Urban Forest Management Plan
Overview

Seattle’s urban forest is a thriving and sustainable mix of tree species and ages that creates a contiguous and healthy ecosystem that is valued by the City and all of its citizens as an essential environmental, economic, and community asset.
### Urban Forest Management Plan (April 2007)
- City's first strategic plan for managing the urban forest
- Establishes goal of 30% canopy cover in 30 years
- Considers issues/opportunities based on different land uses and establishes specific goals
- Lays out the short-, mid- and long-term actions needed to meet the goals

<table>
<thead>
<tr>
<th>Inspire/Inform</th>
<th>Preserve</th>
<th>Plant</th>
<th>Maintain</th>
<th>Restore</th>
</tr>
</thead>
</table>
| **Seattle reLeaf – Community outreach campaign**
  - Website
  - Brochures, posters, bus ads, radio promos
  - Earned media
  - Community events
  - Strategic Partnerships
| **Regulatory Update**
  - During development
  - Outside of development
  - Street trees
| **City Property**
  - City 2 for 1 Tree Replacement Policy
  - Parks, SDOT, Zoo
  - Seattle Center, FFD
| **City Tree Maintenance**
  - Parks
  - SDOT
  - Seattle Center
  - FFD
  - Zoo
| **Green Seattle Partnership**
  - Restoring 2500 acres of forested lands by 2025

| **Department of Planning & Development**
| **In the Community**
  - DON Tree Fund
  - Neighborhood Trees Program
| **Power line clearance**
  - City Light
| **Community Partners**

**PlantAmnesty**

**Lost Tree Replacement Program**

**EarthCorps**

**Nature Partners**
City-Owned Trees

• Plant thousands of trees each year
  – Enhancement
  – Construction projects
  – Tree replacement
  – Restoration activities

• Maintain hundreds of thousands of trees
  – 90,000 trees in developed parklands
  – 38,000 of the 133,000 street trees
  – >500,000 trees in natural areas
  – Utility line safety & reliability
City’s Role in Private Trees

• Education
  – Outreach, brochures, website, events etc.

• Incentives
  – Neighborhood tree planting programs
  – Business district enhancement programs

• Regulatory Protection
  – During development
  – Outside of development
  – Street trees
  – Environmentally critical areas
Department Roles

- **Parks** – plants & cares for trees in parks, mitigates potential hazards, clean-up after storms, restores natural areas
- **SDOT** – plants & cares for trees on streets, mitigates potential hazards, clean-up after storms, street tree protection regulations
- **DPD** – regulates trees on private property both during and outside of development
- **SCL** – prunes trees for electrical safety and reliability
- **DON** – tree planting/community building program
- **SPU** – consider trees in establishing stormwater requirements, manages trees in riparian areas
- **Seattle Center & Zoo** – manage trees on campus-like settings
- **OSE** – leads interdepartmental team, coordinates policy issues, oversees UFMP implementation, monitors performance
Urban Forest Management Plan

• Adopted April 2007
• Developed by Urban Forest IDT
  – 9 departments (Parks, SDOT, DPD, OSE, SCL, SPU, Seattle Center, DON, FFD)
• Organization – based on an established model for urban forest planning
  – Tree Resource
  – Management Framework
  – Community Framework
<table>
<thead>
<tr>
<th>Tree Resource</th>
<th>Management Framework</th>
<th>Community Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand the characteristics and complexity of Seattle’s urban forest</td>
<td>Facilitate interdepartmental communication and cooperation to provide decision-makers the information they need to support the UFMP</td>
<td>Enhance public awareness of the urban forest as a community resource</td>
</tr>
<tr>
<td>Maintain trees to promote health and longevity</td>
<td>Develop and implement resource management tools</td>
<td>Engage the community in active stewardship of the urban forest</td>
</tr>
<tr>
<td>Maximize canopy cover and optimize age and species diversity</td>
<td>Preserve and protect existing trees, and encourage new tree planting throughout the city by improving management of trees on private property</td>
<td>Promote citizen-government-business partnerships</td>
</tr>
<tr>
<td>Maximize the ecological and environmental benefits of the urban forest</td>
<td>Model good stewardship in City practices</td>
<td></td>
</tr>
</tbody>
</table>


