Measuring Success in Urban Forest Restoration

Conference on Ecological and Ecosystem Restoration
New Orleans, Louisiana
July 30, 2014
PlaNYC

• Launched 2007 in response to projected population growth
• 1M trees to be planted over 10 years
• Public-Private Partnership
So where are all these trees supposed to go?
Brief History of Restoration in NYC

- Early 90s mapping
- Late 90s barrier protection, invasive control and planting
- Early 2000s erosion control and planting
- 2007 onslaught of new funding
Quantifying the Benefits of Trees

- Stormwater Runoff: $36 million
- Property Values: $52 million
- Total Street Trees: 592,130
- Total Benefits: $122 million USD
- CO₂ Reduction: $0.75 million
- Energy Savings: $27 million
- Air Quality: $5.3 million

Top 5 Street Tree Species:
- London Planetree: 15%
- Norway Maple: 14%
- Callery Pear: 10%
- Honey Locust: 8%
- Pin Oak: 7.5%
Impact of PlaNYC

- Expansion of staff
- Capital funding for restoration
- Strong need for community engagement and assistance
Over 900,000 trees have been planted to date

- Forest Restoration: 48%
- Street Trees: 15%
- Private: 23%
- Other Public Agencies: 12%
- Landscape Projects: 2%

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Focus on metrics

- Tracking plantings
- Measuring survival
  - Increasing storms, tracking removals
  - Survival to establishment is not enough – did we fix the problems?
- Volunteer Engagement
- Integration of Research
The basics

- 403,300 trees planted as part of forest restoration to date through PlaNYC
- 84-93% survival during first 2 years
- 1,350 acres of invasive plant control
- 20,000+ volunteers engaged
Community engagement

- Stewmap
- Mass planting events
- Development of TreeLC and NAV
- Shift from bringing big groups in to cultivating and enriching existing constituents
- Making the transition from planting to stewardship
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Long-term research

- **NYC Afforestation Project: Willow and Kissena**
  
  *Alex Felson, Emily Oldfield, Mark Bradford*
  
  - Impacts on soil
  - Effects of different treatments at time of planting

- **Citywide Plot Study**
  
  *Timon McPhearson, Matthew Palmer*
  
  - Low versus high diversity
  - Recruitment

- **Long-term Outcomes of Ecological Restoration in Urban Park Forests**
  
  *Lea Johnson*
  
  - Effect of restoration activities on structure and composition
  - Establishing baselines
Contact Info

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