

# FSC Certification in Urban Parks

*How to make it happen !*

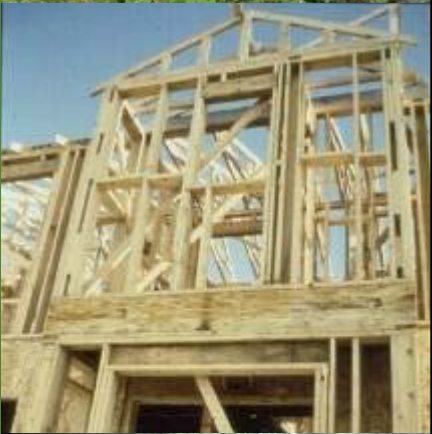
*Presented by  
Kirk Hanson &  
Mark Mead*





**Kirk Hanson**  
**Director**

[www.nwcertified.org](http://www.nwcertified.org)



# What is FSC Certification?

- Regional forest mngt. standards that define “sustainable forestry”
- Environment, economy and community
- Credibility based on independently and democratically developed standards
- 10 principles, 52 criteria, 100’s of indicators
- Highest environmental standard
- Rigorous 3<sup>rd</sup>-party verification
- Brand



The mark of  
responsible forestry



# ***FSC management optimizes multiple values***

- 
- ***Biodiversity***
  - ***Habitat***
  - ***Water quality***
  - ***Carbon***
  - ***Long term profitability***
  - ***Community benefits***
  - ***Product diversity***
  - ***Niche higher value markets***

# What Does FSC Provide?

- **Social license to conduct forest management practices**
- **“Green” stamp of approval**
- **3<sup>rd</sup>-party review of practices and standards**
- **Access to niche and premium markets**
- **Market differentiation**
- **Storytelling**

Photo credit: King County

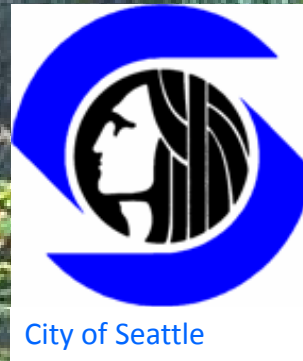
# Steps to Becoming Certified

- **Pre-assessment**
- **Application to certifying organization**
- **FSC Audit/Assessment**
  - **Stakeholder consultation**
- **COC Certificate**
- **Annual performance-based assessments**



# How can Urban Parks Qualify?

The Green Seattle Partnership Model



**FORT & RRA**



*The*

# **GREEN SEATTLE**

P A R T N E R S H I P

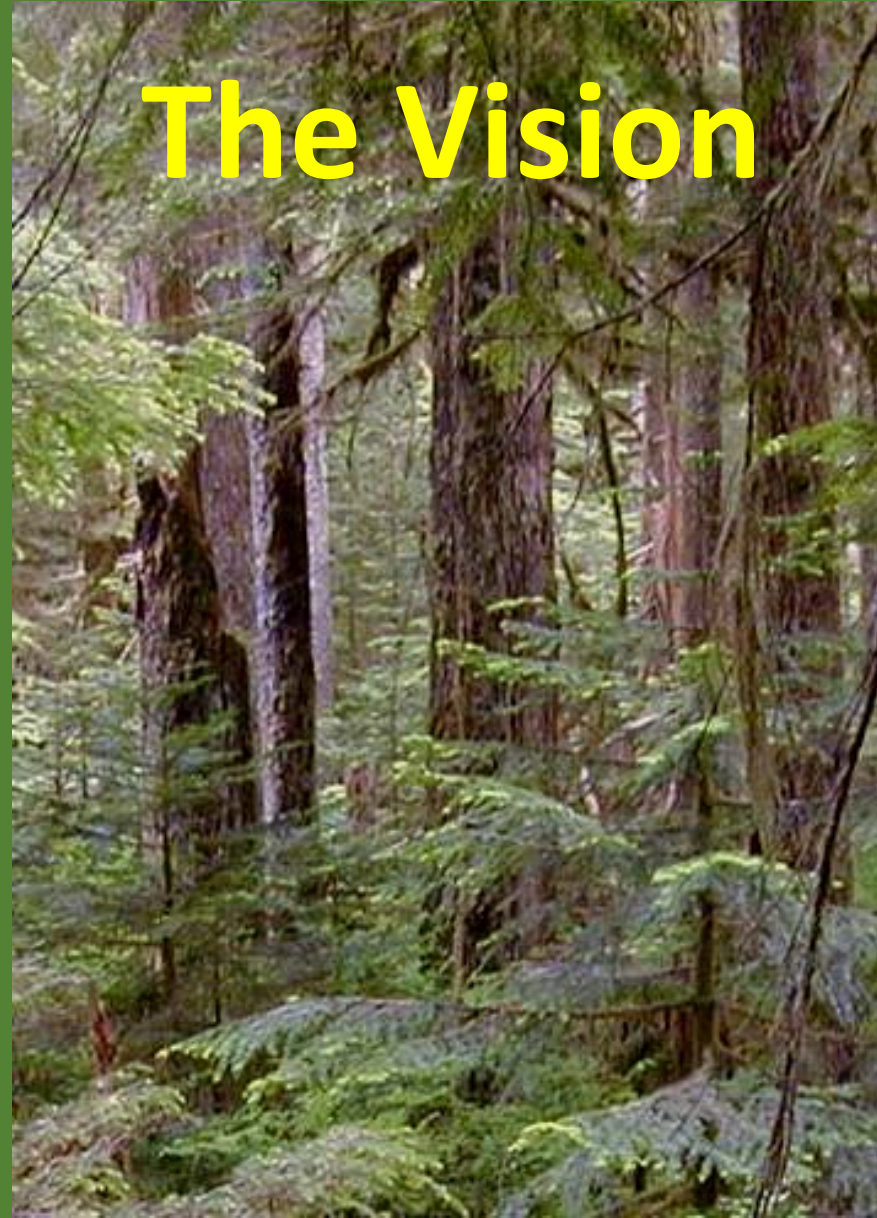
Citizens of Seattle ■ City of Seattle ■ Cascade Land Conservancy

