Eastern Connecticut Risk & Vulnerability Assessment Workshop

January 11, 2012

Waterford Town Hall - Auditorium
15 Rope Ferry Road
Waterford, Connecticut
WORKSHOP REPORT

Purpose of Workshop:

The purpose of the workshop was to provide a forum to conduct a rapid risk and vulnerability assessment of coastal hazards in the Towns of Stonington, Waterford, East Lyme, and Old Lyme using NOAA Coastal Services Center’s “Roadmap for Adapting to Coastal Risk” (NOAA CSC’s Roadmap) and the Coastal Resilience Tool and Risk Matrix. This workshop was designed to provide the participants an opportunity to work together as a team from each Town and foster dialogue on risks and vulnerability across and amongst towns and regional planning organizations (RPOs) along eastern coast of Connecticut.

Purpose of this Report:

The purpose of this report is to capture and present the risk assessment process and responses by the four participating Towns and two regional planning organizations – Stonington, Waterford, East Lyme, Old Lyme, Connecticut River Estuary Regional Planning Agency and Southeastern Connecticut Council of Governments.

This report is divided into three sections:

- Workshop Objectives and Outputs
- Individual Town’s Rapid Risk and Vulnerability Assessment
- Commonalities in Risk and Vulnerabilities Across Towns

A list of participating entities is provided at the end of this report.

Preferred Reference:

Workshop Objectives and Outputs:

The workshop objectives for the participating Towns and RPOs included:

- Define community goals and highlight priority issues for consideration throughout the assessment.

- Address hazards and climate change vulnerabilities through a comprehensive, yet rapid, assessment of local vulnerabilities.
  Output: Risk Assessment that includes Hazards and Societal, Infrastructure and Ecosystem vulnerabilities.

- Identify commonalities and opportunities for coastal risk reduction
  Output: Summary of regional action that includes milestones and champions.

- Post workshop the community teams to further consider and integrate results from risk matrix into existing or upcoming efforts.
  Output: Natural Hazard Mitigation Plan & Plan of Conservation and Development

Pre-workshop Survey Results: Community Characterization and Hazard Profile

In preparation for this workshop, a survey designed to capture a community characterization and to develop an initial hazard profile per the NOAA CSC's Roadmap process was sent to each of the four towns. A summary of this information was provided at the workshop.
Individual Town’s Rapid Risk and Vulnerability Assessment:

Risk and Vulnerability Process and Risk Matrix

The centerpiece of the workshop were several breakout session with separate work stations for each Town. At the onset of the breakout sessions each Town was asked to develop community goals that consider and reflect their risk from hazards. This exercise was followed by a focused rapid assessment of vulnerabilities and assets of each community for various hazards and sectors including infrastructure, societal, and ecological. This exercise was captured using a uniquely designed risk matrix (Lighthouse Consulting and The Nature Conservancy) for this workshop. Once a list or profile for each sector by hazard had been developed by the individual town teams, an initial designation of priority (High, Medium, Low) and urgency timeline (Short or Long-term, ongoing) by individual vulnerability was assigned. It is critically important to note that the dialogue included not only current vulnerabilities for each town but, current assets (e.g., communications, coordination, etc...) that are already in place and working.

The following is a summary of the community goals and risk matrix results by town. These results reflect the dialogue and input of those participants assembled during the workshop and is not meant to be prescriptive; rather these results are meant to enable further discussions in each community on risk, hazards and priority responses to reduce overall risk in these Towns with their respective Regional Planning Organizations.
Old Lyme

Community Goals that Consider/Reflect Risk from Hazards:

- Avoid and minimize risk by educating, enforcing and tracking FEMA floodplain requirements.
- Maintain existing town infrastructure at necessary levels to sustain current needs and uses.
- Maintain status quo to protect natural resources, preserve existing town character and maintain current levels of development.
- Efficient and quick recovery from storm events.
- Get FEMA to be more proactive in mitigation (e.g., buy-outs, stronger regulations).
- Avoid installation of infrastructure in vulnerable areas.
- Establish capacity for buy-outs and no rebuilds or undevelopment.

Top Hazards and Vulnerabilities (see risk matrix for actions):

Hazards: Flooding (Tidal Surge), Inland Flooding, CAT-3 Hurricane (wind, tidal surge, flooding), Flooding to the 100 and 500 yr FEMA lines.

