LINKING POLICY AND PRACTICE: MODELS FOR STATE NATURAL INFRASTRUCTURE POLICY

ASFPM Annual Conference, Phoenix, AZ
June 20, 2018
State Natural Infrastructure Policy

Natural Infrastructure:
• Use of natural features or processes for the explicit purpose of providing tangible benefits to human communities that might otherwise be provided by engineered structures

State Policy Types:
• Law
• Plan
• Bond
• Code/Rule/Regulation
• Trust Fund
• Grant Program
• Permit
• Executive Order
• State Program
<table>
<thead>
<tr>
<th>CURRENT PROCESS</th>
<th>Created database of 32 state-level policy measures that promote or facilitate the use of natural infrastructure</th>
</tr>
</thead>
</table>

Further exploring the enabling conditions and benefits of state natural infrastructure policy
GOALS

• Bridge information gap between state-level policies that promote natural infrastructure and their impacts
• Understand opportunities and challenges for advancing state-level natural infrastructure policy

QUESTIONS

• What enabling conditions and challenges face policies that drive investments in natural infrastructure?
• What flood risk and other co-benefits have resulted from state natural infrastructure policies?
State Natural Infrastructure Policy Case Studies

- **Floodplains By Design**, Washington
  - Image Credit: TNC

- **AB 2480: Financing Source Watersheds**, California
  - Image Credit: American Rivers

- **Executive Order 41**, Delaware
  - Image Credit: TNC Vault

- **HB 973: Living Shoreline Protection Act**, Maryland
  - Image Credit: TNC
### Policy Type
- State Grant Program

### Date Enacted
- 2013

### Natural Infrastructure Approach
- Floodplain Restoration

### Relevant Policy Language
- “...advance integrated floodplain management strategies and projects that consider a broader variety of ecological functions, values, and benefits to the affected human communities.”
Enabling Factors
- Mutual compatibility of flood control and conservation needs
- Flexibility in program applicability
- Pilot project demonstrations

Challenges
- Diverse stakeholder floodplain interests
- Longevity required for managing river systems

Benefits to Date
- 9 integrated floodplain projects in Puget Sound
- 14 projects to reduce flood risk and improve watersheds statewide
- Total funding: $120 Million
- Highlight: Calistoga Reach Project
EXECUTIVE ORDER 41: PREPARING DELAWARE FOR EMERGING CLIMATE IMPACTS AND SEIZING ECONOMIC OPPORTUNITIES FROM REDUCING EMISSIONS

POLICY TYPE
- Executive Order

DATE ENACTED
- September 2013

NATURAL INFRASTRUCTURE APPROACH
- Various

RELEVANT POLICY LANGUAGE
- “The Committee (on Climate and Resiliency) shall develop agency-specific actionable recommendations for improving Delaware’s preparedness and resiliency to climate impacts on public healthy and safety, public infrastructure and facilities, water resources, natural ecosystems, agriculture, tourism, and other industries. The recommendations shall prioritize the use of natural systems or green infrastructure as the preferred means to improve resiliency.”
Enabling Factors
- Favorable political climate and staff
- Regional pressure

Challenges
- Vulnerable to political power shifts
- Lack of funding, reporting, and accountability requirements

Benefits to Date
- Integration of climate change mitigation/adaptation into state agency activities
- Socialization of climate change mitigation priorities
HB 973: “Improvements to protect a person’s property against erosion shall consist of nonstructural shoreline stabilization measures that preserve the natural environment, such as marsh creation.”

Tidal Wetland Regulations: “A property owner is not required to use nonstructural shoreline stabilization measures if determined to be impractical by the MDE by obtaining a waiver, or if the project has been mapped as appropriate for structural shorelines stabilization by MDE.”
Enabling Factors
- Existing policy framework
- Large body of project evidence
- Branding & outreach

Challenges
- Cost & maintenance

Benefits to Date
- Mandatory permit required for structural shoreline solutions

Living Shoreline Protection Act, Maryland
AB 2480: Financing Source Watersheds

California

Policy Type
- Law

Date Enacted
- September 2016

Natural Infrastructure Approach
- Watershed Restoration

Relevant Policy Language
- “It is hereby declared to be the established policy of the state that source watersheds are recognized and defined as integral components of California’s water infrastructure...Recognizing the critical role of source watersheds in enhancing water supply reliability, the maintenance and repair of source watersheds is eligible for the same forms of financing as other water collection and treatment infrastructure.”
Enabling Factors

- Broad ideological support
- Existing framework for financing water infrastructure

Challenges

- Permitting required for landscape-scale projects
- Availability of labor force

Potential Benefits

- 300,000 additional acre feet of water per year
- 40% reduction in peak flooding
- Reduced risk and improved reliability of supply predictions for water and hydropower suppliers
LESSONS LEARNED & OPPORTUNITIES

- Policy as part of a much bigger picture and conversation
- Demonstration of natural infrastructure benefits
- Multi-benefit project framing
- Replicable finance for natural infrastructure
  - Revolving Loan Fund - MD Living Shoreline Protection Act
  - Grant Programs - WA Floodplains By Design
- Importance of strong evidence base
THANK YOU & QUESTIONS

• Acknowledgements:
  • Bhaskar Subramanian – Maryland Department of Natural Resources
  • Kelly Leo – The Nature Conservancy
  • Colin Kelly – Pacific Forest Trust
  • Jennifer DeMooy – Delaware Department of Natural Resources and Environmental Control
  • Sarah Cooksey – The Nature Conservancy
  • Bob Carey – The Nature Conservancy
  • Alice Tripp – The Nature Conservancy

Contact Information: Cat Bowler, cat.bowler@tnc.org