*A Success Story in  
Urban Forest Sustainability*



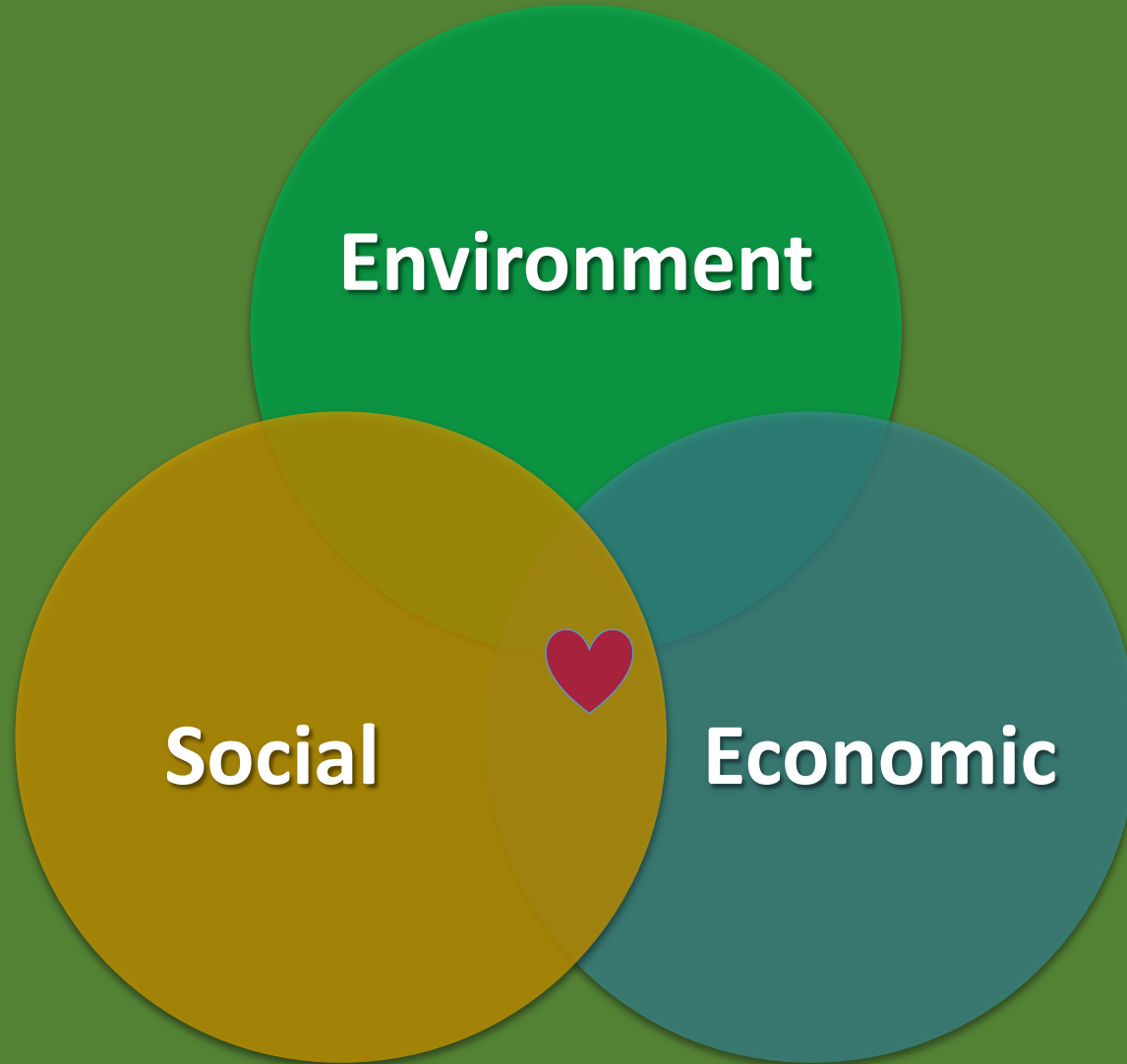
# The Vision

*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 and cared for by the City and all its citizens as an essential environmental, economic, and community asset.*





# What Is Sustainability?





# Urban Forest Sustainability Model

A strong, workable model based on a thorough understanding of :

- **The Forest Resource (Science)**
- **Management Infrastructure (\$)**
- **Community Support Framework (People)**



# Urban Forest Reality Model

## The Forest Resource

- Urban forests are ASSETS

## Management Infrastructure

- Maintenance is the new SEXY

## Community Support Framework

- Volunteers are not “FREE”

# Forest Sustainability Scale

Less



More

## Forest Resource—

*A healthy and biologically diverse forest*

Less



More

## Management Infrastructure –

*Well managed and diverse funding sources*

Less



More

## Community Support Framework –

*Across all levels and communities*

**Restore and maintain 2,500 acres of forested parklands by 2025**

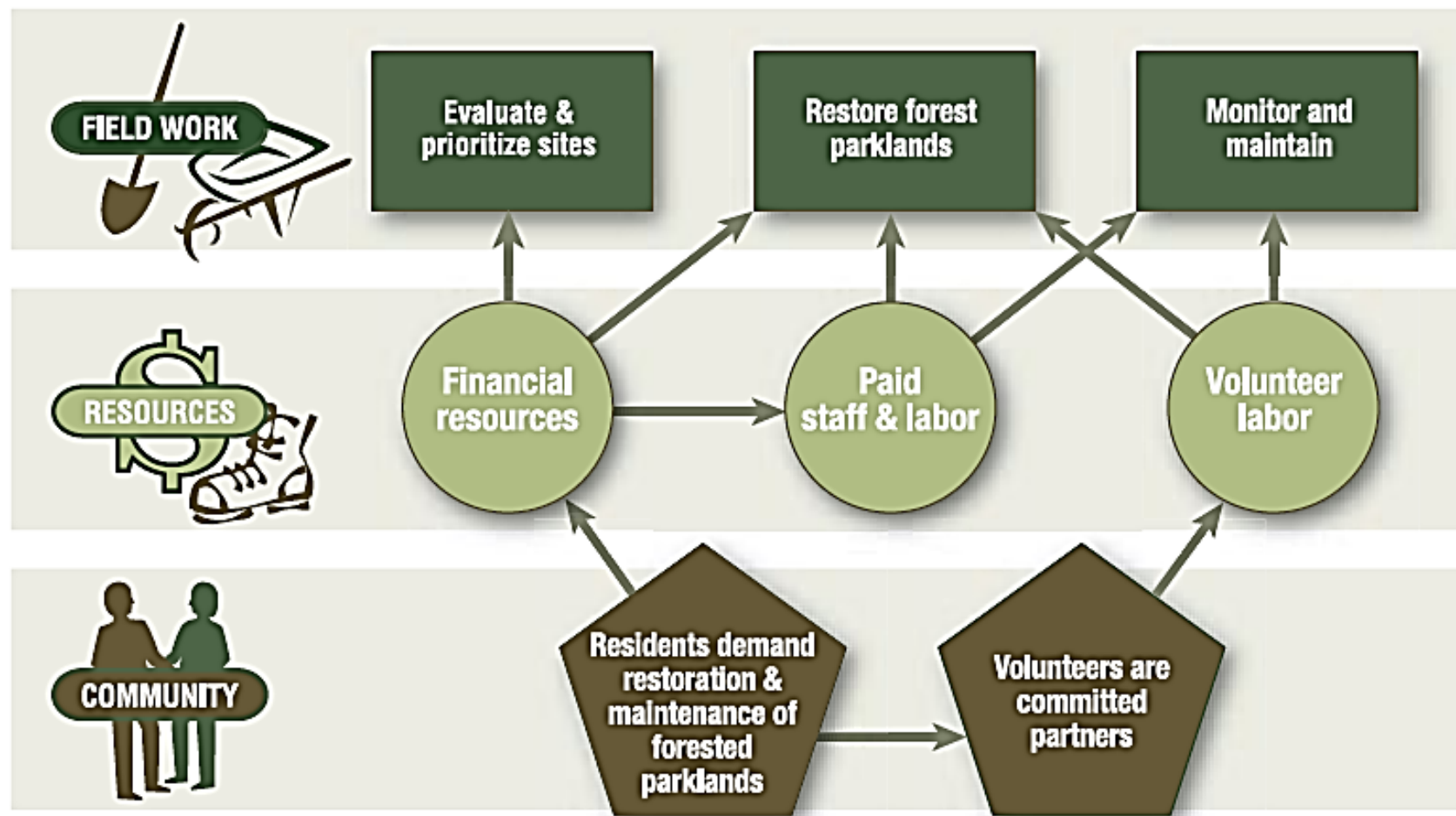


Figure 1. Balanced Scorecard Strategy Map



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## **Forest Management Plan**