Top Vulnerabilities

Infrastructure

- RT. 156 Shore Road inundation and wash out
- Altered natural stormwater drainage
- Above Ground Utilities

Societal

- Housing within FEMA +1 foot contour
- Impact on Tax Base of scenarios
- Conversion of seasonal to year-round residences
- Lack of common goals for the community

Ecosystem

- Loss/Conversion of Tidal Marsh and Floodplain southward of RT 156 and Black Hall River

### Vulnerabilities by hazards

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Location</th>
<th>Ownership</th>
<th>H-M-L</th>
<th>S &amp; L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above Ground Utilities</td>
<td>Protect by hardening existing utility infrastructure</td>
<td>M</td>
<td>S &amp; L</td>
<td></td>
</tr>
<tr>
<td>RT. 156 Shore Road inundation and wash out</td>
<td>Determine if Do Not Rebuild (DNR)</td>
<td>H (1)</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>Altered natural stormwater drainage</td>
<td>Protect and restore natural floodplain drainage and absorption/DNR</td>
<td>H (2)</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>Railroad line acts as dyke</td>
<td>Determine if Mile Creek can be used as alternate if RT 156 lost</td>
<td>L</td>
<td>L</td>
<td></td>
</tr>
</tbody>
</table>

### Societal vulnerabilities/assets

<table>
<thead>
<tr>
<th>Vulnerability</th>
<th>Location</th>
<th>Ownership</th>
<th>H-M-L</th>
<th>S &amp; L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing within FEMA +1 foot contour</td>
<td>Determine residential DNR</td>
<td>H</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>Impact on Tax Base of scenarios</td>
<td>Assess impacts of reduction in tax base due to various realignment scenarios</td>
<td>H</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>Conversion of seasonal to year-round residences</td>
<td>Begin planning for increased need for evacuation, shelters, wellness care and associated infrastructure</td>
<td>H</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>Lack of common goals for the community</td>
<td>Beginning saving $ for future increase in evacuation needs</td>
<td>H</td>
<td>S/L</td>
<td></td>
</tr>
</tbody>
</table>

### Ecosystem vulnerabilities/assets

<table>
<thead>
<tr>
<th>Vulnerability</th>
<th>Location</th>
<th>Ownership</th>
<th>H-M-L</th>
<th>S &amp; L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss/Conversion of Tidal Marsh and Floodplain</td>
<td>Continue Open Space Paradigm</td>
<td>H</td>
<td>S/L</td>
<td></td>
</tr>
<tr>
<td>Loss/Conversion of Tidal Marsh and Floodplain</td>
<td>Use FEMA authority to ID areas of high risk for people and high value for natural resources; Build recognition of ecosystem services and risk reduction into POCD;</td>
<td>H</td>
<td>S/L</td>
<td></td>
</tr>
<tr>
<td>Lack of marine or river shoreline armor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Waterford

Community Goals that Consider and Reflect Risk from Hazards:

- Ensure access and evacuation from all areas of town under any hazard scenario.
- Determine the adequacy of infrastructure to existing and future hazards.
- Maintain and improve where necessary all coordination and communications between municipal, state, and private entities.
- Increase consideration of water dependent uses across the town.

Top Hazards and Vulnerabilities (see risk matrix for priority actions):

Hazards: Coastal Flooding, Riverine Flooding, High Winds, Frozen Precipitation

Top Vulnerabilities

Infrastructure

- Millstone Power Plant, Power Transmission
- 28 Waste Water Treatment Pump Stations/Collection Stations
- Bridges and Roads
- New London Waste Water Treatment Plant; Lake Konomoc - Water Treatment Plant
- Isolation Points (156/213, Gardners Wood; Niles Hill Rd; Ridgewood; Bloomingdale Rd; Hunts Brook)
- Railroads - Amtrak & Canadian RR

Societal

- Vulnerable Populations
- Recreational Facilities (BB Fields; Beaches, etc…)
- Critical Social Facilities (Camp Harkness; Cultural Historic Districts; Private Schools)

Ecosystem

- Railroad - Transportation (Cranberry Pond Culvert)
- Jordan Cove Area (undersized drainage); Goshen & Alewife Cove (ecosystem conversion)
- Channel Erosion
- Open Space (Maintain and Obtain)
- Miller Pond (need flood storage, water source, base flow for Stoney Brook)

