

Tree Health Risk Assessment and Mitigation Project

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Parks and Recreation Department

March 12, 2024



Redmond
WASHINGTON



Purpose

- Update on recently completed Tree Health Risk Assessment and Mitigation Project
- Agenda topics:
 - Project Overview
 - Properties Inspected
 - Trees Inspected
 - Inspection Methods
 - Inspection Results
 - Next Steps



Project Overview

- In August 2023, the City hired Bartlett Consulting to perform a health and risk assessment of city-owned trees
- The purpose of the risk assessment was to identify hazardous trees and reduce the safety risk to the community

Properties Inspected

- Parks
- Green belts
- Trail corridors
- Main arterials
- Fire stations
- Utility properties





Trees Inspected

Criteria

- Trunk diameter of 12 inches or greater
- Target within 1.5 times tree height

Inspection type

- Level 1: Approximately 18,500 trees
- Level 2: 285 trees
- Level 3: 16 trees

Top Defects

- Dead (77 trees)
- Decay (37)
- Codominant stems (25)
- Cavities (20)
- Over extended large branches (12)



Tree Assessment Table



Tree #	Species	Botanical Name	DSH (in)	Height (ft)	Dripline Rad. (ft)	Condition	Part of Concern	Defect	Failure Likelihood	Target	Risk Rating	Mitigation
1	Black cottonwood	<i>Populus trichocarpa</i>	25.7	95	37	Fair	Branch	Overextended	Probable	Residence	High	Pruning
2	Black cottonwood	<i>Populus trichocarpa</i>	13.8	80	50	Poor	Crown	Lean	Probable	Street	Moderate	Remove
3	Bigleaf maple	<i>Acer macrophyllum</i>	28.4	70	27	Fair	Trunk	Dead	Probable	Street	High	Pruning
4	Black cottonwood	<i>Populus trichocarpa</i>	68.0	120	47	Fair	Branch	Overextended	Probable	Street	High	Pruning
5	Black cottonwood	<i>Populus trichocarpa</i>	37.9	75	39	Fair	Branch	Overextended	Probable	Street	High	Pruning
6	Black cottonwood	<i>Populus trichocarpa</i>	22.0	75	43	Poor	Crown	Poor form	Probable	Street	High	Remove
7	Douglas fir	<i>Pseudotsuga menziesii</i>	30.7	95	27	Poor	Whole tree	Dead	Probable	Street	High	Remove
8	Douglas fir	<i>Pseudotsuga menziesii</i>	31.6	95	29	Poor	Whole tree	Dead	Probable	Street	High	Remove
9	Black cottonwood	<i>Populus trichocarpa</i>	31.0	105	45	Fair	Branch	Poor form	Probable	Street	High	Pruning
10	Black cottonwood	<i>Populus trichocarpa</i>	42.0	105	47	Fair	Branch	Poor form	Probable	Street	High	Pruning
11	Bigleaf maple	<i>Acer macrophyllum</i>	28.0	60	29	Fair	Branch	Dead	Probable	Street	Moderate	Pruning
12	Bitter cherry	<i>Prunus emarginata</i>	12.1	60	22	Poor	Branch	Dead	Probable	Street	Moderate	Snag
13	Black cottonwood	<i>Populus trichocarpa</i>	55.0	110	45	Poor	Trunk	Decay	Probable	Street	High	Remove
14	Bigleaf maple	<i>Acer macrophyllum</i>	36.9	65	22	Poor	Crown	Dead	Probable	Street	High	Snag
15	Bigleaf maple	<i>Acer macrophyllum</i>	20.2	60	26	Poor	Trunk	Decay	Probable	Street	High	Remove
16	Bigleaf maple	<i>Acer macrophyllum</i>	22.3	60	27	Poor	Trunk	Cavity	Probable	Street	High	Remove
17	Black cottonwood	<i>Populus trichocarpa</i>	8.5	60	16	Very Poor	Crown	Dead	Probable	Street	High	NA
18	Black cottonwood	<i>Populus trichocarpa</i>	19.5	75	25	Fair	Branch	Dead	Probable	Street	High	Pruning
19	Red alder	<i>Alnus rubra</i>	12.0	50	14	Poor	Crown	Dead	Probable	Street	Moderate	Remove
20	Bigleaf maple	<i>Acer macrophyllum</i>	12.0	55	30	Poor	Trunk	Codominant	Probable	Street	Low	NA

Recommended Actions

- Prune (70 trees)
- Fully remove (69)
- Convert to wildlife snags (71)
- Move target (1)





Next Steps

- City arborists field inspection of 211 hazardous trees
- Prioritize trees for mitigation
- Project communications plan (including dedicated webpage, direct communication with individuals impacted, QAlert category for related issues)
- Hire contractor to perform mitigation work
- Perform tree replacements where appropriate



Thank You



Any Questions?

