Size

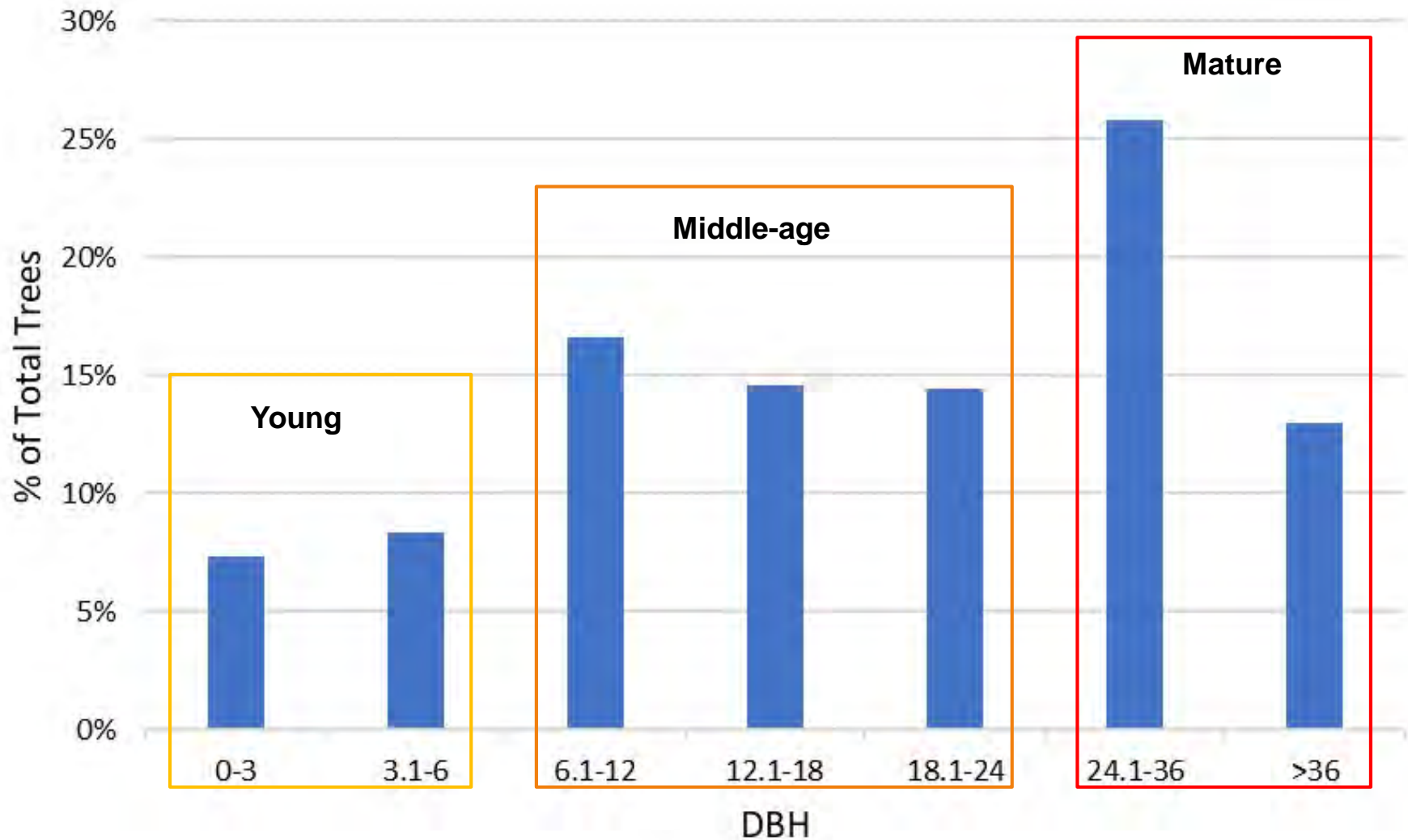


*Spanish fir  
1.4" DBH  
at Washington Park*

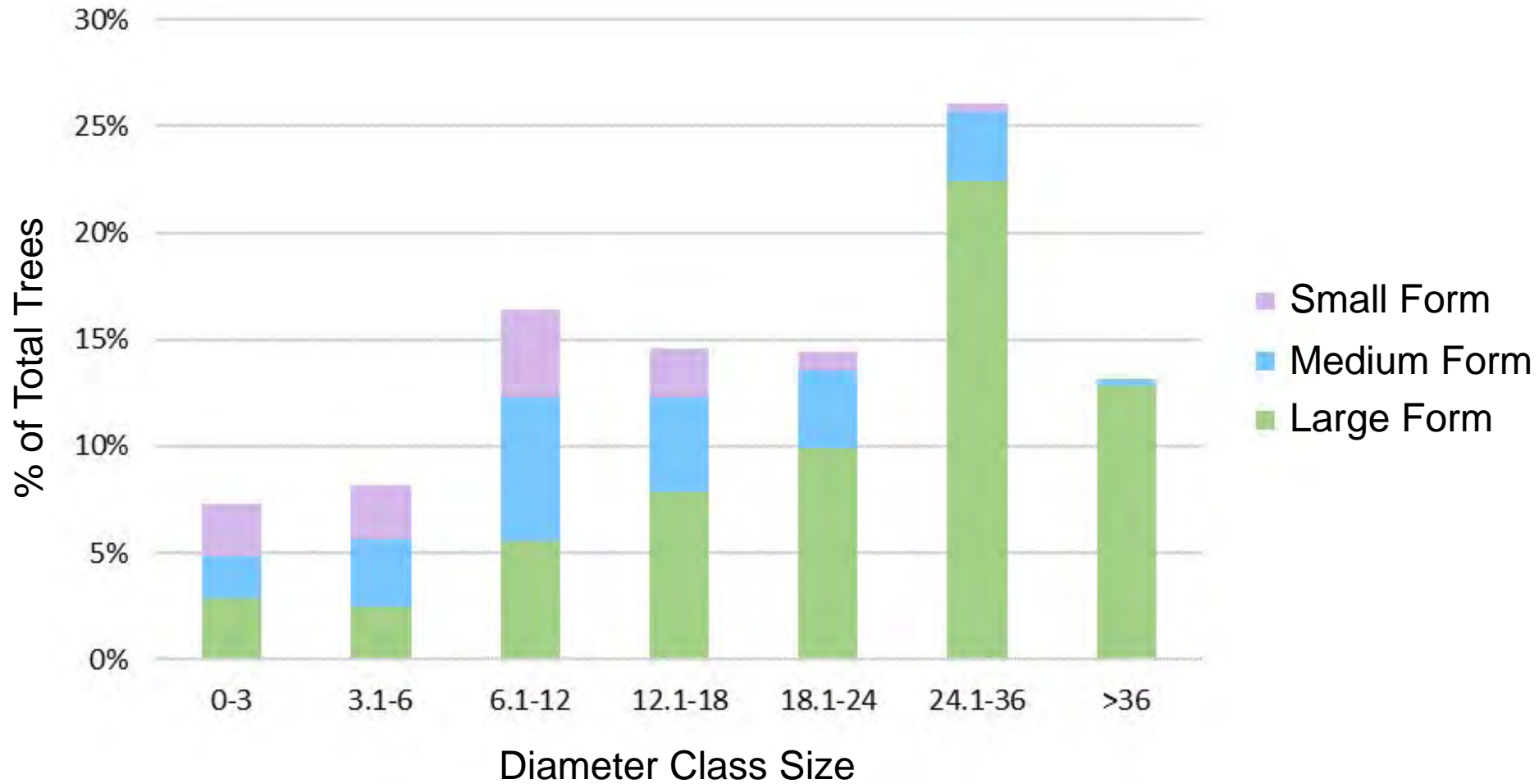


*London plane tree  
65.8" DBH  
at Grant Park*