### **FSC PRINCIPLE 7: MANAGEMENT PLAN**

**A management plan -- appropriate to the scale and intensity of the operations -- shall be written, implemented, and kept up to date. The long term objectives of management, and the means of achieving them, shall be clearly stated.**

# Shift The Forest Paradigm - Asset Management



2005—2010



## Major Maintenance Plan



June 2004

Planning and Development Division





# FOREST RESOURCE

## Understanding the Forest



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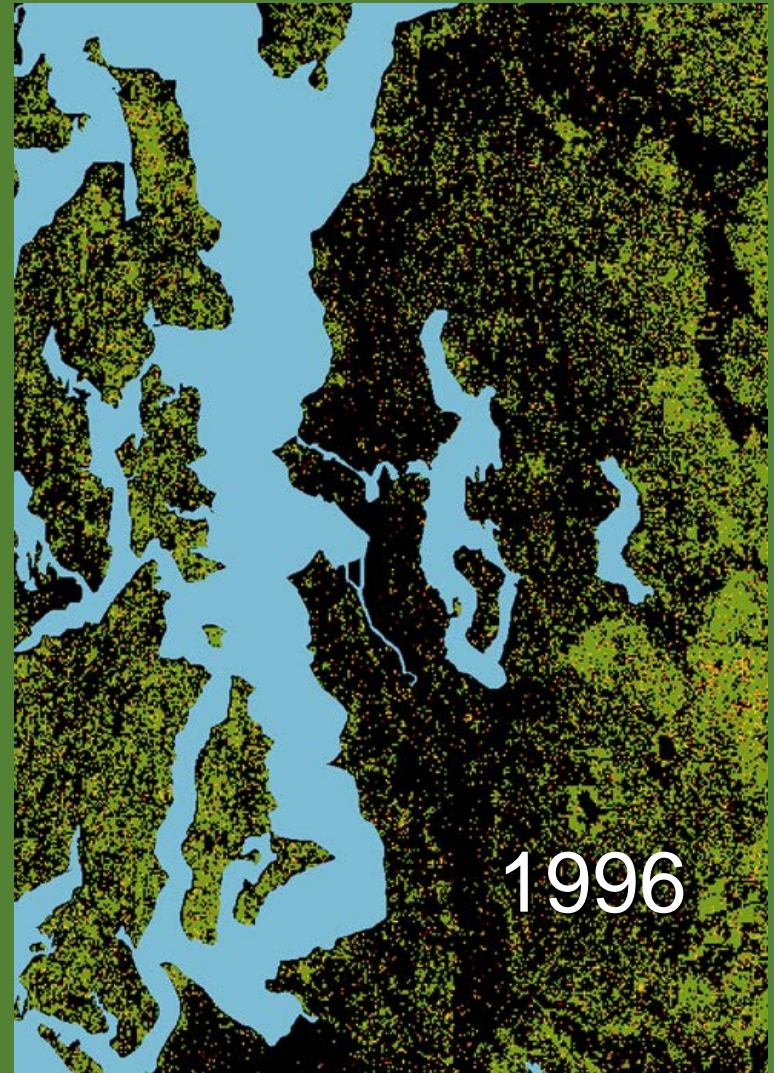
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## Land Ownership

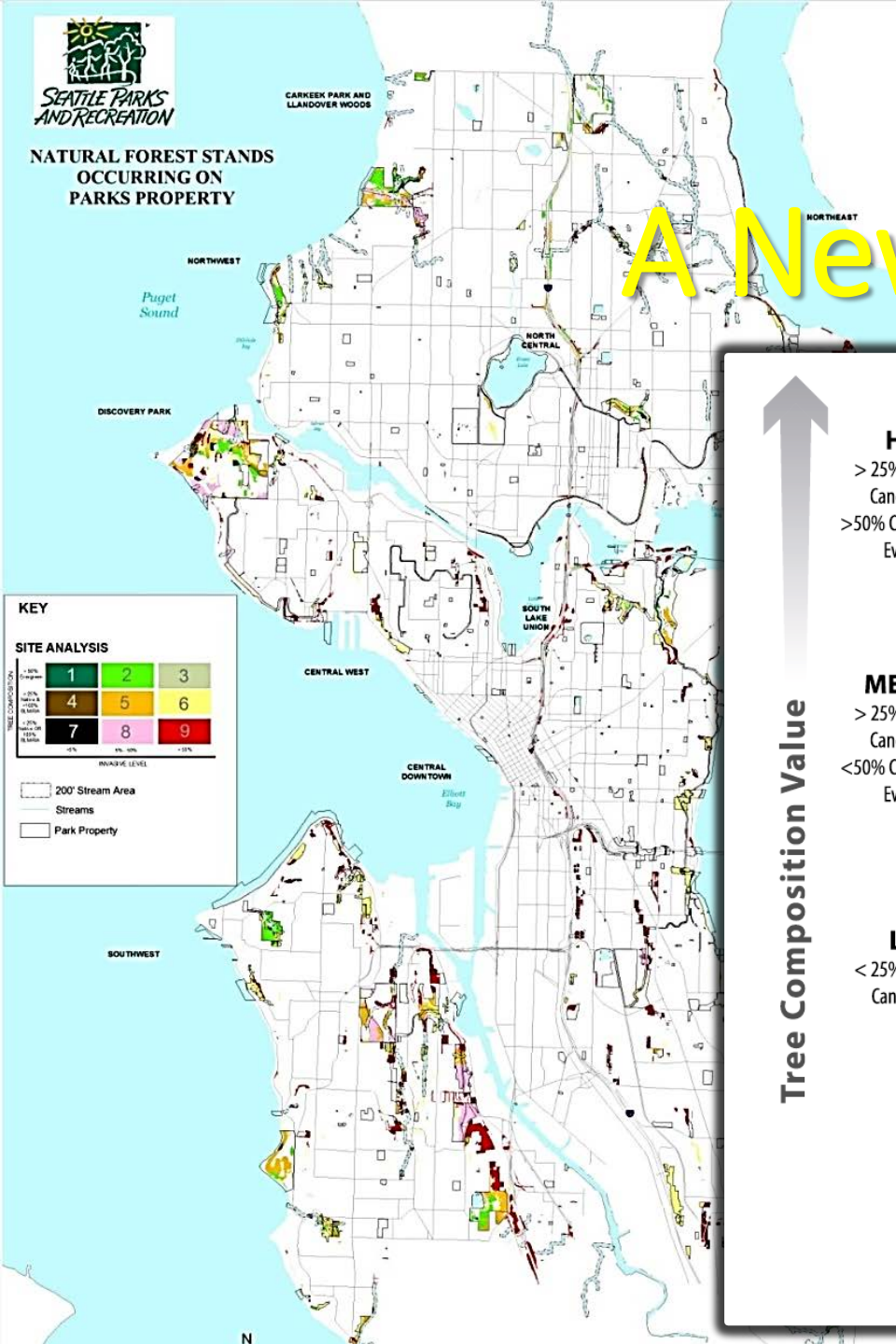
FSC INDICATOR 2.1.c: Boundaries of land ownership and use rights are clearly identified on the ground and on maps prior to commencing management activities.