### Vulnerabilities by hazards

<table>
<thead>
<tr>
<th>Location</th>
<th>Ownership</th>
<th>Coastal Flooding</th>
<th>Baseline Flooding</th>
<th>High Winds</th>
<th>Frozen Precipitation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infrastructure vulnerabilities/assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Millstone Power Plant</td>
<td>RT 136</td>
<td>Cont. &amp; Comm. w/</td>
<td>Same</td>
<td>Same</td>
<td>M</td>
</tr>
<tr>
<td>Power Transmission</td>
<td>Town Wide</td>
<td>CL&amp;P</td>
<td>Same</td>
<td>Same</td>
<td>L</td>
</tr>
<tr>
<td>'28 WWF Pump Stations/Collection Stations</td>
<td>Town Wide</td>
<td>Town</td>
<td>Assess/locate vulnerable Man Holes that need to be made watertight to 200y flood</td>
<td>Improve accessibility</td>
<td>S</td>
</tr>
<tr>
<td>Bridges and Roads</td>
<td>Town Wide</td>
<td>Town</td>
<td>Cont with DOT on vulnerable state owned infrastructure: RT 156 and 213 intersection</td>
<td>L</td>
<td>15-20 yrs</td>
</tr>
<tr>
<td>New London WWF Plant</td>
<td>City of New London</td>
<td>Assess Impacts of Flooding</td>
<td>M</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>Lake Warner - Water Treatment Plant</td>
<td>Town</td>
<td>Feeder Lines</td>
<td>Maintain and replace drainage</td>
<td>M</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Isolation Points (156/213, Garners Wood, Niles Hill Rd, Ripplewood, Blossomdale Rd, Avon Brook)</td>
<td>Town</td>
<td>All Risk</td>
<td>Detailed flood studies (FEMA; 3rd party; AOE); Community Rating System participation; Mapping</td>
<td>H</td>
<td>5 yrs</td>
</tr>
<tr>
<td>Railroads - Amtrak &amp; Canadian RR</td>
<td>Across Town</td>
<td>Coastal at. of culverts/Marriage; Eliminate at-grade crossings</td>
<td>M</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>Fire House Train Approach (Decentralized)</td>
<td>Town Wide</td>
<td>Town</td>
<td>Tree cutting along lines</td>
<td>M</td>
<td>L</td>
</tr>
<tr>
<td>New Generator in School</td>
<td>Town Wide</td>
<td>Town</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Societal vulnerabilities/assets

<table>
<thead>
<tr>
<th>Location</th>
<th>Ownership</th>
<th>Coastal Flooding</th>
<th>Baseline Flooding</th>
<th>High Winds</th>
<th>Frozen Precipitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vulnerable Populations</td>
<td>Town Wide</td>
<td>Town</td>
<td>Cont. w/ other Town agencies (community services)</td>
<td>M</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Recreational Facilities (Bl Fields, Beaches, etc.)</td>
<td>Town Wide</td>
<td>Town</td>
<td>Emergency Comm. &amp; Cond. at. facilities</td>
<td>M</td>
<td>S</td>
</tr>
<tr>
<td>Critical Social Facilities (Camp Harkness; Cultural Historic Districts; Private Schools)</td>
<td>Town Wide</td>
<td>State/Town/Priv</td>
<td>Cont. w/ owners: make sure plans are in place: Harrison's Landing, Jordan, Granville, Quaker Hill, Baptist Church School, WTRF Country School</td>
<td>S</td>
<td>S</td>
</tr>
</tbody>
</table>

### Ecosystem vulnerabilities/assets

<table>
<thead>
<tr>
<th>Location</th>
<th>Ownership</th>
<th>Coastal Flooding</th>
<th>Baseline Flooding</th>
<th>High Winds</th>
<th>Frozen Precipitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railroad - Transportation (Crabroly Pond Culvert)</td>
<td>Millstone Pt</td>
<td>Various</td>
<td>Eval. &amp; modify culvert for tidal flushing</td>
<td>M</td>
<td>L</td>
</tr>
<tr>
<td>Jordan Cove Area (Landscaped drainage)</td>
<td>Jordan</td>
<td>Various</td>
<td>Cont. w/ Division/FEMA/DOHS</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Goose Creek Ecosystem conversion</td>
<td>Various</td>
<td>Various</td>
<td>Acquire Develop Rights; done restoration;</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Channel Erosion</td>
<td>Various</td>
<td>Various</td>
<td>Acquire Develop Rights; Education Proj</td>
<td>M</td>
<td>S</td>
</tr>
<tr>
<td>Open Space (Maintain and Define)</td>
<td>Various</td>
<td>Town/State</td>
<td>Acquisition (marsh migration)</td>
<td>M</td>
<td>Ongoing</td>
</tr>
<tr>
<td>U/A Miller Pond (Deep storage, water source, base flow for Stony Brook)</td>
<td>Various</td>
<td>Miller</td>
<td>Assess Flood storage</td>
<td>M</td>
<td>L</td>
</tr>
<tr>
<td>A Barrier Beaches &amp; Dune System</td>
<td>Harford to Mohegan</td>
<td>Town/State/Priv</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Visualizing coastal impacts, planning wisely for the future and making smart choices today.

