A WEBINAR on
“Ecological Solutions to Community Coastal Hazards”
March 29, 2017  1:00 pm – 2:00 pm (EST)
Presenters

**Stacy Small-Lorenz, PhD**
Climate Adaptation & Resilience Specialist
National Wildlife Federation

**Jon Miller, PhD**
Research Assistant Professor, Stevens Institute of Technology

**Linda B. Weber, AICP, PP**
Resiliency Director, Sustainable Jersey and the Sustainability Institute at The College of NJ
Our Project and Team

- Three year project
- Funded by the Department of the Interior and administered by the National Fish & Wildlife Foundation
- Grant recipient: NJ DEP Office of Coastal and Land Use Planning
- Team of nine+ partner organizations (public, non-profit, academic)
- Multiple disciplines - engineers, planners, ecologists, environmental scientists, educators
Project Scope

- Direct assistance to 27 coastal and tidal communities (planning and restoration projects)
- Citizen monitoring, schools curriculum and blue acres design recommendations
- Development of an online, interactive technical guide (plans, policies, ordinances, and general resources)
Incentivizing Ecological Solutions to Community Coastal Hazards

Linda Weber, AICP, PP, Resiliency Director
Sustainable Jersey and the Sustainability Institute at The College of New Jersey

March 29, 2017
Sustainable Jersey identifies actions to help towns and schools become more sustainable

Provides tools, resources, and guidance to make progress

Provides access to grants and funding for participating communities
Municipal Certification Program

Successes of the Program

443 (78%) NJ municipalities registered
87% of NJ’s population live in these communities
198 municipalities certified:
- 153 towns at bronze level
- 45 towns at silver level
Since 2009, municipalities have implemented over 6,000 discrete actions!

150
Bronze

350
Silver
Incentivizing ecological solutions to coastal hazards through local plans and policies

- Coastal Vulnerability Assessment
- Dune Vegetation Management Plan
- Community Forestry Plan
- Flood Management Plan
- Environmental Resource Inventory
Ecological solutions to coastal hazards through local plans and policies

* Plans, studies and inventories are most effective if they are integrated into other policies, regulations and other decision-making processes

Key Documents for Integration
Master (or Comprehensive) Plan
All Hazard Mitigation Plan
A Coastal Vulnerability Assessment (CVA) analyzes

1) Where flooding will occur, how much, and the frequency

2) The impact of the flooding on community assets

3) The consequences those vulnerabilities pose to the community.
Brick Township has 129.6 miles of shoreline. Zoom in to see which shoreline enhancement techniques apply here.

http://coastalresilience.org
### Table 1. Elsinboro Coastal Vulnerability Assessment Matrix Summary

<table>
<thead>
<tr>
<th>Asset Name</th>
<th>Asset Category</th>
<th>Asset Function</th>
<th>Vulnerability Rating Sea Level Rise</th>
<th>CAT1 Hurricane</th>
<th>Vulnerability Rating Sea Level Rise</th>
<th>CAT1 Hurricane</th>
<th>Consequences Rating Sea Level Rise</th>
<th>CAT1 Hurricane</th>
<th>Consequences Rating CAT1 Hurricane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbott’s Farm Dyke</td>
<td>Critical Facilities &amp; Infrastructure Systems</td>
<td>A dyke system used to control water levels and protect properties in the wetlands complex to the North of the dyke.</td>
<td>Moderate</td>
<td></td>
<td>High</td>
<td></td>
<td>NA</td>
<td></td>
<td>NA</td>
</tr>
<tr>
<td>Abel Nicholson House</td>
<td>Community Resources &amp; Amenities</td>
<td>A historic farm house, currently unoccupied, and placed on the National Historic Register.</td>
<td>NA</td>
<td>Low</td>
<td>NA</td>
<td></td>
<td>NA</td>
<td></td>
<td>Moderate</td>
</tr>
<tr>
<td>Beaches</td>
<td>Natural Resources &amp; Ecosystems</td>
<td>The beach along the Delaware River extending from the Southern end of South Oakwood Neighborhood and running north to the mouth of the Salem River.</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td></td>
<td>High</td>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Drenk Behavioral Center</td>
<td>Community Resources &amp; Amenities</td>
<td>A treatment center that primarily focuses on mental health and substance abuse services.</td>
<td>High</td>
<td>High</td>
<td>Insignificant</td>
<td></td>
<td>Insignificant</td>
<td></td>
<td>Insignificant</td>
</tr>
<tr>
<td>Elsinboro Fire Company</td>
<td>Critical Facilities &amp; Infrastructure Systems</td>
<td>The Fire Company provides emergency services, both firefighting and EMS, for the Township.</td>
<td>NA</td>
<td>High</td>
<td>NA</td>
<td></td>
<td>NA</td>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Elsinboro Municipal Building</td>
<td>Critical Facilities &amp; Infrastructure Systems</td>
<td>The Elsinboro Municipal Building operates as the Elsinboro Township administrative building.</td>
<td>NA</td>
<td>Low</td>
<td>NA</td>
<td></td>
<td>NA</td>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>Elsinboro Point</td>
<td>Natural Resources &amp; Ecosystems</td>
<td>A small public area owned and operated by PSE&amp;G.</td>
<td>Insignificant</td>
<td>Insignificant</td>
<td>NA</td>
<td></td>
<td>NA</td>
<td></td>
<td>NA</td>
</tr>
<tr>
<td>Elsinboro School</td>
<td>Community Resources &amp; Amenities</td>
<td>A public elementary school that serves students from Kindergarten through the 8th Grade.</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
<td>NA</td>
<td></td>
<td>NA</td>
</tr>
</tbody>
</table>
Dune Vegetation Management Plan