# Decline in the Urban Forest





**NATURAL FOREST STANDS OCCURRING ON PARKS PROPERTY**



**KEY**

**SITE ANALYSIS**

1	2	3
4	5	6
7	8	9

INVASIVE LEVEL: 0% to >50%

200' Stream Area  
Streams  
Park Property

# A New "Old" Scheme

Tree Composition Value

**HIGH**  
> 25% Native Tree Canopy Cover,  
>50% Canopy Cover is Evergreen

**MEDIUM**  
> 25% Native Tree Canopy Cover,  
<50% Canopy Cover is Evergreen

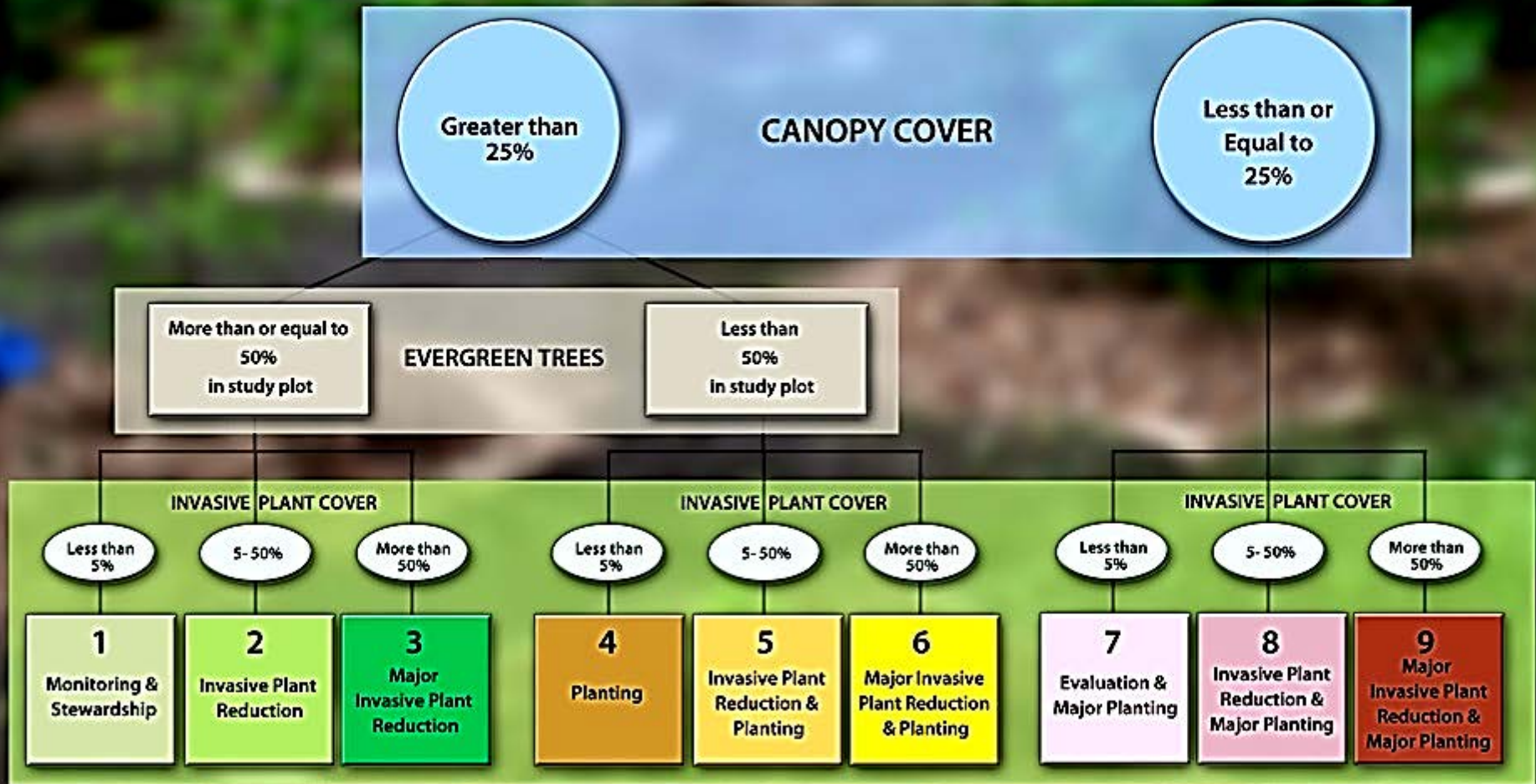
**LOW**  
< 25% Native Tree Canopy Cover

<p><b>1</b></p> <p>Monitoring &amp; Stewardship (41 ac)</p>	<p><b>2</b></p> <p>Invasive Plant Reduction (330 ac)</p>	<p><b>3</b></p> <p>Major Invasive Plant Reduction (95 ac)</p>
<p><b>4</b></p> <p>Planting (39 ac)</p>	<p><b>5</b></p> <p>Invasive Plant Reduction &amp; Planting (442 ac)</p>	<p><b>6</b></p> <p>Major Invasive Plant Reduction &amp; Planting (608 ac)</p>
<p><b>7</b></p> <p>Evaluation &amp; Major Planting (44 ac)</p>	<p><b>8</b></p> <p>Invasive Plant Reduction &amp; Major Planting (380 ac)</p>	<p><b>9</b></p> <p>Major Invasive Plant Reduction &amp; Major Planting (633 ac)</p>

**LOW** (Less than 5% invasive cover)      **MEDIUM** (5%-50% invasive cover)      **HIGH** (More than 50% invasive cover)

Threat →

# Tree-age Flow Chart



# Tree-age Generator

- ✓ ***Greater than 25% Canopy Cover***
- ✓ ***Greater than 50% Evergreen***
- ✓ ***5% - 50% Invasive Cover***



**Recommended Restoration Strategy: *Invasive Plant Reduction.***



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## Ecosystem Services

### PRINCIPLE 6: ENVIRONMENTAL IMPACT

Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.