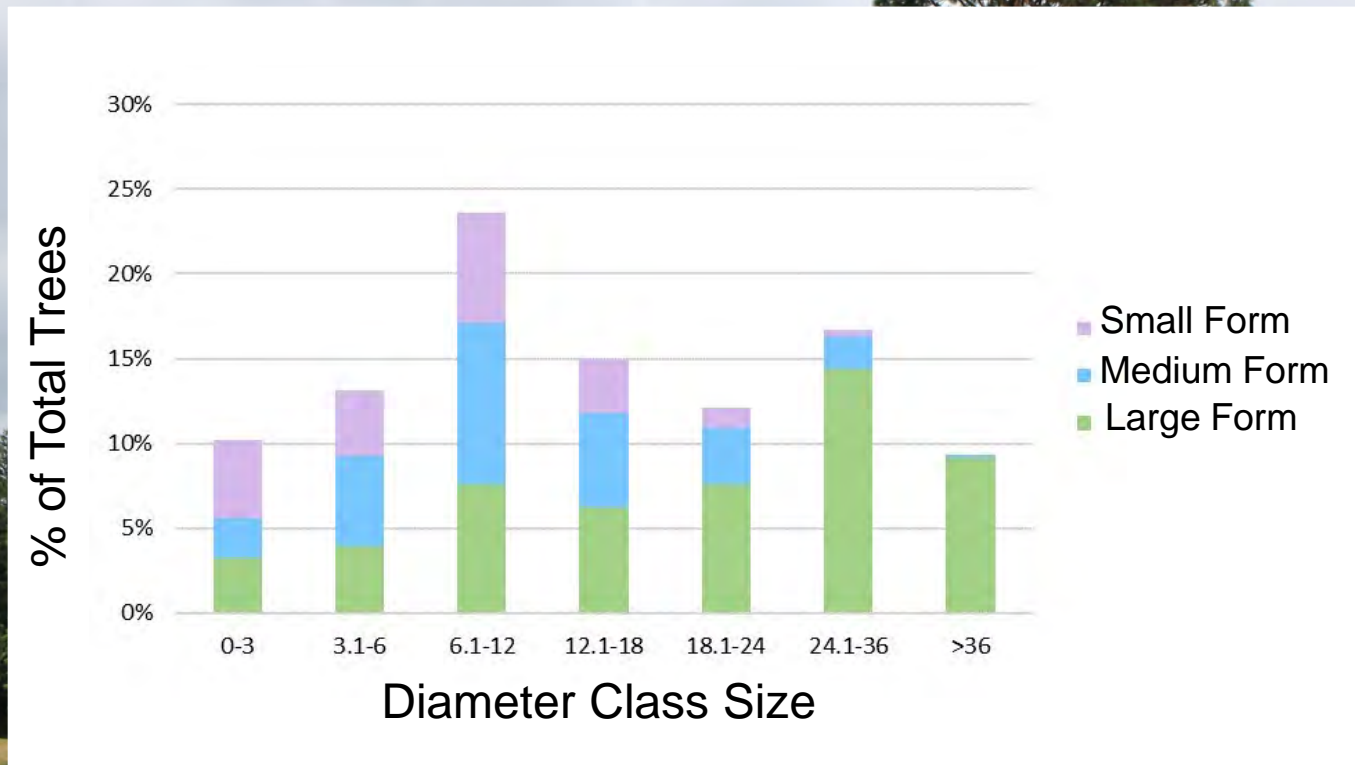
# Age and Class Size



# Age and Mature Tree Size

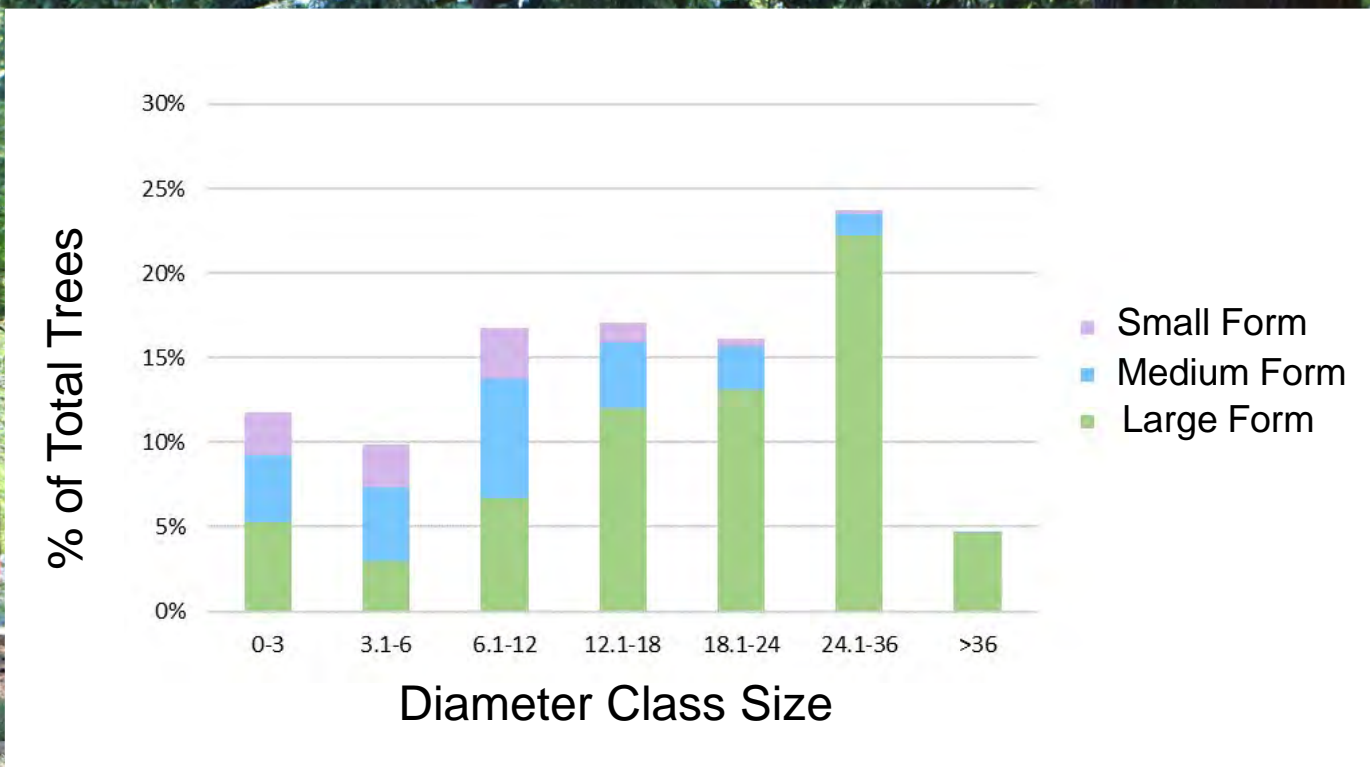


# West Portland





# East Portland



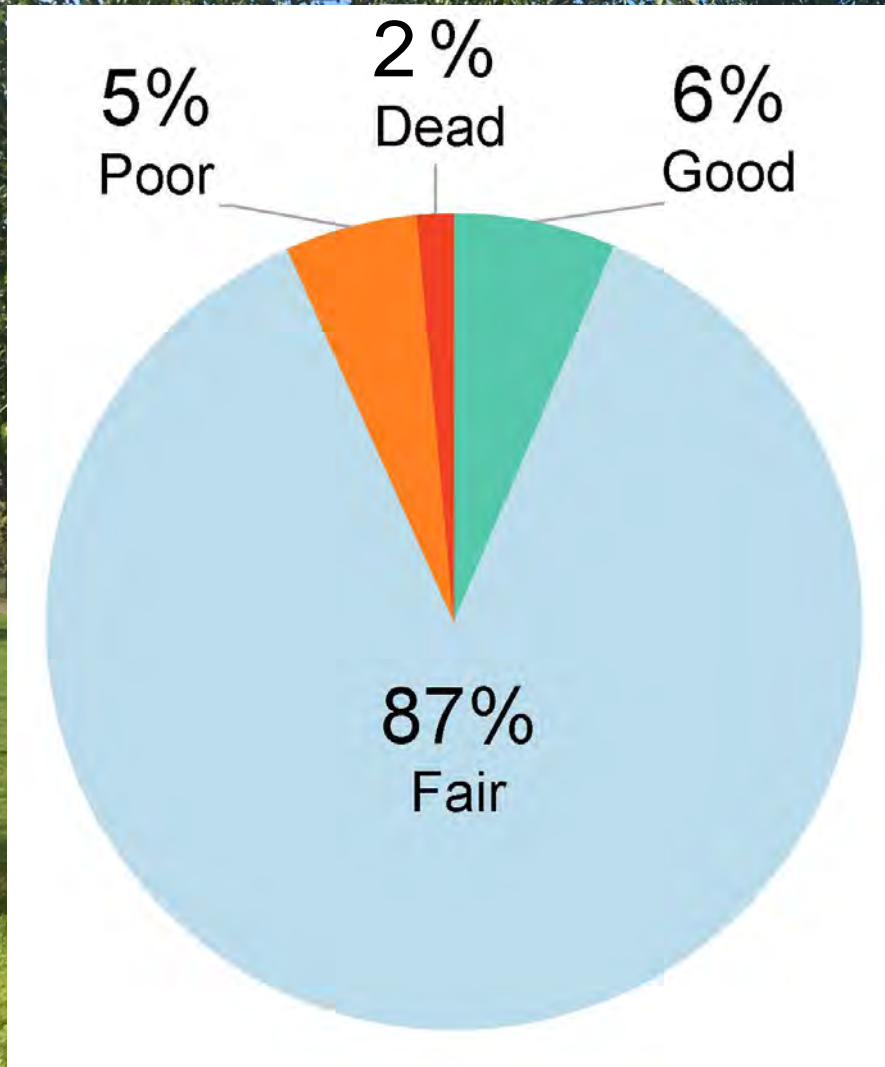
