Urban Greening Economics & Partnerships

Business & Sustainable Cities

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July 5, 2008
Outline of Talk

- Introduction to Seattle
- Urban Greening Economics
- City Sustainability & Business
- Products
- Buildings & Facilities
- Community Strategies
  - Donations
  - Partnerships
Seattle sea to mountain
Home to . . . . .
University of Washington
Home to . . . . . . Microsoft
Home to...... Boeing Co.
Home to . . . . . Starbucks
Home to . . . . . Amazon.com
Home to . . . . . Ichiro - thanks!

- source: Associated Press
Outline of Talk

- Introduction to Seattle
- **Urban Greening Economics**
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CITYgreen software
Seattle 1999

Vegetation Change
Puget Sound Area 1972-1996

<table>
<thead>
<tr>
<th></th>
<th>1972</th>
<th>1986</th>
<th>1996</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Vegetation</td>
<td>1500</td>
<td>1750</td>
<td>2000</td>
</tr>
<tr>
<td>Moderate Canopy</td>
<td>500</td>
<td>400</td>
<td>350</td>
</tr>
<tr>
<td>High Canopy</td>
<td>300</td>
<td>350</td>
<td>400</td>
</tr>
</tbody>
</table>

Legend:
- Black: Low Vegetation (<20% Vegetated)
- Yellow: Moderate Canopy (20-50% Vegetated)
- Green: High Canopy (>50% Vegetated)
Seattle Region

UEA - Major Findings

● 1972 to 1996, areas of heavy tree canopy cover declined by 37%

● lost trees remove air pollutants & particulates - $95 million per year

● 29% increase of stormwater flow during peak storms, $2.4 billion engineering replacement costs
Urban Forest Benefits
analysis software - economics

Tools for assessing and managing Community Forests
About i-Tree >>

Assessing Urban Ecosystems
Find out how to assess all the trees in your community.

Assessing Street Tree Populations
Learn how to assess just the street trees in your community.

Applications and Utilities
Access tools available for your tree management.

The i-Tree Tools help quantify the structure, function and value of tree populations. They provide a scientific process for data collection, analysis and quantification of the benefits.

Find out more >>
CITYgreen software
Washington DC 2002

Tree Cover Change in Washington, DC Metro Area

- Heavy Canopy (>50%)
- Moderate Canopy (20-49%)
- Low Canopy (<20%)

1973

1985

1997
Washington DC Region
Forest Analysis - Major Findings

- **increased stormwater flow** during peak storms = $4.74 billion costs (per 30-year construction cycle)
Washington D.C.
analysis . . tree loss . . NGO

- donation - $50 million U.S.
- Betty C. Casey
Urban Greening Benefits

- city trees = public good
- scientific studies of benefits
- valuation of benefits (air, water, health)

Questions or Comments?
Outline of Talk

- Introduction to Seattle
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- City Sustainability & Business

business investment in green cities and better communities
Outline of Talk

- Introduction to Seattle
- Urban Greening Economics
- City Sustainability & Business

**Products**
- Buildings & Facilities
- Community Strategies
  - Donations
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Sustainability & Products
Concepts & Examples

• life cycle analysis
• ecological accounting
• making more with less!
Concept: Life Cycle Analysis (all products & materials)

ecological accounting = sustainable alternatives
Concept: Life Cycle Analysis (all products & materials)
Concept: Life Cycle Analysis

milk!

ecological accounting = sustainable alternatives
Apparel
NIKE “trash talk” shoe

- February 2008
- upper - leather scraps
- mid-sole - scrap ground foam
- outsole - environmentally-preferred rubber

ecological accounting = sustainable alternatives
Product Life Cycle Analysis
(all products & materials)
Concept: Life Cycle Analysis (all products & materials)

ecological accounting = sustainable alternatives

reduce embedded energy
Concept: Life Cycle Analysis (all products & materials)

life cycle of tire

carbon (Nissan)
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Sustainable Buildings

- sustainability certification
- USGBC - NGO - U.S. national
- architecture focus
LEED
Green Building Rating Systems

- USGBC
- Leadership in Energy & Environmental Design
- using tools and performance criteria
- building and development checklist
- started in U.S., now 41 countries
LEED Performance Checklist