# Management Infrastructure

Understanding the difference  
between cost and funding



# Management Requires Values

- Assets are valued via existing infrastructure paradigms
- Economic values gain “credibility”
- Values must exceed costs
- Costs are easily quantified

# Economic Implications for Seattle

## “Urban Ecosystem Analysis of Seattle”

(American Forests™, 1999)

Estimated tree loss from 1972–96 cost Seattle:

- **\$1.3 million/year** in stormwater mitigation
- **\$15 million in lost** stormwater retention value
- **\$226k/year loss** in removal of airborne pollutants



# Limited Use of Herbicides

Criteria 6.6: Management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management and strive to avoid the use of chemical pesticides.

Sorted by Latin Name		MINIMUM TREATMENT DURATION	WINTER			SPRING			SUMMER			FALL			
WEED NAME	LATIN NAME		PLANT TYPE/TREATMENT TYPE(S)	December	January	February	March	April	May	June	July	August	September	October	November
Butterfly Bush	<i>Buddleia davidii</i>	Tall deciduous shrub						New leaves emerge			Flowering		Flower/Seed		
		Manual	Dig up (weed wrench might work)												
		Chemical								Triclopyr foliar spray		Basal or cut stump			
												Glyphosate, foliar or cut stump			
Bindweed or Morning Glory	<i>Calystegia sepium</i> or <i>Convolvulus arvensis</i>	Herbaceous Perennial			Emerge			Flower			Seed				
		Mechanical	>2 years			Cut or pull; remove fragments	Cut or pull; remove fragments	Cut or pull; remove fragments	Cut or pull; remove fragments	Cut or pull; remove fragments	Cut or pull; remove fragments	Cut or pull; remove fragments	Cut or pull; remove fragments	Heavily mulch infested area	
		Shade	3 to 5 years	Cover infested area with landscape fabric or cardboard/woodchips - need to maintain cover so plants get no light over whole population; watch surrounding area for plants (at least 5-10 feet from infested area)											
		Chemical	>2 years						Spray or wipe on dicamba (at bud stage) or triclopyr (full flower). Unwind from desirable vegetation before spraying.		Spray or wipe on glyphosate (full bloom to early seed) or 2,4-dicamba (post bloom-follow up in spring); when re-treating, wait until stems are > 12 inch long				
		Mechanical + Chemical							Cut plants and spray/wipe on glyphosate when regrowth > 12 inches						



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## **Active Management to Restore Native Habitat**

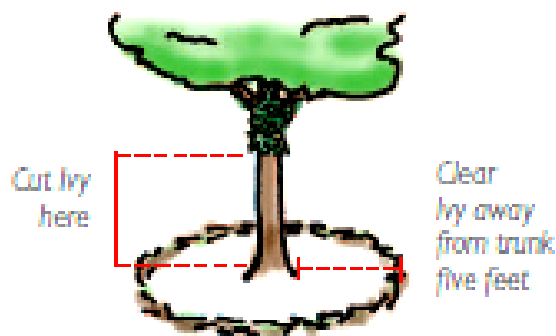
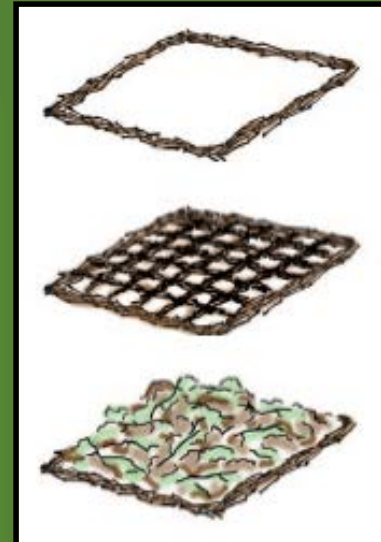
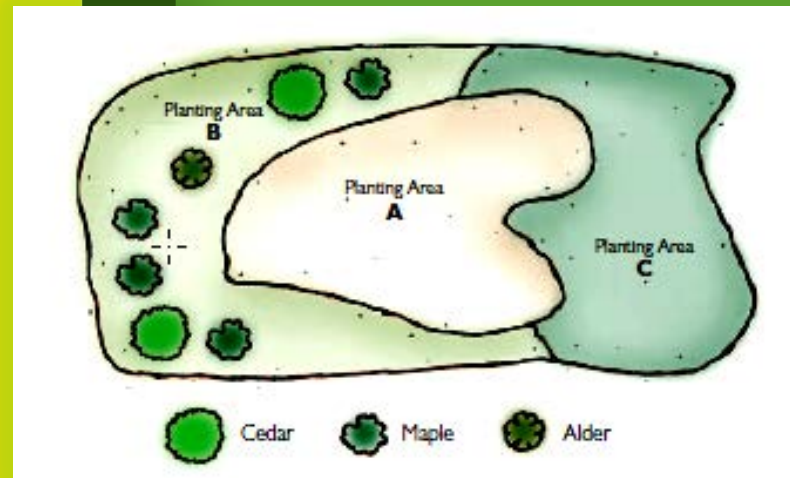
**FSC CRITERIA 6.3 Ecological functions and values shall be maintained intact, enhanced, or restored, including:**

- Forest regeneration and succession.
- Genetic, species, and ecosystem diversity.
- Natural cycles that affect the productivity of the forest ecosystem.

Photo credit: Forterra

# Best Management Practices

## Forest Steward Field Guide



"Lifesaver" Tree Ring – Cut ivy at shoulder height and again at base of tree. Do not attempt to pull vines out of tree. Roll ivy back away from tree in logs like those illustrated. Clear at least five feet back from each tree trunk.



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# Best Management Practices

## Phase 1:

- Hand weeding (average 400 person hours)

## Phase 2:

- Hand weeding (40 hours in spring)
- Fall planting (100 hours)

## Phase 3:

- Hand Weeding
- Watering and mulching (40 hours total)

## Phase 4:

- Stewardship maintenance as necessary (average 5 hours)
- Now called Phase FORESTRY!