# Top 5 Young Trees

Species	% of Young Tree Population
<b>Western redcedar</b>	4.9%
Black tupelo	3.8%
<b>Douglas-fir</b>	3.2%
<b>Oregon ash</b>	3.0%
<b>Oregon white oak</b>	2.7%

# East Portland Young Trees

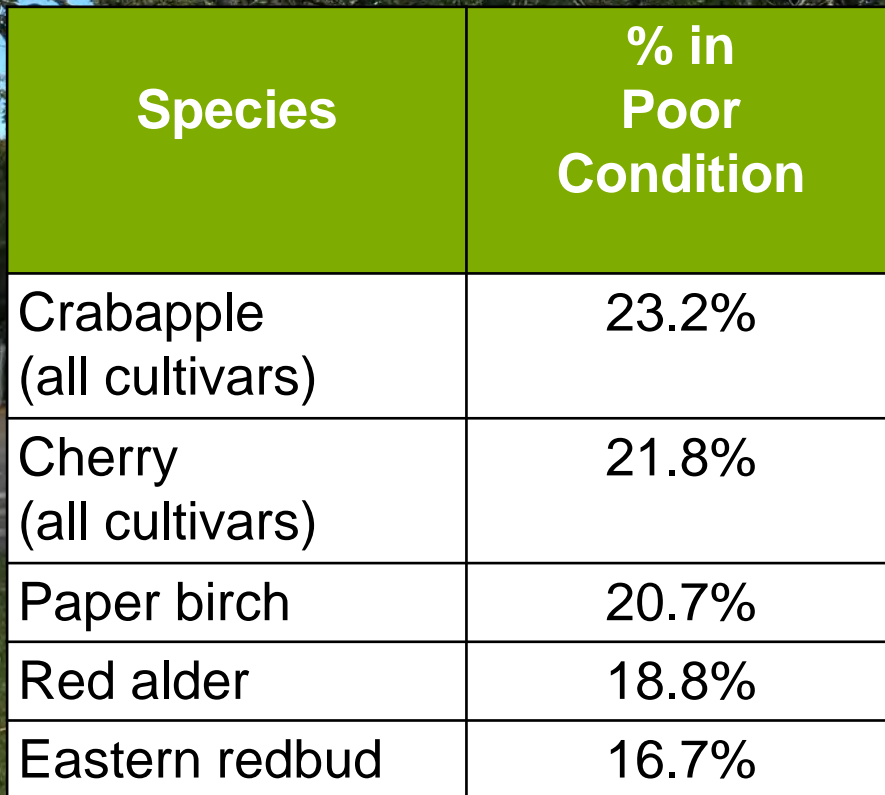
Species	% Total Population
<b>Bird cherry</b>	7.3%
Western redcedar	6.6%
<b>English hawthorn</b>	5.1%
Douglas-fir	4.9%
European beech	4.4%

# Condition of Park Trees



*Sellwood Riverfront Park*

# Best & Worst Condition



Species	% in Poor Condition
Crabapple (all cultivars)	23.2%
Cherry (all cultivars)	21.8%
Paper birch	20.7%
Red alder	18.8%
Eastern redbud	16.7%



