



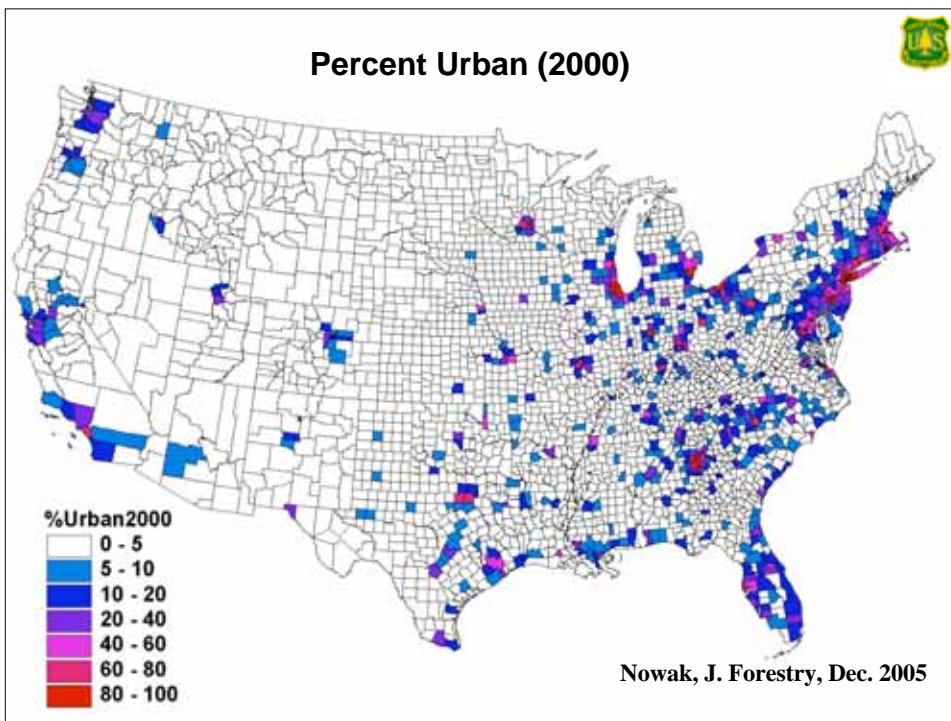
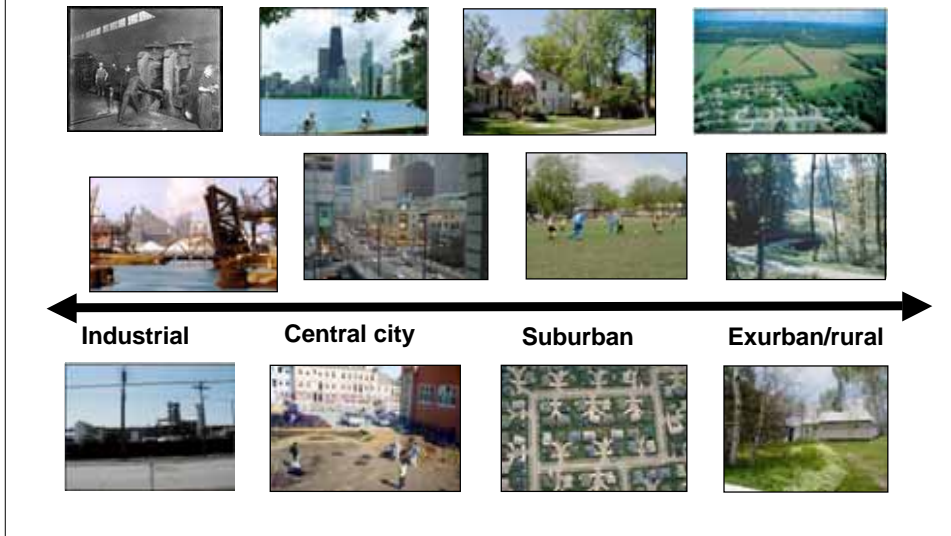
Information Sources for Research Plan