[www.coastalresilience.org](http://www.coastalresilience.org)
Stonington

Community Goals that Consider and Reflect Risk from Hazards:

- Improve public access and safety during hazard events.

Top Hazards and Vulnerabilities (see risk matrix for priority actions):

Hazards: Flood, Winds, Storm Surge, Sea Level Rise

Top Vulnerabilities

Infrastructure

- Sewage Treatment Facilities
- Laneway Dam
- Sylvia’s Pond Dam
- Emergency Access Points
- Flooding of Fire Stations
- Impacts to Septic Systems

Societal

- Apple Rehab Center, Stonington Combo, Palmer House
- Mystic Seaport; Historic Houses in Mystic
- Historic Center of Borough
- Critical Facilities: CVS Pharmacy, Mystic; Big Y Pharmacy and Food
- Commercial Fishing Fleet (Town Dock)
- Existing and future Rehab Centers

Ecosystem

- Coastal Wetlands town-wide
**Stonington, Connecticut (01/11/2012) Eastern Connecticut Risk Assessment Workshop**

### Vulnerabilities by hazards

<table>
<thead>
<tr>
<th>Location</th>
<th>Ownership</th>
<th>Flood</th>
<th>Wind</th>
<th>Storm Surge</th>
<th>Sea Level Rise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewage Treatment Facilities</td>
<td>Various</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Link Plants and Improve protective measures</td>
</tr>
<tr>
<td>Laneway Dam</td>
<td>Stonington Private</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Sylvia’s Pond Dam</td>
<td>Stonington Private</td>
<td>Repair and Upgrade</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Emergency Access Points</td>
<td>Various Public</td>
<td>Enlarge, Armor, Raise - other work arounds</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Flooding of Fire Stations</td>
<td>Various Public</td>
<td>Relocate</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Impacts to Septic Systems</td>
<td>Various Private</td>
<td>Investigate municipal + alt. systems</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

### Societal vulnerabilities/assets

<table>
<thead>
<tr>
<th>Location</th>
<th>Ownership</th>
<th>Action Plan</th>
<th>Evacuation Plan</th>
<th>Flood Impacts</th>
<th>Sea Level Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple Rehab Center</td>
<td>Mystic</td>
<td>Evacuation Plan</td>
<td>Structure Eval - overhauling limba</td>
<td>Same as Flood</td>
<td>Same as Flood</td>
</tr>
<tr>
<td>Stonington Combo</td>
<td>Stonington Public</td>
<td>Relocate</td>
<td>Structure Eval</td>
<td>Relocate</td>
<td>Relocate</td>
</tr>
<tr>
<td>Palmer House</td>
<td>Stonington Private NGO</td>
<td>None</td>
<td>Structure Eval</td>
<td>None</td>
<td>Access</td>
</tr>
<tr>
<td>Mystic Seaport</td>
<td>Stonington Private NGO</td>
<td>Seawall/Floodproof</td>
<td>Verify Plan of Action</td>
<td>Seawall</td>
<td>Seawall</td>
</tr>
<tr>
<td>Historic Center of Borough</td>
<td>Stonington Private</td>
<td>Evacuation Plan</td>
<td>Structure Eval</td>
<td>Same as Flood</td>
<td>Same as Flood</td>
</tr>
<tr>
<td>Historic Houses in Mystic</td>
<td>Mystic</td>
<td>Evacuation Plan</td>
<td>Limbs</td>
<td>Evacuation Plan</td>
<td>Enhance seawalls</td>
</tr>
<tr>
<td>CVS Pharmacy, Mystic</td>
<td>Mystic</td>
<td>Evacuation Plan</td>
<td>Limbs</td>
<td>Evacuation Plan</td>
<td>Enhance seawalls</td>
</tr>
<tr>
<td>Big Y Pharmacy and Food</td>
<td>Stonington Private</td>
<td>Evacuation Plan</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Commercial Fishing Fleet (Town Dock)</td>
<td>Stonington Public</td>
<td>Relocate/encourage development of shorefront</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Existing and future Rehab Centers</td>
<td>Stonington Private</td>
<td>Relocate/encourage development of shorefront</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