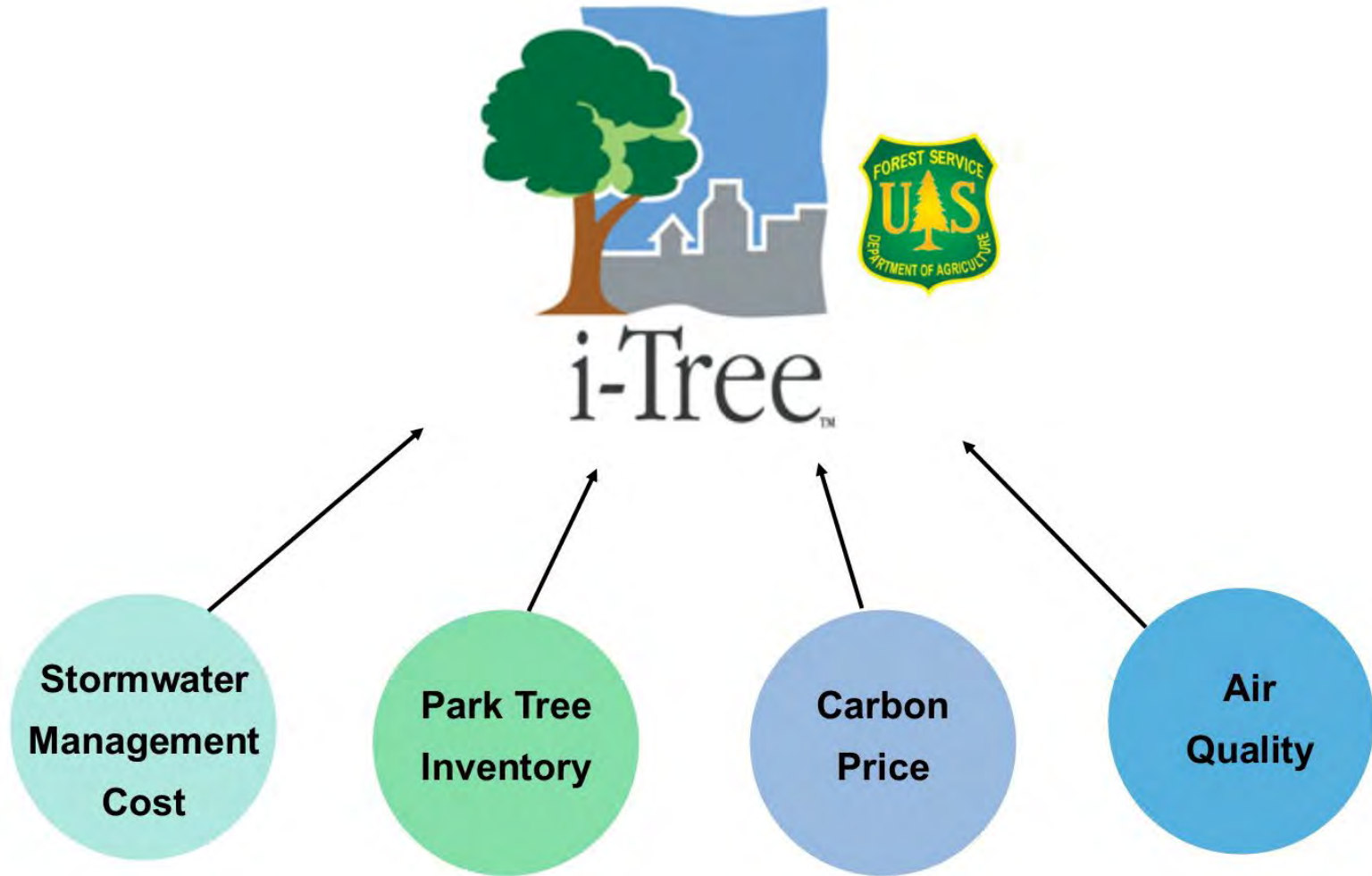
Species	% in Good & Fair Condition
Grand fir	100%
Deodar cedar	100%
Blue Atlas cedar	100%
Giant sequoia	100%
Large leaf linden	100%