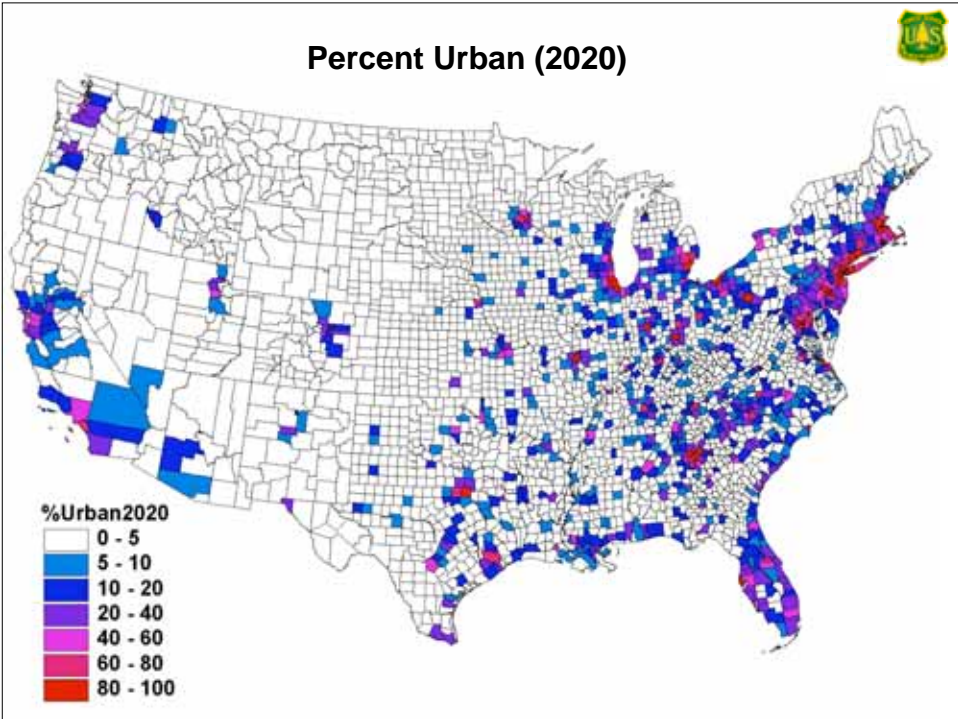
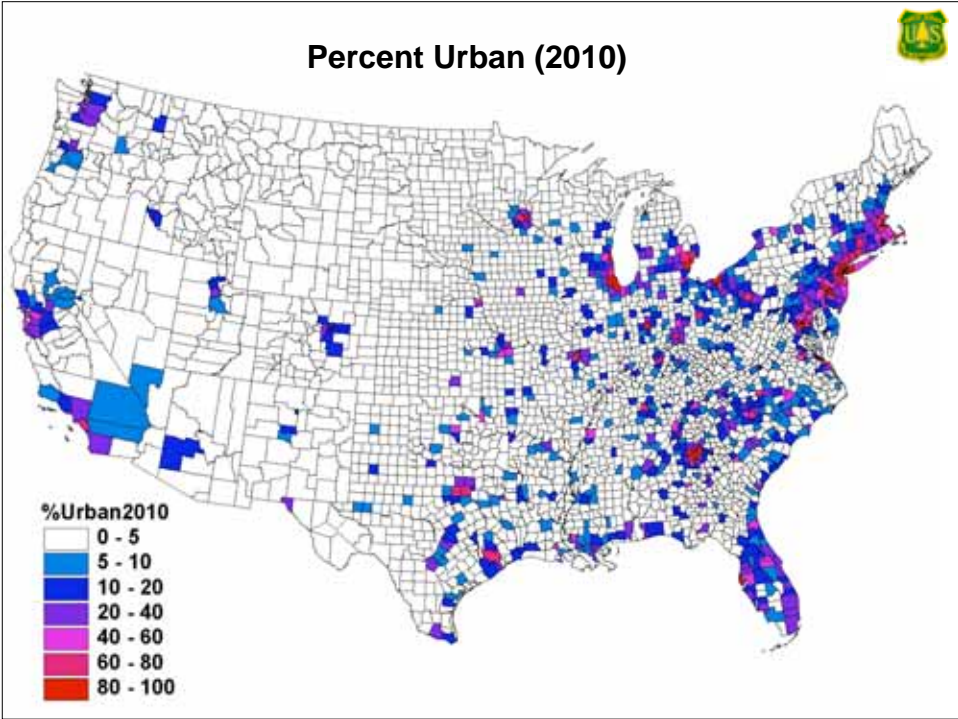
Sponsored by NUCFAC

