LOCAL PLANNING FOR GREEN INFRASTRUCTURE

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Environmental / Transportation Planner

New Jersey Green Infrastructure Forum
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### WHY PLAN FOR GREEN INFRASTRUCTURE?

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Improve public and environmental health</th>
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<tbody>
<tr>
<td>Stormwater management</td>
<td>Reduce peak stormwater runoff volumes and peak flows</td>
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<td>Maintain drinking water supplies</td>
<td>Improve water &amp; air quality</td>
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<td>Lower life-cycle infrastructure costs</td>
<td>Mitigate urban heat island effect</td>
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<td>More open/green space, recreational opportunities, and wildlife habitat</td>
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<td>Quality of Life</td>
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ESTABLISHING A COMMUNITY VISION

- Educate and engage
- Build Partnerships
- Integrate with community goals and plans
- Coordinate Policy and Actions
- Stewardship
ROLE OF MUNICIPAL PLANNING

- Municipal Land Use Law
  (N.J.S.A) 40:55D-1 et seq.
  - Master Plan
  - Capital Improvement Program
  - Subdivision and Site Plan Review Ordinance
  - Zoning
  - Stormwater Management Plan

- Develop a Long-term green Infrastructure Plan
- Public Improvements
- Operations & Maintenance Plan or Guidelines
## Role of County Planning

- **County Planning Act (N.J.S.A.) 40:27-1 et seq.**
  - Subdivision and Site Plan Review
  - Master Plan Elements
  - Review Municipal Master Plans and Stormwater Management Plans

- **Water Quality Management Planning**
  - Watershed and wastewater management plans

- **Hazard Mitigation Plans**

- **Infrastructure Operations & Maintenance**

- **Leader & Resource for Municipalities**
## ACTION STEPS

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<tr>
<th>Establishing a vision</th>
<th>Actions</th>
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| **Educate and Engage** | • Seek technical assistance  
• Coordinate with existing community groups and schools for educational workshops |
| **Build Partnerships** | • Utility companies, public agencies, community groups, universities, private companies/chambers of commerce |
| **Integrate with Community Goals and Plans** | • Review existing plans and ordinances  
• Community visioning sessions  
• Develop a Green Infrastructure Plan  
• Revise existing zoning code and development review ordinances |
| **Coordinate Policy and Actions** | • Land use incentives for private property owners  
• Stormwater retention standard  
• Require the use of green infrastructure to reduce, or otherwise manage stormwater runoff  
• Require reduction of impervious surfaces  
• Lead by example with public facilities and pilot projects |
| **Stewardship** | • Ensure a long-term dedicated funding source  
• Engage community in maintenance |
CASE STUDY: CITY OF HOBOKEN, NJ
Together North Jersey LDP

Partners

Key Issues:

- Climate Adaptation
- Flood Control Strategies
- Resilience of Transit and the Surrounding Community
- Green Infrastructure

Regional Site Map, Hoboken, NJ
Objectives:

- Develop implementable place-based stormwater management strategies in support of climate adaptation steps
- Develop a framework for green infrastructure with cost-effective, long-term solutions
- Create a more resilient transit system and transit-based community
CASE STUDY:
PASSAIC COUNTY, NJ
EXISTING GREEN INFRASTRUCTURE PROJECTS: ROADWAYS & PARKS

- County Roads
  - Infiltration Strips
  - Vegetated Swales
  - Contech® Units

- County Parks
  - Goffle Brook Park
  - Riparian Restoration

- Open Space Trust Fund
  - Park Development
  - Permeable Paving projects

Greenwood Lake Turnpike, West Milford
Hershfield Park, Pompton Lakes
MOLLY ANN BROOK WATERSHED MANAGEMENT PLAN

- Identifies Best Management Practices (BMPs) that can reduce stormwater runoff and non-point source pollution
- 319(h) grant from NJDEP
- Goal: to enhance, protect and restore the surface water quality of the Molly Ann Brook and its tributaries
Reduces stormwater volumes

Harvests rainwater for nonpotable uses

641 rain barrels distributed ➔

Prevents >2,000,000 gallons of stormwater from directly entering the watershed each year
Rain Garden Initiative

- Slows rate of stormwater flows
- Collects and treats stormwater
- 7 rain gardens installed on public property in 4 municipalities
- Treat > 115,000 gallons of precipitation each year
GREEN STREETS

- **Complete Streets** = “Streets for Everyone”
- **Green Streets** = Complete Streets that incorporate low-impact design elements which can mimic natural systems

*Photos courtesy of US Environmental Protection Agency*
<table>
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<th>Complete Streets Design Guidelines</th>
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<tr>
<td>Typical Design Elements</td>
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<tr>
<td>Roadways</td>
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<tr>
<td>Public transit</td>
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<tr>
<td>On-site</td>
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<td>Streetscape features</td>
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<th>Streetscape Features</th>
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<tr>
<td>Plant street trees</td>
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<tr>
<td>Utilize stormwater planters</td>
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<td>Increase use of pervious paving materials</td>
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<td>Integrate vegetated stormwater receiving areas</td>
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<td>Install bicycle facilities</td>
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<td>Energy-efficient and appropriate lighting</td>
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GREEN STREETS WORKSHOPS

- EPA Building Blocks Technical Assistance for Sustainable Communities
- Education and Technical Assistance Workshop Series
  - Passaic County Workshop
  - City of Paterson Workshop

Recommendations:
- Coordination with state and federal agencies
- Implement Green Streets pilot projects
- Engage the community in stewardship and maintenance activities
- Promote the benefits of Green Streets
- Provide model ordinances and codes to municipalities
IMPLEMENTATION

PLANS
- Moving Passaic County: Transportation Element (2012)
- Passaic County Future: Sustainability Element (2013)
- Amendment to Molly Ann Brook Watershed Management Plan (2013)
- Parks, Recreation and Open Space Master Plan (forthcoming)
- Hazard Mitigation Plan

PARTNERSHIPS
- Rutgers Cooperative Extension
- Municipalities
- State, Regional and Federal Agencies
- Private sector
- Community, environmental and faith-based groups
- School districts
- Master Gardeners
- Universities

REGULATIONS
- Complete Streets Policy
- Development Review – Complete Streets Checklist
- Modify Site Plan and Subdivision regulations and County Right of Way Entry Opening Resolution (Roads Resolution)

PROJECTS
- Identify Sites: High priority areas due to flooding impacts and water quality
- Rain gardens on County corridors
- Green Streets pilot projects
- Rain garden installers training programs

FUNDING
- Passaic County Corridor Enhancement
- 319(h) and other grant funding sources
- Public-private partnerships
- Resurfacing Program
Thank you! Questions?

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