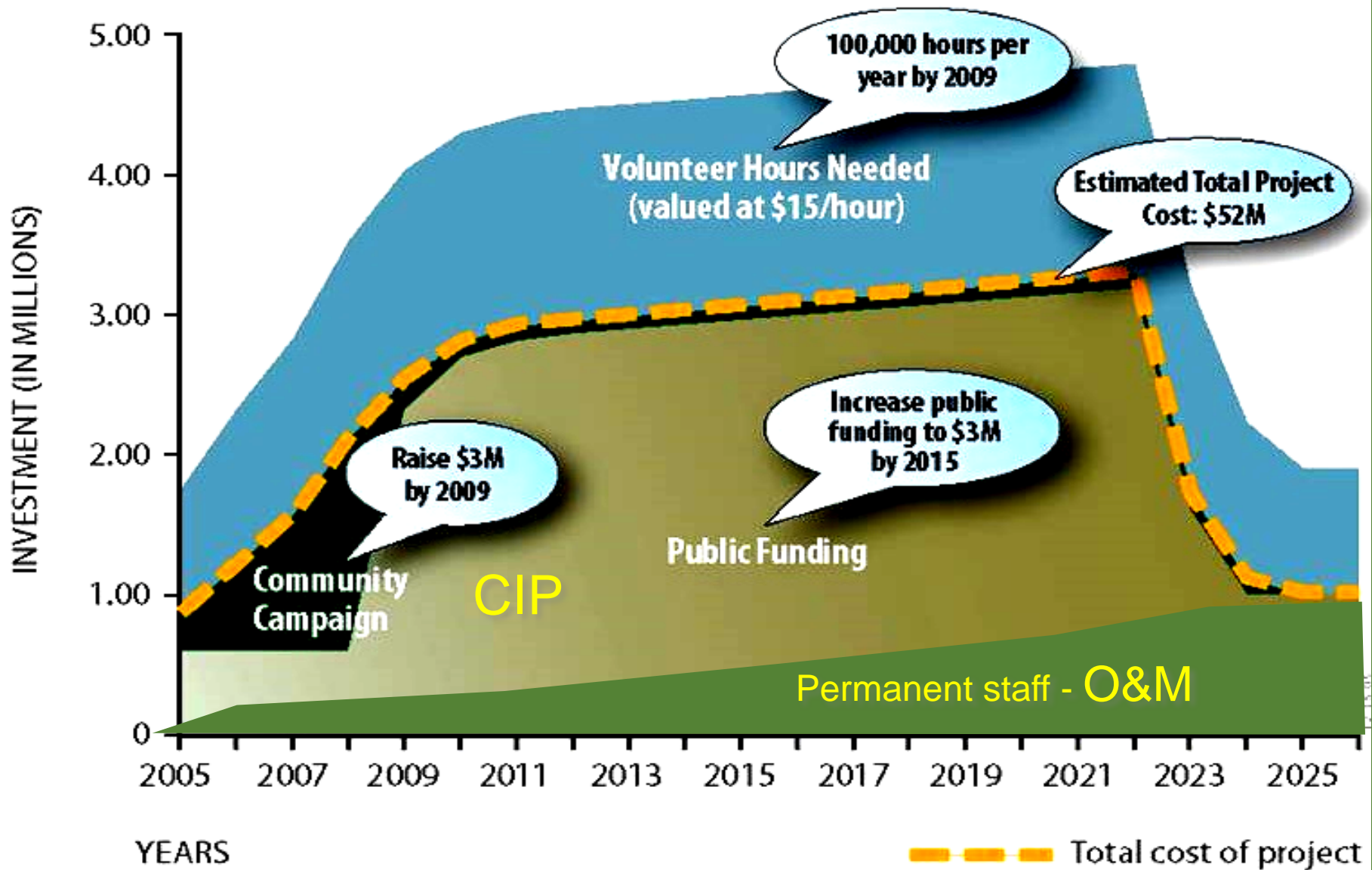
Investment for each acre of restoration:

- 585 person hours at a cost of \$20,000
- 1:1 match in volunteer hours

# Application of Cost Model

Tree-age category	Average restoration cost/acre	Acres	Total Cost/ category
1	\$2,800	41	\$114,800
2	\$9,500	330	\$3,135,000
3	\$15,400	95	\$1,463,000
4	\$9,500	39	\$370,500
5	\$16,100	422	\$6,794,200
6	\$22,000	608	\$13,376,000
7	\$15,400	44	\$677,600
8	\$22,000	380	\$8,360,000
9	\$27,900	633	\$17,660,700
	<b>Total</b>	<b>2,592</b>	<b>\$51,951,800</b>

# Economic Infrastructure







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## **Monitoring**

### **FSC PRINCIPLE 8: MONITORING AND ASSESSMENT**

**Monitoring shall be conducted -- appropriate to the scale and intensity of forest management -- to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.**

# Long-Term Monitoring and Maintenance

- The other elephant in the closet.....
- Requires the build up to a \$1.25 million (in 2006 \$'s) annual maintenance budget over the next twenty years to adequately maintain the restored forest
- Potential sources of increased funding include an ecological services utility fee and other creative solutions

# Community Relations

## FSC PRINCIPLE 4: COMMUNITY RELATIONS AND WORKER'S RIGHTS

Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.



## Stakeholder Process

FSC Criteria 4.4 Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups (both men and women) directly affected by management operations.

# COMMUNITY FRAMEWORK

**Supporting and Building Citizen  
Stewards**

# Building A Framework of Community Support

- Projects in neighborhoods with active interest
- Leveraged funding by 300% - 500%
- Mutual learning opportunity – BMPs, restoration costs, etc.
- Over 22,000 voters participating yearly

# Community Resource: Individual Volunteers

## Forest Stewards

- Committed nearby residents
- Over 125 in 70 parks
- Trained in:
  - Forest restoration science
  - Onsite leadership
  - Volunteer recruitment
  - PAPERWORK



# Community Resource: Friends Of “ “ Groups

## Friends Of “... “ Groups

- The core of the GSP
- Small groups of community stakeholders specific to a park and an issue.
- Over 180 citywide for a number of issues
- Currently 30 specifically tied to forest restoration
- Essential for soliciting external funds, developing community support and advocacy



# Community Resource: Volunteer Organizations

## Volunteer Organizations:

- >100 Volunteer Organizations
- Organizations are usually National , Regional or Citywide groups
- Usually have a broad scope of philanthropic services
- Provide large numbers of volunteers at single events
- Provide volunteer recruiting services





# Community Resource: Schools

Grade Schools, High Schools, Universities,  
Community Colleges:

- Over 100 from across the city and outside of the city
- They call us
- Tying practical outdoor experiences to classroom objectives
- Will work from one day to several years
- Can be one class or the entire school
  - 1<sup>st</sup> year MBA students from the University of Washington – Competitive and do not play well with each other
  - 5<sup>th</sup> Grade Class from Cooper Elementary - Tougher and do play well with each other