Canopy Cover Goals

• Establishes 30% canopy goal citywide

• Why we need goals
  – Provide a clear set of agreed targets
  – Help prioritize planning and budget

• Management Units
  – Unique land uses provide unique opportunities & challenges
  – Based on City’s land use classifications
<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>UFMP Goal Tree Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family</td>
<td>33%</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>20%</td>
</tr>
<tr>
<td>Commercial/Mixed Use</td>
<td>15%</td>
</tr>
<tr>
<td>Downtown Seattle</td>
<td>12%</td>
</tr>
<tr>
<td>Industrial</td>
<td>10%</td>
</tr>
<tr>
<td>Institutional</td>
<td>20%</td>
</tr>
<tr>
<td>Parks: Developed Sites</td>
<td>25%</td>
</tr>
<tr>
<td>Parks: Natural Areas</td>
<td>80%</td>
</tr>
<tr>
<td><strong>Citywide</strong></td>
<td><strong>30%</strong></td>
</tr>
<tr>
<td>Transportation Corridors/Street ROW</td>
<td>24%</td>
</tr>
</tbody>
</table>
Canopy Cover Assessment

**Goals**

- Prioritize City investments to create greatest tree canopy gain
- Evaluate current canopy cover and recent trends in canopy gain and loss
- Understand impacts of development
- Assess planting potential
- Create baseline to monitor progress toward 30% canopy cover goal
Canopy Cover Assessment

**Methods**
- High resolution satellite data
- Advanced data extraction & analysis techniques
- Data from 2002/03 and 2007 (summer)

**Parameters**
- Citywide
- Land Use Categories: single-family, multi-family, manufacturing/industrial, downtown, developed parks, parks natural areas, commercial/mixed use, institutional
  - ROW and Private Property
  - Community Reporting Areas (CRAs)
  - Urban Villages
Canopy Cover Assessment

Results:

- Citywide canopy cover in 2007 was about 23%
- Canopy cover citywide increased slightly with gains balancing losses
- ROW tree cover is increasing more quickly than non-ROW property
- Canopy loss occurs during redevelopment
- We need to more than double the acres of canopy increase each year to meet the UFMP 30% goal by 2037
Canopy Cover Assessment

Results

• Developed parks are above the goal
• Expected decline in parks natural areas
  – Green Seattle Partnership is addressing
• Increase in multi-family primarily in ROW
• ROW increased 1%
  – ROW is 27% of the city land area and 61% of canopy cover gain
<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>2002 Canopy Cover</th>
<th>2007 Canopy Cover</th>
<th>Goal Canopy Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial/ Mixed Use</td>
<td>8.4%</td>
<td>9.7%</td>
<td>15%</td>
</tr>
<tr>
<td>Developed Park or Boulevard</td>
<td>25.9%</td>
<td>25.5%</td>
<td>25%</td>
</tr>
<tr>
<td>Downtown</td>
<td>4.2%</td>
<td>4.7%</td>
<td>12%</td>
</tr>
<tr>
<td>Major Institution</td>
<td>18.4%</td>
<td>19.4%</td>
<td>20%</td>
</tr>
<tr>
<td>Manufacturing/ Industrial</td>
<td>3.8%</td>
<td>4.3%</td>
<td>10%</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>16.6%</td>
<td>17.1%</td>
<td>20%</td>
</tr>
<tr>
<td>Parks Natural Area</td>
<td>82.5%</td>
<td>80.4%</td>
<td>80%</td>
</tr>
<tr>
<td>Single Family</td>
<td>25.2%</td>
<td>25.7%</td>
<td>33%</td>
</tr>
<tr>
<td>Total</td>
<td>22.5%</td>
<td>22.9%</td>
<td>30%</td>
</tr>
</tbody>
</table>
Canopy Cover Assessment

Community Reporting Areas (53 CRAs)

• Canopy in less developed areas tended to decrease
  – 6 CRAs had a 3% or greater decline; all south of downtown
  – Significant areas of remaining forest land in SF zones were redeveloped in these areas

• Canopy in fully developed areas tended to increase
  – 8 CRA’s had a 3% or greater increase; all north of downtown
Canopy Cover Assessment