### Ecosystem vulnerabilities/assets

<table>
<thead>
<tr>
<th>Location</th>
<th>Ownership</th>
<th>Action Plan</th>
<th>Evacuation Plan</th>
<th>Flood Impacts</th>
<th>Sea Level Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coastal Wetlands town-wide</td>
<td>Stonington Various</td>
<td>Debris removal</td>
<td>None</td>
<td>Same as Flood</td>
<td>Provide for upland buffering and expansion</td>
</tr>
</tbody>
</table>

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East Lyme

Community Goals that Consider and Reflect Risk from Hazards:

• Direct future growth so that no one aspect of the town overwhelms the other by balancing economic stability and the preservation of natural, recreational, and cultural resources.

Top Hazards and Vulnerabilities (see risk matrix for priority actions):

Hazards: Coastal Flood – Sea Level Rise, Inland Flooding, Ice/Wind Storms, Drought

Top Vulnerabilities

Infrastructure
• Electric System (Utilities)
• Public Water and Sewer
• Emergency Response and Hospitals
• Roads
• Dams
• Hazardous Materials
• Railroads
• Senior Housing
• National Guard/Prisons/Municipal Facilities (Police and Fire)

Societal

• Senior Housing/Populations
• Low Income Populations
• Boating/Industry
• Public/Local Communications (RVS 911)
• Parks & Recreation
• Businesses/Villages (Niantic, Flanders)

Ecosystem

• Salt Marsh (Rocky Neck, Watts, Niantic River/Bay)
• Rivers/Streams/Lakes/Ponds
• Beaches

#### Vulnerabilities by hazards

<table>
<thead>
<tr>
<th>Infrastructure vulnerabilities/assets</th>
<th>Location</th>
<th>Ownership</th>
<th>Coastal Flood - Sea Level Rise</th>
<th>Inland Flooding</th>
<th>Ice/Wind Storms</th>
<th>Drought</th>
</tr>
</thead>
<tbody>
<tr>
<td>V Electric System (Utilities)</td>
<td>Townwide</td>
<td>CL&amp;P</td>
<td>ID vulnerable parts of system with CL&amp;P</td>
<td>Same</td>
<td>Same</td>
<td>None</td>
</tr>
<tr>
<td>V Public Water and Sewer</td>
<td>Townwide</td>
<td>Town</td>
<td>ID parts of system maintaining aux services</td>
<td>Same</td>
<td>Same</td>
<td>Supply - H2O; Coord. with DEEP; region</td>
</tr>
<tr>
<td>V/A Emergency Response/Hosp</td>
<td>Town/Shared</td>
<td>FD - relo; FD - relo</td>
<td>Same</td>
<td>Same</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>V Roads</td>
<td>Town/State</td>
<td>ID Roads - relocate/imp./reloca</td>
<td>Same</td>
<td>Same</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V Dams</td>
<td>Town/State/Pri</td>
<td>ID Risks</td>
<td>ID - Reg. D.S.</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>V Haz. Materials</td>
<td>State/7</td>
<td>ID Risks</td>
<td>ID - Reg. D.S.</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>V/A Railroads</td>
<td>Amtrak</td>
<td>ID Risk</td>
<td>Id Risk</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>V Senior Housing</td>
<td>Private</td>
<td>ID</td>
<td>ID</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>V/A Nat. Guard/Prisons/Municipal Fac. (PD and FDs)</td>
<td>State/Town</td>
<td>ID Comm w/EMS</td>
<td>Same</td>
<td>Same</td>
<td>Coord. DEEP NL H2O</td>
<td></td>
</tr>
</tbody>
</table>