# Community Resource: Private Corporations



REI to Regional Banks, over 100 corporate  
volunteers and sponsors



# Increase Volunteer Empowerment

## Build Tools Volunteers Can Use

Provide our Forest Stewards

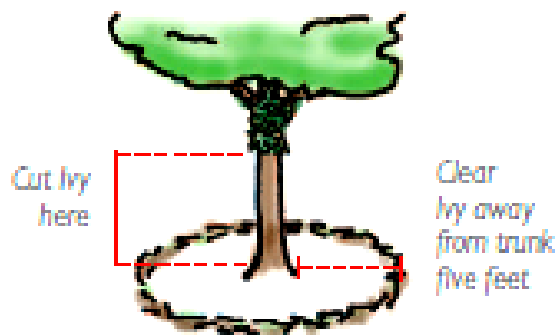
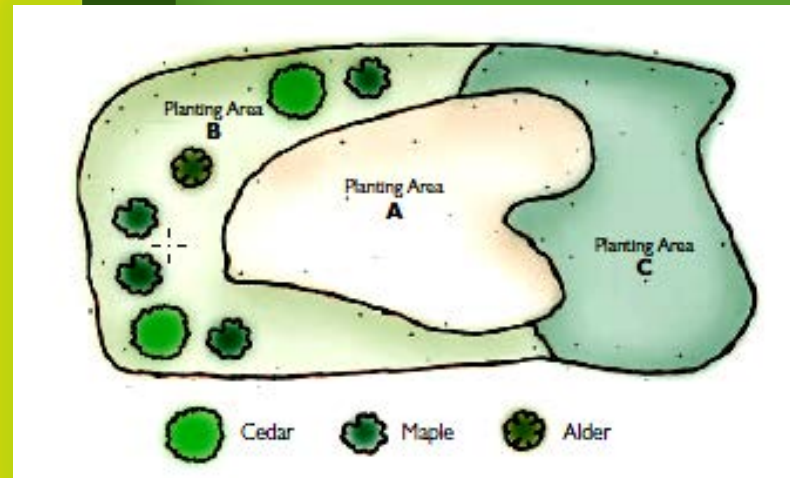
- Knowledge
- Decision making skills
- Planning abilities
- Volunteer Leadership tools
- Online data entry (*They actually do it!*)



***Helping citizens make the change they are committed to.***

# Best Management Practices

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# Orientations and Trainings





# Best Management Practices

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## Phase 3:

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- Stewardship maintenance as necessary (average 5 hours)
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Investment for each acre of restoration:

- 585 person hours at a cost of \$20,000
- 1:1 match in volunteer hours



# Professional Crew Support



# Site Visits with GSP Technical Staff





# Recognize and Reward Volunteers

## Green Seattle Day 2005-14

- 700 volunteers at 19 parks annually
- Plant over 3,500 trees, shrubs and groundcover in a day
- Participants were rewarded with a free concert by local superstar

SHAREHOLDERS MEETING  
Annual Awards Ceremony  
Picnics  
Cool Metal Clipboards  
JOBBOX





# Forest Sustainability Model

## The Forest Resource

- Forest value and threat assessed
- “Best” potential forest identified
- Work practices improved and perfected

## Management Infrastructure

- Funding needs quantified
- Crew compliment & skills identified
- Internal coordination improved

## Framework of Community Support

- Active citizens engaged and supported
- Training improved
- Outreach and education tools developed

# Economic

## PRINCIPLE 5: BENEFITS FROM THE FOREST

Criteria 5.1 Forest management should strive toward economic viability, while taking into account the full environmental, social, and operational costs of production, and ensuring the investments necessary to maintain the ecological productivity of the forest.



urban hardwoods



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# Economic

## PRINCIPLE 5: BENEFITS FROM THE FOREST

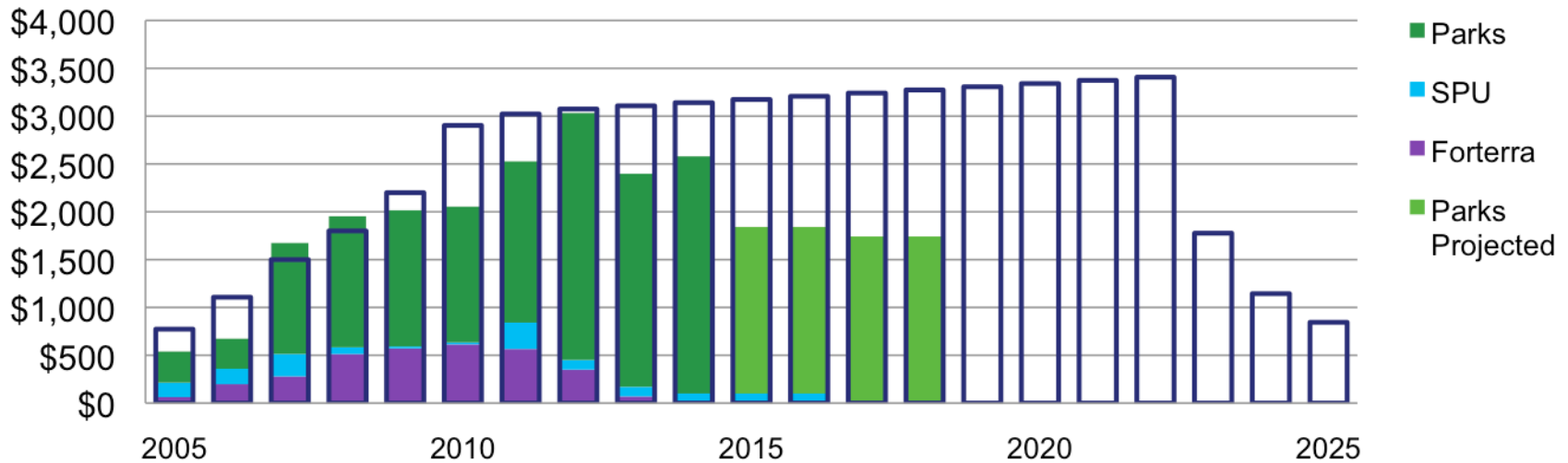
Criteria 5.2 Forest management and marketing operations should encourage the optimal use and local processing of the forest's diversity of products.

# Measuring Performance

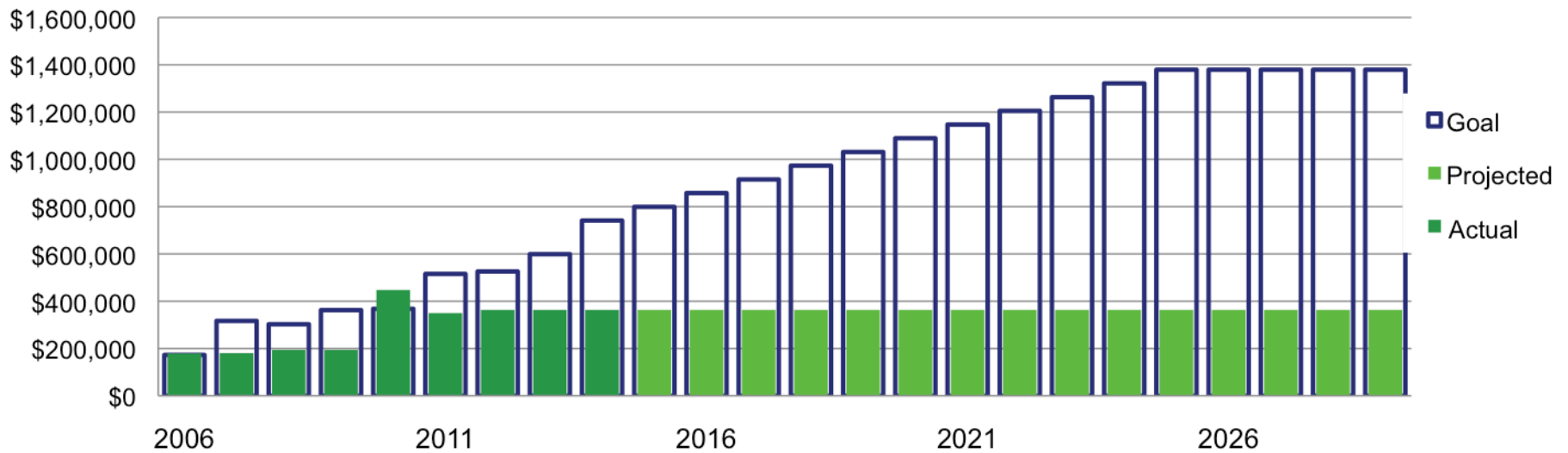
<b>Outcomes:</b>	<b>(2005-2014)</b>
Acres in restoration	1,250
Trees planted	125,000
Total hours worked :	
Paid	100,000
Volunteer	550,000
Dollars spent	
City	\$16 million
Leveraged	\$23 million
Cost per acre	\$24,000