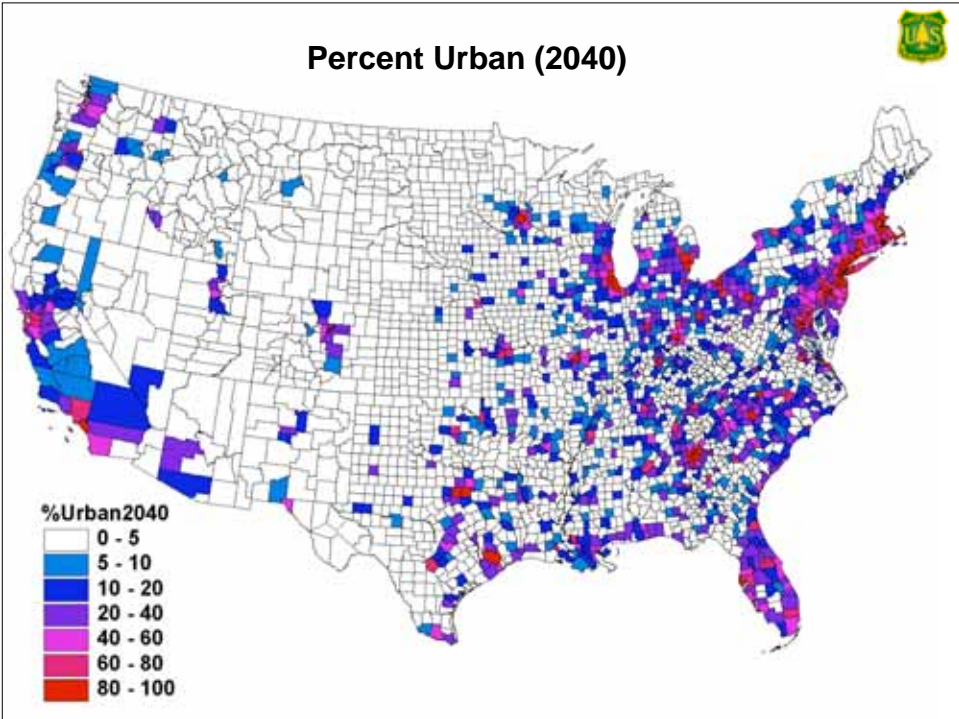
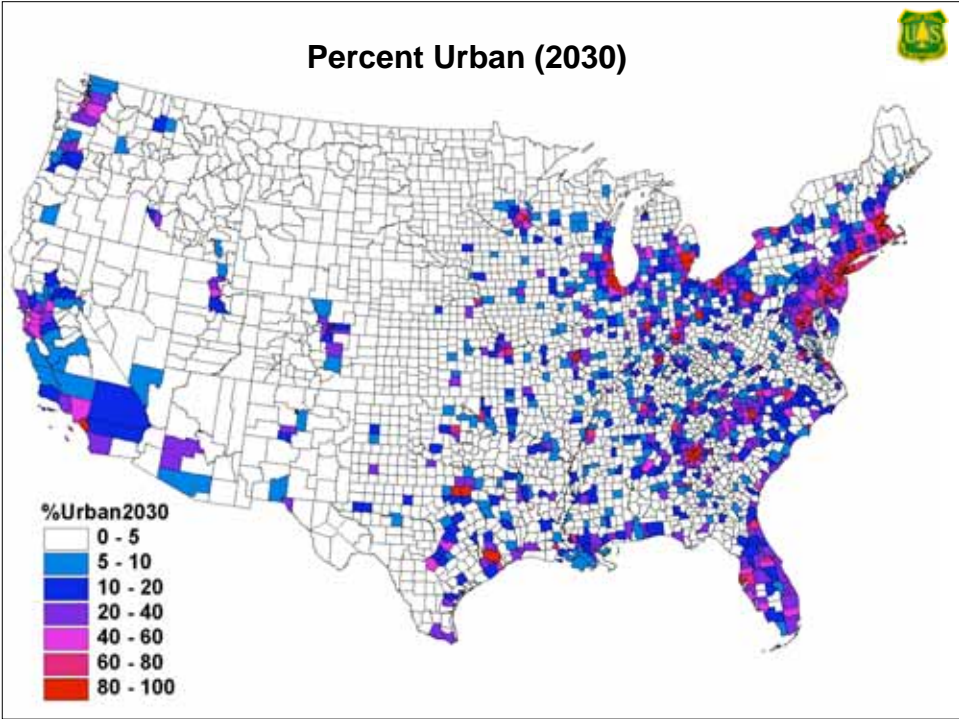
National Urban and Community Forestry Advisory Council