#### Societal vulnerabilities/assets

| V Senior Housing/Population           | ID Risk - Notification EVAC/BT | Same | Same | H2O/NHAT; Coord. MED, RSP, EMS |
| V Low Income populations              | ID Risk - Notification EVAC/BT | Same | Same | H2O/NHAT; Coord. MED, RSP, EMS |
| V Boat/Ind.                           | Cord at risk loc. | Same | Same | |
| V/A Public/Local Communications (RVS 911) | ID Deficiencies; cord | ID - State/Red | Same | n/a |
| V/A Parks & Recreation                | ID Loss; redesign | Same | Same | M |
| V/A Emergency Preparedness/Education  | Update NMD/FOP | Same | Same | n/a |
| V/A Businesses/Villages (Niantic, Flanders) | ID Risk/Dev. Plan | Same | Same | |
| A Nation Guard                        | State/NGO/Town | ID Haz./mitigation Plan; Cord with State | Park reduction to allow for migration | n/a | n/a |
| A Paid/Volunteer EMS                  | Town | M | L |

#### Ecosystem vulnerabilities/assets

| V/A Salt Marsh (Rocky Neck, Watts, Niantic River/Bay) | State/NGO/Town | ID Haz./mitigation Plan; Cord with State | Park reduction to allow for migration | n/a | n/a | M |
| V/A Rivers/Streams/Lakes/Ponds          | State/NGO/Town | ID Haz./mitigation Plan; Cord with State | Park reduction to allow for migration | n/a | n/a | M |
| V/A Beaches                            | Town/CI/OM/ | ID Beaches at high risk from SLR | n/a | n/a | M |
| A Niantic SF / Yale Prop/Stone/OSW Hills | State/Town/Pri | n/a | n/a | Maintain Forest management | n/a | |
Commonalities in Risk and Vulnerabilities across Towns

The final agenda item of the workshop was a report out by each Town from the Risk Matrix followed by a facilitated discussion on shared or similar vulnerabilities across more than one the four participating communities. The following is a summary list of all the commonalities and associated actions raised by the collective group in an open dialogue in the order discussed.

- Regional water systems: Response to drought and excess rain.
  - Requires more involvement by Council of Governments.

- Sewage systems and the shared/dependent nature of the system.
  - East Lyme and Waterford => New London Waste Water Treatment Facility;
  - Restoration of power after events is top priority.

- The importance of Natural Resources within the context of individual municipalities and Long Island Sound.

- The need to integrate language and guidance regarding Sea Level Rise into key documents – Plans of Conservation and Development & Natural Hazard Mitigation Plans.
  - Provides a place for decision makers a point to that will support discussion of impacts and need for change.

- Critical role for Regional Planning Organizations in assisting with consideration of Sea Level Rise and coordination of multi-town adaptation.
  - Council of Governments needs to provide the planning framework and concept suggestion to ensure consistency amongst Towns.

- Need for state and federal ownership and involvement in solution.
  - Federal flood insurance modifications;
  - Expansion of FEMA maps;
  - Access issues on state/federal roads;
  - Flood building standards – increase and force buyouts.

- Post-storm redevelopment/buyouts that minimize future risk.
  - State and Federal incentives to rebuild is very high;
• Look at subsides for sewers and roads.

• Surface water storage and management.
  o Dams, Culverts, impediments to flow;
  o Need to develop effective water management plans.

• Evacuation and other emergency responses to events.
  o Requires regional coordination – evacuation and shelter.

• Every community has a long list of “at-risk” places now based on past experiences.

• Preparedness education for general public.
  o Extended outages; business and industry continuity and recovery;
  o Communications when power goes out?

• Economic costs and context for adaptation.
  o Increased impact on businesses and economy in post-storm event;
  o Need to become more self-sufficient in depressed economy.

• Connecticut Light and Power – regional players need to be involved.

• Need for education of elected officials.
  o Include hazards language in official documents;
  o Increase conversations between department heads within and between municipalities and Council of Governments.
Participants:

Town of East Lyme
Town of Old Lyme
Town of Stonington & Borough of Stonington
Town of Waterford

Connecticut River Estuary Regional Planning Agency
Southeast Connecticut Council of Governments

Center for Land Use Education & Research
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Coastal Resilience Quick Start User Guide

1. Go to www.coastalresilience.org
2. Click on “Geographies”
3. Click on “New York and Connecticut”
4. Click on “Future Scenario Map”
5. “Agree” to the Disclosure and Use policies

In navigation bar (top of map) click on “Zoom Button” (magnifying glass) to draw rectangle around area of interest.

Go to “Flood Scenarios” dropdown menu & select your projection.

Go to “Location Search Button” - type in your address & look for the red dot.

Create a map & share hyperlink by clicking on “Bookmark Link”

Visualizing coastal change, planning wisely for the future, making smart choices today.