- sustainable site development
- water savings
- energy efficiency and atmosphere
- materials selection
- indoor environmental quality
LEED Rating

- based on Performance Checklist
  - Certified
  - Silver
  - Gold
  - Platinum
Bronx Library (New York City)

- New Construction Certification
- score: 34
  LEED rating: Silver
City of Bainbridge Island, City Hall

- LEED rating: Certified
City of Bainbridge Island, City Hall

- LEED rating: Certified
Islandwood (environmental ed center)

- LEED rating: Gold
Seattle Public Library

- LEED rating: Silver
Seattle Public Library

- LEED rating: Silver
Seattle Public Library

- LEED rating: Silver
LEED Certification
Summary

- Performance Criteria = score
- Rating Levels: Silver, Gold, Platinum
- Incentive not regulation
- widely used - public & private sector
CASBEE
Comprehensive Assessment System for Building Environmental Efficiency

- Japan Sustainable Building Consortium
- performance score based on building design
- additional information?
Sustainability in Business

- goods, products and services
  - life cycle analysis & ecological accounting
- facilities and buildings
  - LEED/CASBEE

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Community Strategies
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Community & Neighborhoods
Social Sustainability

- urban greening movement!
- parks, gardens, urban forest, open spaces
- public goods
- citizen and volunteer work
- private investment & support
people help plant & steward
citizen stewards

- volunteers
- NGOs (EarthCorps)
Private Investment
Urban Greening NGOs

- examples from the U.S.
- partnerships
- community sustainability

model 1: donations to local or regional NGOs

model 2: partnership resources to major NGO, distribution to local or regional NGOs
**Model 1: Examples**

**Model 1:**
- Business or Foundation
- Donations to local or regional NGOs

**Model 2:**
- Partnership resources to major NGO, distribution to local or regional NGOs

**Business or Foundation**

- Model 1: Donations to local or regional NGOs
Model 1: Direct Donations
Boeing Company & Cascade Land Conservancy

- “Cascade Agenda” - start May 2005
- 100 year visioning & action for Seattle area
- conserve 526,000 hectares forests & farms
- smart urban growth & development

- $750,000 U.S. donated 2008
Boeing & Environment

Boeing Environmental Philanthropy
Boeing-Sponsored Employee Volunteerism

Download the full report (PDF)
Print this page

2008 Environment Report

Boeing Environmental Philanthropy

Recognizing the interdependence between our business and our communities, we believe that partnering with nonprofits and other key community stakeholders to promote environmental preservation is key to our role as a global corporate citizen.

In fact, the environment is one of Boeing’s five strategic community investment areas. Over the last five years alone, as a company we have made cash contributions of nearly $10 million to support innovative environmental programs across the globe to protect vital natural assets, restore or improve critical habitats and train citizens to protect and preserve the environment.

In 2007, our environmental preservation efforts included grants to:

- Green Corridor in support of its Tree Buddies program, which teaches middle school-aged students environmental awareness through visits to London’s Royal Botanic Gardens and other educational activities.
The Cascade Agenda
100 Years Forward

Three years ago, the Cascade Land Conservancy and its many partners began discussions with over 3,500 elected officials, scientists, business leaders, loggers, farmers, timber companies, students and private citizens in the King, Kittitas, Pierce and Snohomish county region. In the face of dramatic population growth, we wanted the community's opinion on what our region should look like in 100 years.

The response was overwhelmingly in favor of large-scale conservation of working forests and farms and the preservation of treasured recreation and habitat lands. That response became The Cascade Agenda, which was unveiled in May 2005 (www.cascadeagenda.com).