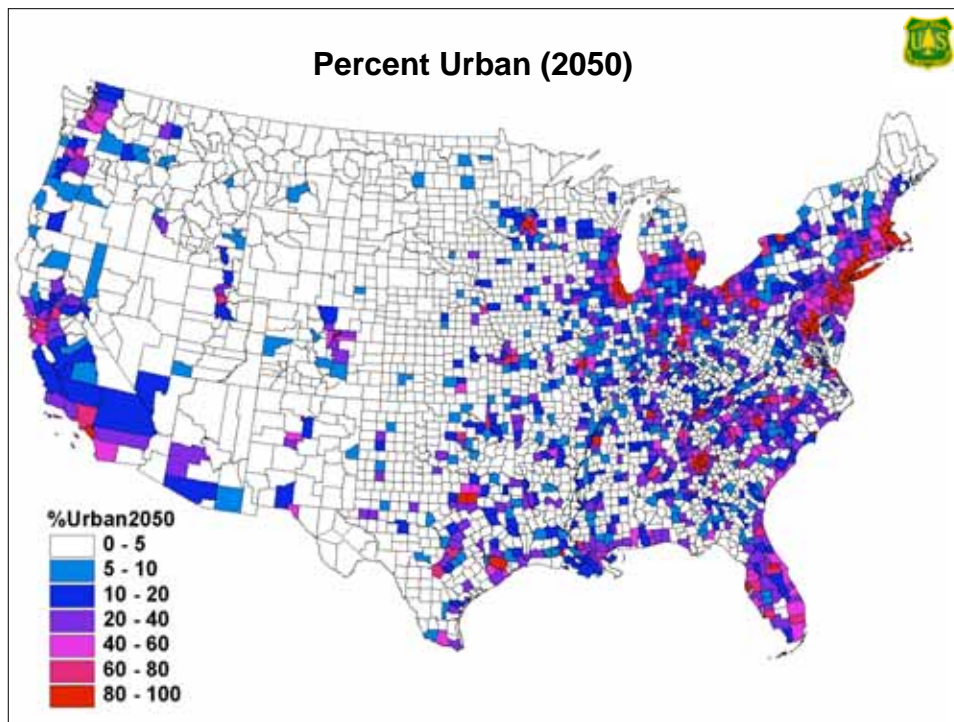
- National Survey of Scientists and Professionals, 2001
- Research Summit, December 2002
<http://www.treelink.org/nucfac/summit.pdf>
- Research Plan for 2005-2015, January 2006
[http://www.treelink.org/nucfac/
National_Research_Plan_for_Urban_Forestry_2005_2015.pdf](http://www.treelink.org/nucfac/National_Research_Plan_for_Urban_Forestry_2005_2015.pdf)

Urban and Community Forestry *The Landscape Spectrum*









Two Broad Programs of Research and Technology Transfer Have Been Identified:

1. Threats to ALL forests must be reduced and managed
2. Understanding of the environmental, social, and public health benefits provided by urban forests must be improved and highlighted.