- Plant types
- Planting depths and spacing
- Planting schedule
- Sand fencing materials & instructions
Community Forestry Management Plan

- Inventory of trees
- Training for local officials
- Public education
- Key roles for municipal officials
- Cross-references other plans and ordinances.
(Everyone has a role to play)
Flood Management Plan

- Flood areas, hazards and mitigation measures
- Incorporate vulnerability assessment
- Beach and dune profiles
- Cross reference relative policies and ordinances, e.g. open space preservation plan, stormwater management regulations, ecosystem typologies, vegetation plans, habitat inventories
Environmental Resource Inventory

**Standard maps and data:** water bodies, threatened & endangered species, geology, soils, open space and climate.

**Added value:**
- Future flood projections – sea level rise and storm surge
- Acknowledge the flood mitigation value of coastal marshes
- Map existing and predicted marsh retreat
- Include inventories of native vegetation by ecosystem typology

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**Table 9: Plants of the Dune Woodland Community** (after Collins and Anderson 1994, pp. 220)

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red Cedar</td>
<td>Juniperus virginiana</td>
<td>Black Cherry</td>
<td>Prunus serotina</td>
</tr>
<tr>
<td>American Holly</td>
<td>Ilex opaca</td>
<td>Red Maple</td>
<td>Acer rubrum</td>
</tr>
<tr>
<td>Hackberry</td>
<td>Celtis occidentalis</td>
<td>Sassafras</td>
<td>Sassafras albidum</td>
</tr>
<tr>
<td>Pitch Pine</td>
<td>Pinus rigida</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Excerpt from the Upper Township NRI (table is continued)
Upcoming Technical Assistance Calls

Dates for Energy Technical Assistance calls:
• April 26\textsuperscript{th}, 7:00 – 8:00 PM
• May 16\textsuperscript{th} noon – 1:00 PM

Registration is not required! Log in through Go to Meeting at this link:
https://global.gotomeeting.com/join/842038685

You can also dial in using your phone.
United States (Toll Free): 1 877 309 2070
Partnership with the Environmental Defense Fund (EDF) and New Jersey Natural Gas (NJNG) to assist municipalities and school districts within NJNG service territory in completing Sustainable Jersey energy actions.

Full-time, on-site support will be provided for 10 weeks in the summer of 2017.

Click [here](#) for application and more information.

Learn how the EDF Fellows can help your town: [Lessons from the Field: EDF Climate Corps Fellows Document Municipal and School Progress in Sustainable Jersey](#)

**Application Deadline:** Friday, April 14, 2017 at 11:59pm
Upcoming Events

Coding for Community Wrap Up Event
MARCH 31, 2017 - 9:00 AM TO 12:30 PM
THE COLLEGE OF NEW JERSEY
Library Auditorium, Basement Level, 2000 Pennington Road, Ewing, NJ 08628-0718

Coding for Community is Sustainable Jersey's first civic tech competition, pairing New Jersey municipalities with the technologists to develop solutions to local sustainability and public engagement issues.

Get more information on the competition [here](#).

*To RSVP, email Lauren at skowronl@tcnj.edu or call (609) 771-3129.*

Visit the TCNJ campus map [here](#).
Upcoming Events

Landscaping for a Healthy Environment
(Webinar)

APRIL 26, 2017 - 1:00 PM TO 2:00 PM

REGISTER
Save the Date:
2017 New Jersey Sustainability Summit
June 21, 2017
The College of New Jersey

The 2017 New Jersey Sustainability Summit will explore how coordinated local action can achieve an increased collective impact. As federal and state budgets decline, there is renewed energy at the local level to make progress. For information about registering, visit www.sustainablejersey.com