# Condition of Young Trees

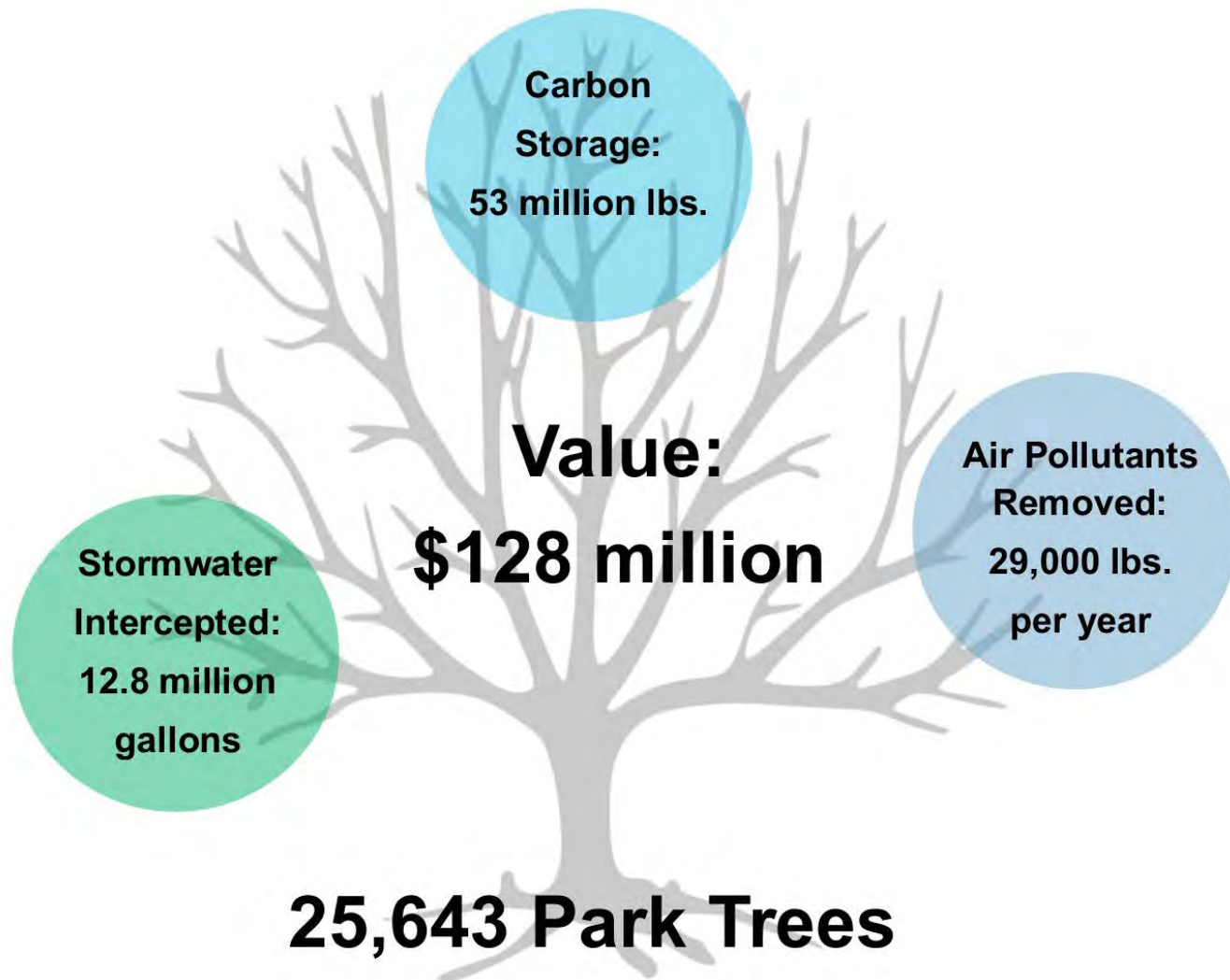
Species	% in Poor Condition
Western redcedar	10.9%
Oregon ash	8.8%
Oregon white oak	5.7%
Douglas-fir	4.8%
Black tupelo	3.4%

*Willamette Park*

# Park Tree Services



# Park Tree Services





# Climate Resilience in Parks



*Older Western redcedars  
along Cesar Chavez Blvd*



*Young Western redcedar  
in Hillsdale Park*

# Climate Resilience in Parks

Most Common Street Trees	% of tree population N = 25,269
Douglas-fir	27%
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Pin oak	2%
Incense cedar	2%
Bigleaf maple	2%
Flowering cherry	2%
American elm	2%
Giant sequoia	1%



*Douglas-fir stand  
in Mt. Scott Park*

# Vulnerability to Invasive Pests



Asian Longhorned Beetle (ALB)  
*Anoplophora glabripennis*

Image credit: Photograph by Barbara Strnadova/Getty.



