RESTORE Act Ecosystem Restoration Project Proposals

for consideration in the Gulf Coast Ecosystem Restoration Council's Comprehensive Plan 2012

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<tr><td colspan="5">Contact Information: Heather Stafford- DEP Charlotte Harbor Aquatic Preserves; Heather.Stafford@dep.state.fl.us</td><td colspan="3">Date of Submittal: 10/31/12</td></tr>
<tr><td colspan="5">Name of Project:
Charlotte Harbor Aquatic Preserves' Restoration of Molluscan Shellfisheries Habitat</td><td colspan="3">Org and Rank:
CHNEP, 1</td></tr>
<tr><td colspan="8">Project Description:
Restore 2,000 acres of shellfish habitat in Tidal Peace and Myakka Rivers, 3,000 acres in Lemon Bay and 25,000 acres in Pine Island Sound. Increase the density and abundance of southern hard clam within Lemon Bay, wedge clam within Tidal Peace and Myakka Rivers, and bay scallop within Pine Island Sound through direct seeding taken from native broodstock. Characterize both structural and functional success through monitoring juvenile survival, as well as improve water clarity and quality through the quantization of PAR, color, turbidity and chlorophyll a levels.</td></tr>
<tr><td colspan="8">Project Location: Tidal Myakka project boundaries: -82.25° 27.01°, -82.24° 27.01°, -82.21° 26.95°, -82.21° 26.96° and Peace Rivers project boundaries: -81.98° 27.01°, -81.98° 27.00°, -82.03° 26.97°, -82.00° 26.96° (Charlotte County); Lemon Bay project boundaries : -82.43° 27.05°, -82.42° 27.05°, -82.28° 26.81°, -82.27° 26.83° (Charlotte and Sarasota Counties); and Pine Island Sound project boundaries -82.24° 26.70°, -82.16° 26.71°, -82.09° 26.44°, -82.06° 26.47° (Lee County); state owned submerged land.</td></tr>
<tr><td colspan="4">Responsible Party: DEP-Charlotte Harbor Aquatic Preserves (CHAP)</td><td colspan="4">Partners: Florida Fish and Wildlife Research Institute, Lee County Environmental Lab, Bay Shellfish Company, Friends of Charlotte Harbor Aquatic Preserves and GOMA</td></tr>
<tr><td colspan="2">NEP: CHNEP</td><td colspan="3">Project Cost: $2,012,324.00</td><td colspan="3">Dollars Needed: $1,952,420.00</td></tr>
<tr><td colspan="4">Start: April 2013</td><td colspan="4">Completion: May 2015</td></tr>
<tr><td colspan="8">Status of Project Design and Permitting: Planning and design completed; Special Activity License under review by FWC.</td></tr>
<tr><td colspan="8">What Date or Year could Construction Feasibly Begin: April 2013</td></tr>
<tr><td colspan="8">Your Proposed Timing of Funding (given permits, phasing, staging, etc.)</td></tr>
<tr><td>FY</td><td>12/13</td><td>13/14</td><td>14/15</td><td>15/16</td><td>16/17</td><td>17/18</td><td>Total</td></tr>
<tr><td></td><td>$727,070</td><td>$816,900</td><td>$408,450</td><td>-</td><td>-</td><td>-</td><td>$1,952,420</td></tr>
<tr><td colspan="8">Quantify Environmental Results and How to Measure Them: Ten 1 m^2 plots will randomly be selected at each restoration site to measure bivalve growth, density and abundance within the study sites. Continuous water quality measurements of dissolved oxygen, temperature, pH and salinity will be measured in situ, using YSI 6600 continuous monitoring datasondes swapped out every two weeks. PAR measurements will be made with a LiCor during site visits. Water samples will be collected during site visits for color, turbidity and chlorophyll a and analyzed by the Lee County Environmental Laboratory (LCEL).</td></tr>
<tr><td colspan="8">Economic Benefits (including ecosystem services): 12 full time jobs will be created and 4 maintained. Restoring commercially important mollusks creates a more diverse and abundant</td></tr>
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bivalve population leading to increased water clarity and light availability in the water column for stimulating seagrass growth.
Estimated number of Jobs Created or Preserved: 16 total; 12 full time jobs will be created (CHAP 24 month positions: one project manager, four bivalve monitors, one water quality technician; Bay Shellfish: 6 staff for 18 months) and 4 jobs maintained at the Bay Shellfish Co.
How much Habitat will be restored and conserved?: 30,000 acres will be restored to historic mollusk populations, at sustainable levels.
Quantify pollutant reductions: As a result of increased filtering of the bivalves, a 10% reduction in either turbidity or chlorophyll *a*, or a 10% increase in PAR will be considered a success.
What living coastal/marine resources will be improved and by how much?: Restoration of commercially important bivalves (30,000 acres), improved seagrass habitats as a result of improved water clarity. Other species that are expected to benefit include arthropods (stone, blue and mud crabs), oysters, shrimp, and various commercial and recreational important fish.
How will community resilience be enhanced? Restoration of mollusks and associated habitat will improve water quality, clarity and overall estuarine diversity and health that many tourist dollars depend upon (recreational fishing, boating, swimming, etc.).
Additional Justification: This restoration project seeks to not only restore historic native mollusk levels, but also improve water quality, clarity and ecosystem functionality within the area, while increasing public awareness. This project seeks to collaborate with volunteers to increase public awareness of the estuarine environment and importance of native species through hands on restoration. The submerged land is owned by the State of Florida and portions are directly managed by Charlotte Harbor Aquatic Preserves.

Add any photos or maps that explain project:

Bay scallop

Hard clam

Charlotte Harbor Aquatic Preserves' Mollusk Restoration Boundaries