Community Reporting Areas

- 8 CRAs had single family zones with canopy cover <20%
  - Ballard, Beacon Hill, Georgetown, Judkins Park, N. Beacon Hill, Roxhill, W. Seattle Junction, Whittier Heights

- 12 CRAs have overall tree canopy <15%
  - Cluster in center of City: downtown, Belltown, Judkins, First Hill, Pioneer Sq, Capital Hill, Eastlake
  - South: Duwamish, South Park, Georgetown
  - North: Ballard, Interbay
Tree Canopy Change
Community Reporting Areas (CRA's)
Seattle, WA
2002-2007

Percent Change in Canopy Cover
PCT_CHANGE
- Loss > 3%
- Loss 2 - 3%
- Loss 1 - 2%
- Loss 0 - 1%
- Gain 0 - 1%
- Gain 1 - 2%
- Gain 2 - 3%
- Gain > 3%

NOTE:
- Large labels are change in acreage per CRA
- Small labels are total acreage

0 0.5 1 2 Miles
Canopy Cover Assessment

Application of Data

- Targeting programs to low canopy areas
- Parcel and neighborhood canopy cover available to public online
- Projection of future canopy trends
- Tracking progress towards canopy cover goals
<table>
<thead>
<tr>
<th>Category</th>
<th>UFMP Canopy Goal (total trees)</th>
<th>2007 Canopy</th>
<th>Total additional trees needed to meet goal in 28 years</th>
<th>Total additional trees/ year needed</th>
<th>Total tree increase 03-07</th>
<th>Average trees/yr increase 03-07</th>
<th>Trees per year not happening at status quo</th>
<th>Cost of trees requiring additional incentives</th>
<th>Add’l trees/ acre needed (goal trees/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downtown</td>
<td>12% (13,572)</td>
<td>4.7%</td>
<td>8,224</td>
<td>294</td>
<td>591</td>
<td>148</td>
<td>146</td>
<td>$102,200 ($700/tree)</td>
<td>10.1 (16.6)</td>
</tr>
<tr>
<td>Institutional</td>
<td>20% (19,552)</td>
<td>19.4%</td>
<td>557</td>
<td>20</td>
<td>1,008</td>
<td>252</td>
<td>-</td>
<td>-</td>
<td>.5 (17.8)</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>10% (85,882)</td>
<td>4.3%</td>
<td>48,777</td>
<td>1,742</td>
<td>4,411</td>
<td>1,103</td>
<td>639</td>
<td>$319,500 ($500/tree)</td>
<td>8.0 (13.9)</td>
</tr>
<tr>
<td>Industrial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-Family</td>
<td>20% (156,635)</td>
<td>17.1%</td>
<td>22,971</td>
<td>820</td>
<td>3,855</td>
<td>964</td>
<td>-</td>
<td>-</td>
<td>4.1 (27.7)</td>
</tr>
<tr>
<td>Commercial</td>
<td>15% (94,103)</td>
<td>9.7%</td>
<td>33,415</td>
<td>1,193</td>
<td>7,779</td>
<td>1,945</td>
<td>-</td>
<td>-</td>
<td>7.4 (20.8)</td>
</tr>
<tr>
<td>Single Family</td>
<td>33% (876,567)</td>
<td>25.7%</td>
<td>192,869</td>
<td>6,888</td>
<td>13,941</td>
<td>3,485</td>
<td>3,403</td>
<td>$680,600 ($200/tree)</td>
<td>6.4 (29.3)</td>
</tr>
<tr>
<td>Parks Developed</td>
<td>25% (52,283)</td>
<td>25.5%</td>
<td>(974)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(22.2)</td>
</tr>
<tr>
<td>Citywide</td>
<td>30% (1,298,594)</td>
<td>22.9%</td>
<td>306,813</td>
<td>10,957</td>
<td>31,585</td>
<td>7,897</td>
<td>4,188 (3,060)</td>
<td>$1,102,300</td>
<td>6.2 (24)</td>
</tr>
<tr>
<td>ROW</td>
<td>24% (225,265)</td>
<td>17.6%</td>
<td>81,831</td>
<td>2,922</td>
<td>12,460</td>
<td>3,115</td>
<td>-</td>
<td>-</td>
<td>5.6</td>
</tr>
</tbody>
</table>