We believe that preservation of the environment and natural landscapes is essential to creating a high quality
Model 1: Direct Donations

Toyota America & TreePeople (Los Angeles)
MillionTreesNYC (New York)
Model 1: Direct Donations

TreePeople

- urban forestry - urban water management
- Toyota - $10,000 U.S. project grant
Model 1: Direct Donations

MillionTreesNYC

- urban forestry, parks, open spaces
- Toyota - $ U.S. project grant
Model 2: Examples

model 2: partnership resources to major NGO, distribution to local or regional NGOs

model 1: donations to local or regional NGOs
Model 2: Partnerships
IKEA &
American Forests/Global Releaf

- IKEA awards funds to American Forests
- AmFor distributes funds for “releaf” projects in U.S.
Model 2: Partnerships
IKEA

IKEA awards funds to American Forests
AmFor distributes funds for "releaf" projects in U.S. and world

$?? U.S.
Model 2: Partnerships
American Forests/Global Releaf

IKEA Plant-A-Tree Cool the Globe

Plant your trees now!
IKEA, an international leader in promoting sustainable business practices, has teamed up with American Forests to clean the air and sequester carbon through tree planting. The average American family needs to plant 30 trees to offset the CO2 produced by their daily energy use. By planting your trees now, you will join IKEA and American Forests in planting trees to offset CO2 and cool the globe.

Our focus is to offset the CO2 emitted from cars traveling to and from IKEA stores. Each IKEA store will plant enough trees (about 33,100 trees each year) to offset the annual CO2 emissions produced by IKEA co-workers and IKEA visitors driving to the store each year. IKEA’s offset trees be planted in AMERICAN FORESTS Global ReLeaf projects around the US.

"Being successful with social and environmental work is not an easy thing. It takes a dedicated organization. It takes clear goals, strategies, time plans and responsibilities. And above all, it takes a vision to create a better everyday life for people and nature."

"Plant a Tree Cool the Globe"
Model 2: Partnerships
Home Depot Foundation & Alliance for Community Trees

- HDF provides resources to ACT
  (2007 - 310,000 community trees)

- ACT distributes to national network of 167 member organizations
  (7.8 million trees; 450,000 volunteers)
Model 2: Partnerships
Home Depot Foundation

- HDF awards to ACT - trees, capacity building, organizational strength
Model 2: Partnerships
Alliance for Community Trees

Community Tree Leadership Forum - California
August 1-2, 2008
University of California
Santa Cruz, CA
Registration deadline: July 18, 2008

August 6-9, 2008
Kellogg West Conference Center & Lodge
Pomona, CA
Registration deadline: July 25, 2008

The Alliance for Community Trees, Arbor Day Foundation, and California ReLeaf are teaming up to offer an intensive two-day training program focused on the needs of nonprofits, service groups, volunteer coordinators, and community organizers engaged in urban and community forestry.

The trainings are designed to increase the impact of nonprofit and community organizations working on urban forest issues by providing opportunities to strengthen management and leadership skills. Seminars are targeted towards executives, staff, and board members, and are of value to state and
Model 2: Partnerships
ACT - NeighborWoods

Celebrate National NeighborWoods Month
October 2008!

SPOTLIGHT
Save the date for this year's NeighborWoods Month. Check back soon for updated planning tools!
Explore our website to see photos, news and resources from NeighborWoods Month 2007.

> Register your event
> View the Events Calendar
> Apply for a Mini-Grant
> Enter the Photo Contest
> View pictures from around the country

Join us as we improve our communities — tree by tree, street by street.

NEW PLANNING TOOLS
Online Banners & Ribbons
Various sizes available

©2008 Alliance for Community Trees
Model 2: distributed assets

Global Releaf
Green Cities Institute
Community Trees Awards
NeighborWoods

feedback: community need strategic giving

resources to major NGO: funds, staff, organizational assist

Business or Foundation
Model 2 Partnerships: Advantages

- Business protects investment
- Build capacity of NGO (e.g. executive loan)
- NGO can leverage for other resources
- Significant, visible projects promote more urban greening
- Visible results are good “green marketing” for business partner
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- investment and commitment -
leverage volunteer work!
Human Dimensions of Urban Forestry and Urban Greening

featuring research on peoples' perceptions and behaviors regarding nature in cities

Nature and Consumer Environments
Research about how the urban forest influences business district visitors.

Trees and Transportation
Studies on the value of having quality landscapes in urban roadsides.

Civic Ecology
Studies of human behaviors and benefits when people are active in the environment.

Policy and Planning
Integrating urban greening science with community change.

Urban Forestry and Human Benefits
More resources, studies and links . . .

Research Director
Kathleen L. Wolf, Ph.D.
Sustainability & Business

- goal! community sustainability
- business relationships with NGOs
- donations or partnership?
- Japan examples?

Questions or Comments?