Orleans Water Quality Advisory Panel Stakeholder Workshop

Non-Traditional Technologies Breakout Groups

January 20, 2016

Non-Traditional Technologies Demonstration Project Task Progress

Technology

- Aquaculture/Shellfish Propagation
- Floating Constructed Wetlands
- Permeable Reactive Barriers

Tasks

- Identify Possible Sites
- Conduct Preliminary Field Survey
- Assemble Base Data
- Establish Criteria For Site Evaluations
- Evaluate and Select Site(s)
- Prepare for/Conduct for PRB Field Investigations

Non-Traditional Technologies Demonstration Project Task Progress (cont.)

- Breakout Groups
  - Aquaculture/Shellfish Propagation: Nauset Room
  - Floating Constructed Wetlands: Tonset Room
  - Permeable Reactive Barriers: Namequoit Room
- Agenda for Each Breakout will Include
  - Technology Overview
  - Review Siting Criteria
  - Review Potential Sites
  - Review Application of Site Criteria
  - Identify Recommended Sites
  - Next Steps

Non-Traditional Technologies Breakout Groups

Aquaculture/Shellfish Propagation
Nauset Room

Floating Constructed Wetlands
Tonset Room

Permeable Reactive Barriers
Namequoit Room

Aquaculture/Shellfish Propagation Demo and Full Scale Siting Evaluation Criteria

❖ Site Suitability

- Available Growing Area/Adequacy of Acreage
- Water Quality Indicators
- Disease/Predation
- Ease of Access
- Aesthetic Impacts
- Representativeness of the Site (Transferability)
- Use Conflicts
- Ability to Co-Locate with other Non-Traditional Technologies

❖ Permitting

- Abutter Compatibility
- Wild Harvest Conflicts
- Grow-Out to Harvest Size
- Permittability

❖ Project Evaluation

- Expected Survival
- Overall Likelihood of Monitoring Plan to Yield Quantified Results

❖ Other/Overriding Considerations

Aquaculture/Shellfish Propagation Locations Evaluated

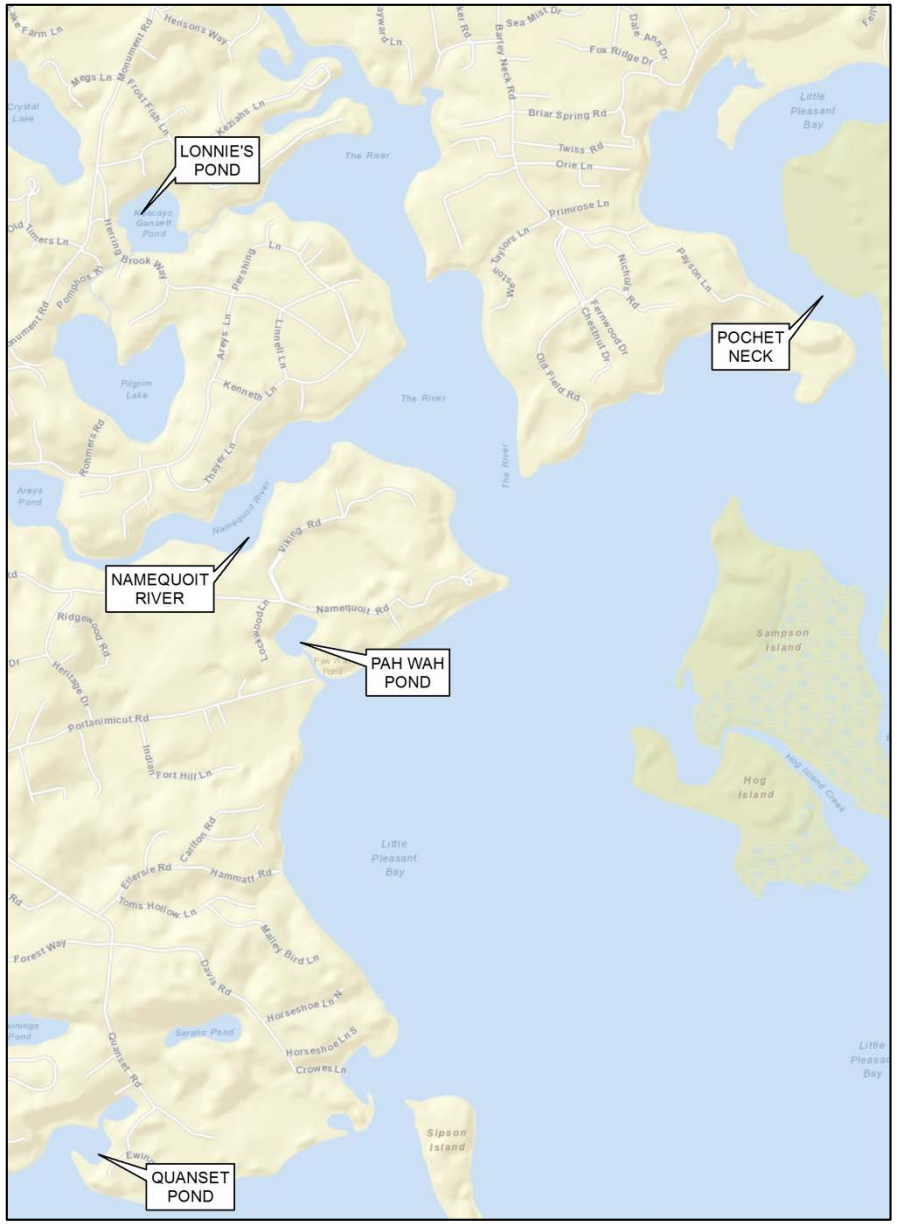
- Little Pleasant Bay (Existing Aquaculture Grants, Oysters and Quahogs)
- Quanset Pond (Oyster Reef)
- Pochet (Oyster Reef)
- Arey's Pond (Oyster Singles in Floating Bags)
- Town Cove (Quahog Propagation)
- Mill Pond (Quahog Propagation)
- Lower River (Oyster Singles in Floating Bags)

FCW Demo and Full Scale Siting Evaluation Criteria

- Use Conflicts
- Utility/Infrastructure Conflicts
- Utility/Infrastructure Benefits
- Ease of Access
- Transferable Results
- Land Ownership
- Depth of Surface Water
- Overall Likelihood of Monitoring Plan to Yield Quantified Results

FCW Locations Evaluated

- Lonnie's Pond
- Namequoit River
- Paw Wah Pond
- Pochet Neck
- Quanset Pond



PRB Demo and Full Scale Siting Evaluation Criteria

- Site Suitability
  - Depth to Groundwater
  - Groundwater Nitrogen Profile (concentration/depth)
  - Groundwater Flow Direction and Velocity
- Permitting
  - Potential Regulatory Concerns
  - Site Use
- Project Evaluation
  - PRB Nitrogen Removal Efficiency
  - Accessible Well Locations
- Other/Overriding Considerations
  - Potential for Watershed/Estuary Impacts
  - Potential for Full Scale Implementation

PRB Locations Evaluated

A. Main Street and Tonset Road (Main Street)

B. South Orleans Road at Tonset/Eldredge Parkway (Route 28 site)

C. Town Cove Gibson Road

D. Namequoit Road

E. Town Landfill

F. Paw Wah Pond

G. Rock Harbor Road Area

H. Kescayo Gansett Pond (Lonnie's Pond)