## GSP Capital Investment Goal and Actuals

(in \$1,000)



## GSP Maintenance Goal and Actuals





## POLITICS

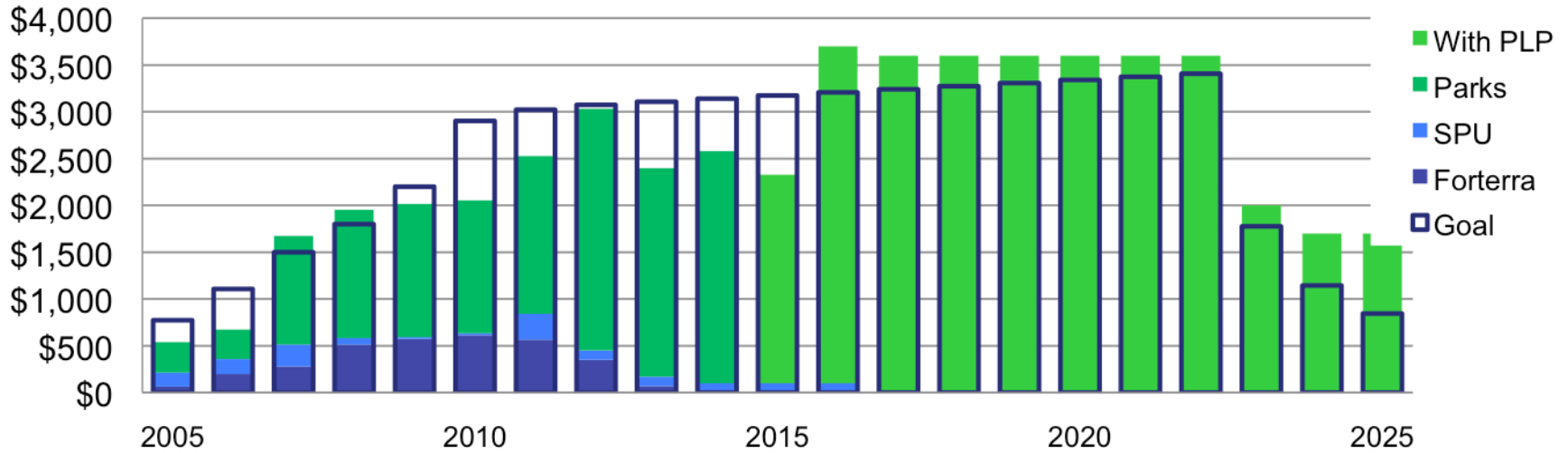
**Last update:** Aug-06-2014 10:35 PM

**Race:** City of Seattle Prop 1 - Park District, City of Seattle, Prop 1 - Seattle Park District

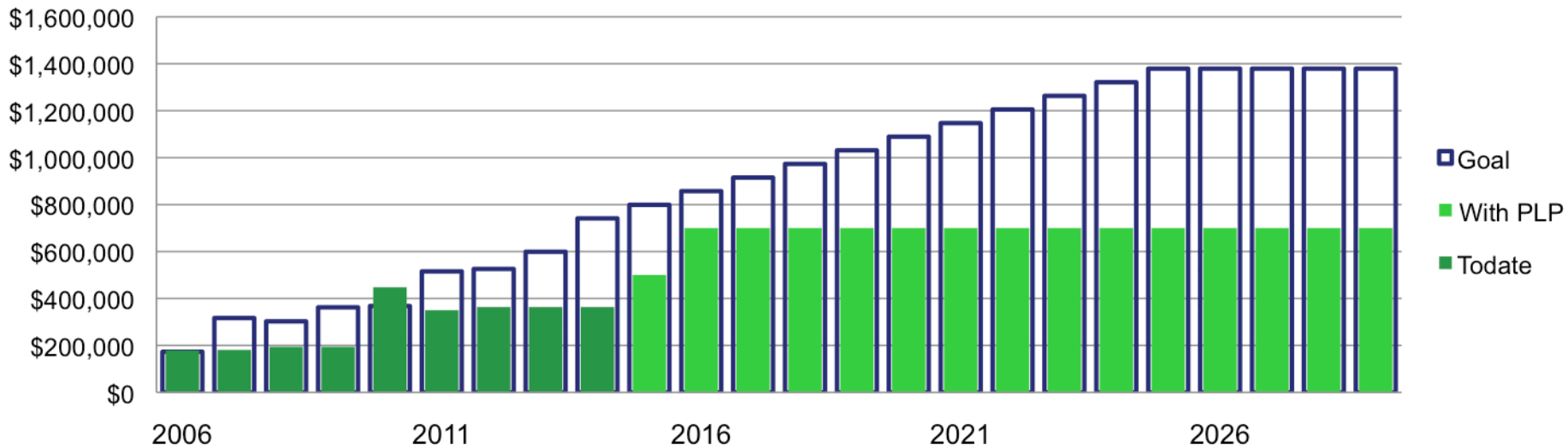
Winner	Choice	Votes	Vote %
	For	60,043	53%
	Against	53,885	47%

## GSP Capital Investment Goal with PLP

(in \$1,000)



## GSP Maintenance Goal with PLP



# Forest Sustainability Scale

Less



More

## Forest Resource—

*A healthy and biologically diverse forest*

Less



More

## Management Infrastructure –

*Well managed and diverse funding sources*

Less



More

## Community Support Framework –

*Across all levels and communities*





# Urban Forest Reality Model

## The Forest Resource

- Urban forests are ASSETS

## Management Infrastructure

- Maintenance is the new SEXY

## Community Support Framework

- Volunteers are not “FREE”

# Thank You

For more information Contact:



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[www.nwcertified.org](http://www.nwcertified.org)



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