Six Strategic Goals
Research and Technology Transfer
re: Urban Forests & Natural Resources

Goal 1 Expand Knowledge and Innovation About
Resource Management to Promote Urban
Ecosystem Health and Sustainability

Areas of Focus

- Extent and condition of forests
- Management tools
- Manage native forest patches
- Stresses and diseases



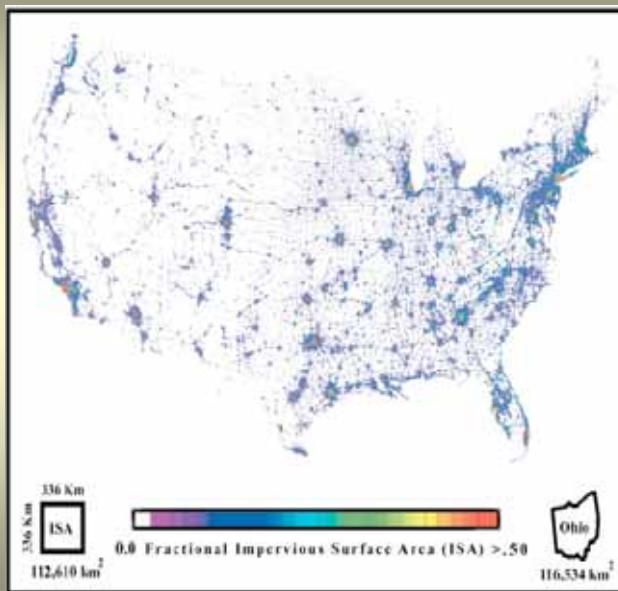
Goal 2 Assess and Monitor Changing Land Use, and Develop Policy and Practices to Reduce Landscape Change

Areas of Focus

- Forest changes with urbanization
- Trees and urban livability
- Better community growth
- Fuels and fire management



U.S. Impervious Surface Area



About 80% US of population in urbanized areas (US Census)

Each year!
3 M people
1 M homes
10,000 miles road
(NOAA 2004)

forest conversion=
carbon emissions

Goal 3 Develop and Deliver Knowledge to Mitigate and Control Invasive Species and Natural Disturbances

Areas of Focus

- Early detection & eradication of new pests
- Biological characteristics of existing and new pests
- Reduce stress and its impacts
- Ecosystems restoration



Goal 4 Expand Understanding of How Trees and Forests Enhance Air and Water Quality, and Other Environmental Services

Areas of Focus

- Improve air/water quality
- Contaminants removal from air, water, and soil
- Stormwater management
- Energy conservation





Tools for assessing and managing
Community Forests



About i-Tree >>



Assessing Urban Ecosystems

Find out how to assess *all* the trees in your community.

[click here to begin](#)

Assessing Street Tree Populations

Learn how to assess *just* the street trees in your community.

[click here to begin](#)


Applications and Utilities

Access tools available for your tree management.

[click here to begin](#)


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 >>](#)




i-Tree Urban Forest Analysis Tools

- Inventory, Analysis and Forecasting Programs:
 - ✓ UFORE - Urban Forest Effects Model
 - ✓ STRATUM - Street Tree Resource Analysis Tool for Urban Forest Managers
 - ✓ MCTI - Mobile Community Tree Inventory
 - ✓ Storm Damage Assessment Protocol







Goal 5 Understand and Implement Urban Forest Systems and Conditions That Enhance Human Health and Well-being

Areas of Focus

- Encourage physical activity
- Trees & healthy social functioning
- Canopy cover and skin cancer
- Mental and physical health



