Agenda

- 2015 SER Chapter 6
- Natural Resource Update
- Cultural Resource Update
Chapter 6 - Natural and Cultural Resources

- **Natural Resource Management**
  - Deer Management – removal of 300 deer, end of year population of ~500
  - Northern long-eared bat federally listed as threatened
  - Continued opportunities for interns looking at a variety of ecological topics

- **Surveillance Monitoring**
  - Cs-137 in deer had similar results as past years - highest value 1.92 pCi/g, wet weight, on-site central lab.
  - Ten year trend shows decline; 2015 on-site average in meat was 0.29 pCi/g, wet weight, with ten year on-site average being 1.0 pCi/g, wet weight.
  - Composite samples (5 deer/sample) from deer cull resulted in 60 samples. Highest value 0.89 pCi/g, wet weight, with average of 0.26 pCi/g, wet weight.
Chapter 6 - Flora and Fauna Monitoring (continued)

- **Fish Monitoring – Post Cleanup**
  - Radiological monitoring
    - on- and off-site fish sampling indicated low levels of Cs-137 (<0.25 pCi/g, wet weight)
    - Non-detect values for Carmans River location
    - consistent with previous years;
  - Mercury monitoring
    - max value 3.26 mg/kg in a largemouth bass from on site Area C
    - max value 0.61 mg/kg in a largemouth bass from Donahue’s pond
    - max value 0.19 mg/kg in a largemouth bass from Carmans River location
Peconic River and Lower Lake, Carmans River Mercury Distribution in Fish Species (Minimum, Maximum, and Average Values). Red line is 0.3 mg/kg water criterion.
Chapter 6 - Flora and Fauna Monitoring (continued)

- **Peconic River – Post Cleanup Monitoring**
  - Mercury in sediment - highest value of 23.0 mg/kg from PR-WC-06.
  - Area of elevated mercury delineated (146 samples).
  - Plan developed to cleanup area containing elevated mercury.
  - River mostly dry due to removal of STP discharge.
### Chapter 6 - Flora and Fauna Monitoring (continued)

- **Peconic River – Post Cleanup Monitoring**
  - River mostly dry due to removal of STP discharge.


<table>
<thead>
<tr>
<th>Location</th>
<th>Station Description</th>
<th>Dist from STP (miles)</th>
<th>June 2015</th>
<th>July 2015</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mercury</td>
<td>Methyl Mercury</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>ng/L</td>
<td>mg/L</td>
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<tr>
<td>PR-WC-15</td>
<td>Upstream of Forest Path</td>
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<tr>
<td>PR-WC-12-D7</td>
<td>Downstream of Sump</td>
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<td>STP-EFF-UVG</td>
<td>Grab Sample</td>
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<td>PR-WC-11DS</td>
<td>&quot;50&quot; downstream of outfall&quot;</td>
<td>0.01</td>
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<tr>
<td>PR-WC-10</td>
<td>West of HMN</td>
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<td>PR-WC-08</td>
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<td>PR-WC-06</td>
<td>South of Area D</td>
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<td>PR-WC-05</td>
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<td>PR-WC-03</td>
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<td>PR-WC-02</td>
<td>2nd west of Schultz Rd.</td>
<td>2.52</td>
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</table>

Notes:
- See Figure 6-5 for Peconic River water sampling locations.
- MDL = Method Detection Level
- SW = water too shallow to sample or location was dry
Chapter 6 - Flora and Fauna Monitoring (continued)

- **Other surveillance monitoring**
  - Terrestrial grassy vegetation and soils;
    - similar to past years.
    - non-detect to 0.43 pCi/g, Cs-137 in vegetation
    - 0.05 to 2.84 pCi/g, Cs-137 in soil
    - High values for both vegetation and soils from same location
  - Precipitation monitoring –
    - radiological data similar to past years;
    - mercury - highest 2015 value 18.2 ng/L.
    - Compared to highest historic value of 24.6 ng/L recorded in 2013
Chapter 6 - Cultural Resource Management

- Cultural Resource Activities 2015
  - Cultural resource tagging project implemented
  - NY SHPO concurrence on Section 106 reviews for demolition of four early BNL support buildings
  - History of BNL Site presented to Summer Sunday visitors and other organizations
  - Tennis for Two (first video game) materials loaned to museums for displays on the history of video games

This might be the world's first video game
Questions?
Natural Resource Update

- **Deer Management**
  - Effects of 2015 cull still evident (300 deer removed)
    - Few deer seen around buildings
    - Supports concept of limited deer movement
  - Planning in process for FY2017 cull
    - Population currently estimated at 500+ (surveys in process)
    - Target population <250

- **4-Poster**
  - Continue drop in tick numbers
    - Evaluating summer 2016 data
    - Drought – helping?
    - Fewer deer helping
Natural Resource Update (cont.)

- **Pollinators**
  - 2014 Presidential Memorandum
  - Pollinator Health Task Force
  - Departmental Commitment
    - Identified BNL and other DOE facilities
    - Adopted Best Management Practices
    - Committed to developing metrics
  - BNL Actions (to date)
    - Establish no-mow areas
    - Established research
      - Genetic finger printing
      - Acoustic monitoring
      - Bee tongue-flower relationships
    - Planted native grasses and flowering plants
      - 10 acres at STP - 2015
      - 12 acres within no-mow areas - 2016
2016 Seeding – pollinator plants
Cultural Resources - update

- **Tagging Project**
  - Over 170 Items
  - Additional items being added as identified and resources allow
  - NSLS Items
  - Cyclotron items
  - Met Tower Beacon
Questions?