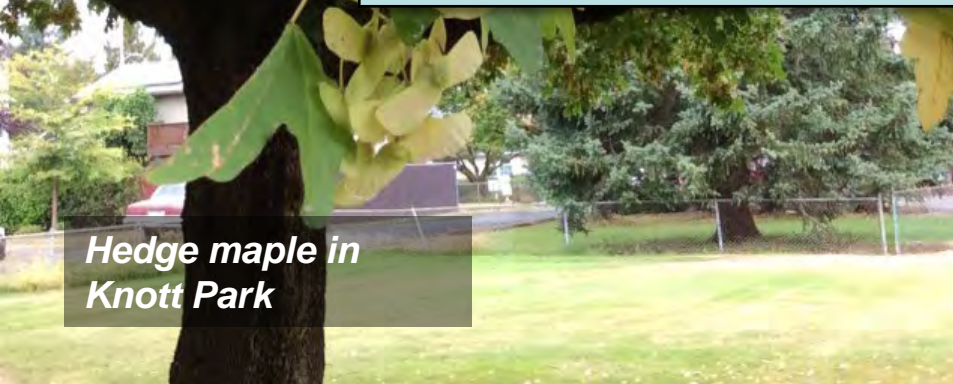
Emerald Ash Borer (EAB)  
*Agrilus planipennis*

Image credit: Photograph by  
Pennsylvania Dept. of Conservation  
and Natural Resources- Forestry.

# Pest Vulnerability



Pest Vulnerability	% of tree population
Asian Longhorned Beetle	22.6%
Emerald Ash Borer	3.1%
Bronze Birch Borer	1.4%
Dutch Elm Disease	1.6%
<b>Total</b>	<b>25.7%</b>



*Hedge maple in Knott Park*



*Fullmoon maple in Westmoreland Park*

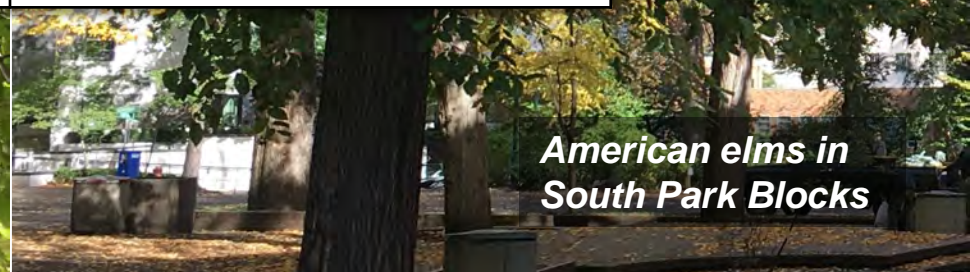


# Pest Vulnerability by Region



Region	% of tree population
West	32.3%
North	36.2%
Northeast	24.3%
Southeast	21.9%
East	16.3%

*Snake bark maple  
in Kelley Point Park*



*American elms in  
South Park Blocks*

# East Portland Trees



*Bird cherry in  
Gilbert Primary Park*

Most Common Park Trees	% of tree population
Douglas-fir	27%
Norway maple	6%
Northern red oak	4%
<b>Bird cherry</b>	<b>3%</b>
Western redcedar	2%
<b>English hawthorn</b>	<b>2%</b>
Bigleaf maple	2%
<b>Black locust</b>	<b>2%</b>
Incense cedar	2%
Cherry	1%
<b>Total</b>	<b>53%</b>

# Pest Vulnerability



*April Hill Park*



**Berkeley Park**





*Sellwood Park*



*Carya ovata*  
Shagbark Hickory  
Laurelhurst





***Corylus colurna***  
**Turkish hazel**  
**Knott Park**



Karren Wcise



*Luuwit View  
Park*



*Glenfair Park*

# What Comes Next...



**Tree Walk in  
Arbor Lodge**



**Pop-Up Arboretum at  
Ventura Park**





Portland Parks & Recreation  
Urban Forestry

**East Holladay Park**



# Thank You!



**Sellwood Park**