Chicago Public Housing with & without green spaces



**Wm. Sullivan
& F. Kuo
University of
Illinois**



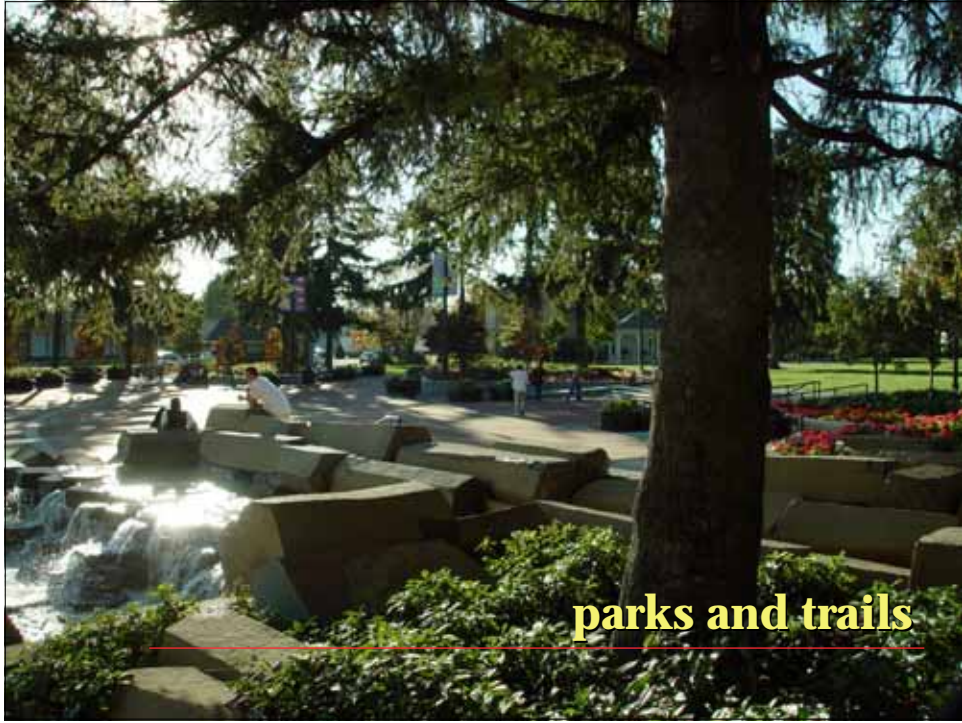
Human-Environment Research Laboratory www.herl.uiuc.edu

lower levels of fear
less violent & aggressive behavior
fewer reported crimes
more self-discipline for girls
reduced ADHD symptoms
better neighbor relationships
better coping with life's challenges

Physical Inactivity & Obesity

majority of Americans not active enough
goal-30 minutes per day of moderate activity
risk factor for chronic diseases
(heart, stroke, cancer, diabetes)
significant costs to national health services

310-580,000 deaths per year
\$100 billion medical costs (1995)
9.4% of all U.S. medical costs



Goal 6 Assess and Implement Community Development and Economics Benefits Through Community-based Planning and Management of Forests

Areas of Focus

- More livable cities
- Economic stability of communities
- Enhanced social ties & cohesion
- Optimize neighborhood quality



Trees in Business Districts

District visitors prefer (large) trees
Merchant interactions & product quality
judged to be better
Willing to pay 9-12% more for products



www.cfr.washington.edu/research.envmind

Business Districts - image preference

Pocket Parks
mean 3.72
(highest)



Scale : 1=not at all,
5=like very much



Full Canopy
mean 3.63

No Trees
mean 1.65
(lowest)



www.cfr.washington.edu/research.envmind

Center for Urban Horticulture, College of Forest Resources, University of Washington

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 roadways.

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

International Urban Greening
Scientific explorations of people and urban nature in other nations.

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

Research Director
Kathleen L. Wolf, Ph.D.



**Increased Funding for Research and
Technology Transfer Is Critical to Advance Our
Understanding of the Need for Nature
in Our Cities and Towns**



Only When There Is a True and Complete Accounting Will the Full Value of Urban Forest Resources Become Apparent to All



Six Strategic Goals

**Research and Technology Transfer
re: Urban Forests & Natural Resources**

1. UF management to promote ecosystem health
2. Land use policy and practices to reduce landscape change
3. Mitigate and control invasive species and disturbance
4. Air and water quality, environmental services
5. Enhance human health and well-being
6. Community and economic development benefits