Subwatershed Management: Restoring Beneficial Uses in the Peconic Estuary Watershed

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Peconic Estuary

One of the “Last Great Places” in the Western Hemisphere
~ TNC
Peconic Estuary Program (PEP):

Comprehensive Conservation and Management Plan (CCMP)

Priority Management Topics

- Brown Tide
- Nutrients
- Habitats and Living Resources
- Pathogens
- Toxics
- Critical Lands Protection

* * *

- Financing
- Education and Outreach
- Implementation
Address Water Quality Impairments: Shellfish Growing Area (SGAs) and Waters with TMDLs

- Comprehensive Concentrated Subwatershed Approach:
  - Eliminate/reduce pollutant loads
  - Remove water quality impairments
  - Re-open SGAs
  - Enhance critical estuarine habitat
PEP Subwatershed Mgmt Plans

4 COMPLETED - IMPLEMENTATION UNDERWAY
6 Additional Expected - Planning Process Initiated
Subwatershed Mgmt Plans: Pollutant Loading Assessment - Existing vs. Build-out

- **Existing Conditions**
  - 29% of total FC loading
  - 24% of total FC loading
  - 10% of total FC loading

- **Future Conditions**
  - 18% of total FC loading
  - 17% of total FC loading
  - 16% of total FC loading

*The subwatershed numbers for those subwatersheds contributing the highest estimated pollutant loading are labeled in the diagram above.*
Subwatershed Mgmt Plans: 
Structural BMP Ranking

- Pollutant Removal Efficiency
- Project Cost
- Implementation Feasibility
  - Permitting
  - Access
  - Maintenance

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>Long Creek Dr. (Pond)</td>
<td>Long Creek Dr.</td>
<td>Laurel Ave.</td>
<td>Grove Rd. &amp; Mill Creek Dr.</td>
<td>Colony Rd. &amp; Bayview Ave.</td>
<td>Grove Rd.</td>
<td>Dons Way</td>
</tr>
<tr>
<td>1a. Impervious Area Treated ( \frac{A_{imp}}{A_{tot}} \geq 30 )</td>
<td>8.29</td>
<td>7.93</td>
<td>2.53</td>
<td>5.07</td>
<td>3.34</td>
<td>1.90</td>
<td>0.74</td>
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<tr>
<td>1b. % of Water Quality Volume Treated ( \frac{WQV_{util}}{WQV_{norm}} \geq 7.5 )</td>
<td>7.50</td>
<td>1.50</td>
<td>7.50</td>
<td>2.50</td>
<td>7.50</td>
<td>7.50</td>
<td>7.50</td>
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<tr>
<td>1c. Pollutant Load Reduction Based on type of facility and ability to remove total nitrogen (eff. ( \geq 7.5 ))</td>
<td>2.48</td>
<td>4.88</td>
<td>3.00</td>
<td>1.43</td>
<td>1.13</td>
<td>1.13</td>
<td>4.88</td>
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<tr>
<td>1. Pollutant Removal Potential (Total Possible Points 45)</td>
<td>18</td>
<td>14</td>
<td>13</td>
<td>9</td>
<td>12</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>2. Project Cost (Total Possible Points 15)</td>
<td>12</td>
<td>12</td>
<td>8</td>
<td>11</td>
<td>8</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>3a. Ownership Private Land = 0, Public Land = 15</td>
<td>15</td>
<td>15</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>3b. Wetland Impact / Permitting Yes = 0, No = 5</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>3</td>
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<tr>
<td>3b. Access Poor = 0, Good = 3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
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<tr>
<td>3c. Maintenance High = 0, Low = 3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<tr>
<td>3d. Utilities Major = 0, No Impacts = 4</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>2</td>
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<tr>
<td>3. Implementation (Total Possible Points 10)</td>
<td>23</td>
<td>22</td>
<td>24</td>
<td>18</td>
<td>21</td>
<td>16</td>
<td>15</td>
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<tr>
<td>4a. Habitat Provides = 5, Does Not Provide = 0</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
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<tr>
<td>4d. Public Benefit Benefits another habitat = 1</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Public/Education Program = 2</td>
<td></td>
<td></td>
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<tr>
<td>Constructed or Maintained by Volunteers = 1</td>
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<tr>
<td>No Permanent Loss of Recreational Features = 1</td>
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<tr>
<td>4. Supplemental Benefits (Total Possible Points 10)</td>
<td>18</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Total Score (Maximum Score = 160)</td>
<td>64</td>
<td>54</td>
<td>51</td>
<td>46</td>
<td>45</td>
<td>40</td>
<td>36</td>
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</tbody>
</table>

Highest Ranking – Lowest Ranking
Subwatershed Mgmt Plans: BMP Conceptual Designs

Legend
- **Red**: Proposed BMP Drainage Areas
- **Blue**: Bioretention
- **Pink**: Dry Swales
- **Green**: Grass Channel

Infiltration Catch Basin

*Note: Half of the roadway runoff will drain to a water quality swale and be treated in the proposed Bioretention, the other half of the roadway will drain to a proposed dry swale. The overflow from both BMPs will overflow to a proposed Oil/Water separator and will be discharged to Long Creek.*
What is a Stakeholder?

- Those who **AFFECT** or may be **AFFECTED BY** an action
- Those who may **CONTRIBUTE** to or **INFLUENCE** a project
- Those who will **BENEFIT**

Why Involve Stakeholders?

- Build **UNDERSTANDING**, **SUPPORT**, **ACCEPTANCE**, and **BUY-IN**
- **INCREASE** level, breadth, and quality of **EFFORT**
- Increase likelihood of **SUCCESS**
- Implementation **RESOURCES**
Subwatershed Mgmt. Stakeholders

- Municipalities
- Watershed Property Owners
- Civic/Homeowner Associations
- Creek Associations
- NYS Dept of Environmental Conservation
- USEPA
- Suffolk County
Engaging Stakeholders: The Public

- Public Watershed Meetings
- Watershed Events (Paddles and Hikes)
- “Model” Watershed Steward Property Tours
- Specific Subwatershed Webpages
- Local Library Displays
Engaging Stakeholders: Government

- Secure $3 million in Federal, State, County, and Town grants/capital funds
- Implement on-the-ground structural controls
- Conduct and coordinate sub-embayment sampling
- Dedicate staff, planning, and resources
- Re-prioritize efforts in select subwatersheds
Partners

- Peconic Estuary Program
- Municipalities
- NYS Dept. of Environmental Conservation
- United States Environmental Protection Agency
- Suffolk County
- Congressman Tim Bishop
- Group for the East End
- NYS Dept. of Transportation
- Homeowners/Property Owners
- Civic Associations
Questions?

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Peconic Estuary Program:
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