

Summary of Manatee County 2012 RESTORE Act Ecosystem Restoration Projects and Estimated Costs for Near Term (3-5 year) Projects

RESTORE Act Applications by Goals (as outlined in 11/20/12 NEP memo)

Restore and Conserve Habitat:

1. Robinson Preserve II Restoration (candidate for regional bundling)	4,450,000
2. Manatee-Hillsborough Conservation Land Corridor Connection (candidate for regional bundling)	1,581,000
3. Manatee County Ecosystem Restoration Task Force	1,500,000 *
4. Duette Preserve Longleaf Pine Restoration through Silviculture (candidate for regional bundling)	1,375,896
5. Environmental Land Acquisition (potential long-term project)	50,000,000
6. Manatee River Minimum Flow	<u>1,100,000</u>
Total Restore and Conserve Habitat	\$60,006,896

Restore Water Quality:

1. Restore Water Quality - Regional Water Quality Monitoring Program..... (candidate for regional bundling)	2,138,608 *
2. Restore Water Quality - Stream Gage Program (candidate for regional bundling)	304,986 *
3. Restore Water Quality - Stream Condition Index Program	359,987 *
4. Stormwater Basin Master Plan	1,250,000 *
5. Restore Water Quality - Air Quality Monitoring Program (candidate for regional bundling)	300,181 *
6. Stormwater Retrofit, Washington Park Borrow Pit	<u>1,850,000</u>
Total Restore Water Quality	\$6,203,762

Replenish and Protect Living and Coastal and Marine Resources:

1. Larry Borden Artificial Reef Habitat Enhancement (candidate for regional bundling)	500,000
2. Robinson Preserve Oyster Bars and Nesting areas (candidate for regional bundling)	285,000
3. Restore and Conserve Habitat – Sarasota Bay Seagrass Monitoring Program	<u>107,182</u> *
(candidate for regional bundling)	
Total Replenish and Protect Living/Coastal/Marine Resources	892,182

Enhance Community Resilience:

1. Monitoring of Petroleum Tanks and Hazardous Waste Storage.....	439,050 *
2. Green Bridge Fishing Pier Restoration	<u>1,100,000</u>
Total Enhance Community Resilience	\$1,539,050

GRAND TOTAL..... \$68,641,890

* Denotes projects with recurring annualized cost. For purposes of estimating, total cost based on 5 years of continuous activity.

Summary of Manatee County 2012 RESTORE Act Ecosystem Restoration Projects

Restore and Conserve Habitat:

1. Robinson Preserve Phase II Restoration (\$4,450,000)
The Robinson Preserve Phase II Restoration project consists of converting 150 acres neighboring Robinson Preserve from mostly improved pasture to native wetland and upland habitats. This will be done by re-contouring the land, followed by planting with native vegetation and intensive maintenance.
2. Manatee-Hillsborough Conservation Land Corridor Connection (\$1,581,000)
Connect 8,500 acres of conservation lands in Hillsborough County to over 3,000 acres in Manatee County through the acquisition of 186 acres of mutually adjacent agricultural land within the Little Manatee River watershed. Project includes funding for longleaf pine ecosystem restoration on land currently used for row crops.
3. Manatee County Ecosystem Restoration Task Force (\$1,500,000)
A five person adaptive management task force will be contracted to perform broad restoration efforts with particular emphasis on invasive-exotic plant species removal, but may include native plant installations, hydrological restoration, mechanical vegetative fuel reduction, monitoring or other restoration activities as directed by the County. Primary work areas would be preserves located in the west side of the County.
4. Duette Preserve Longleaf Pine Restoration through Silviculture (\$1,375,896)
Afforest and restore 2,595 acres of former agricultural land within the Lake Manatee watershed to longleaf pine ecosystem via phased, single generation silvicultural operation. Establish 1,883,970 longleaf seedlings in plantation form (726 trees per acre) over two years. Utilize yields from forest product harvest to fund subsequent restoration goals and objectives over 50 years to include thinning longleaf timber to natural densities, ground cover restoration, purchase of restoration and vegetation management equipment and contracted services.
5. Environmental Land Acquisition(\$50,000,000)
The purpose of this project is to provide funds to acquire property in Manatee County to restore and conserve habitat and the ecological integrity of the regional landscape, protect water quality and provide community resilience in addition to increasing public appreciation and access to natural areas. Public acquisition in fee simple or by conservation easement will be accomplished with full public participation and disclosure as approved by the Board of County Commissioners in open meetings and workshops, with input from the County's standing advisory committee, Environmental Lands Management Acquisition and Advisory Committee (ELMAC).
6. Manatee River Minimum Flow (\$1,100,000)
Manatee County will increase freshwater releases from the Lake Manatee Reservoir during the non-rainy season to preserve and/or enhance low salinity habitat in the

Manatee River. To offset the decrease in safe yield and reliability of the reservoir to provide drinking water to Manatee County customers caused by the increased freshwater releases, improvements to the water intake structures will be required. Lowering of the intakes will allow continued withdrawal at the lower reservoir levels that will result from the increased freshwater release schedule.

Total Restore and Conserve Habitat \$60,006,896

Restore Water Quality:

1. Restore Water Quality - Regional Water Quality Monitoring Program (\$2,138,608)
High-quality ambient water quality data is required by almost all investigations of environmental impacts to freshwater, coastal, and near shore marine resources. Support for the operation of MCNRD's 81-station ambient water quality monitoring program within Manatee County's streams, rivers, bays and coastal waters will help ensure that this service remains intact for use in adaptive management of these resources, evaluation of impairments, compliance with established water quality criteria, and promotion of healthy natural resources management.
2. Restore Water Quality - Stream Gage Program (\$304,986)
A significant data gap in MCNRD ongoing water quality monitoring is the inability to accurately compute watershed pollutant loading rates without discharge measurements from a companion stream gage network. Stream gage stations in five selected, and monitored, sub-watersheds will allow for the calculation of pollutant loads in the gaged sub-watersheds and improve estimates of loads from similar un-gaged sub-watersheds.
3. Restore Water Quality - Stream Condition Index Program (\$359,987)
Assessments of freshwater streams using purely physical and chemical measurements may not unequivocally identify the waterbody as "healthy" or "unhealthy." This proposal funds the implementation of the Florida Department of Environmental Protection's biological assessment measure, chiefly the Stream Condition Index (SCI), within selected Manatee County freshwater streams. Stream quality is essential for protecting downstream lakes, tributaries, estuaries and coastal ecosystems.
4. Stormwater Basin Master Plan (\$1,250,000)
The purpose of this project is to determine the benefit and feasibility of retrofitting stormwater management systems put in to place prior to water quality standards being put into place. This study would be similar in scope to one conducted in Sarasota County for the Indian River and Sapphire Shores neighborhoods but cover a larger area.
5. Restore Water Quality - Air Quality Monitoring Program (\$300,181)
Direct deposition to Gulf and coastal waters by nutrients and pollutants in the atmosphere – specifically nitrogen and sulfur oxides (NOX and SOX) - was identified in the Gulf of Mexico Regional Ecosystem Restoration Strategy (GMRERS) as a water quality issue of concern. Most Emissions of these pollutants are from hydrocarbon combustion. Support for the MCNRD monitoring program will help ensure that air quality data will be available for further, difficult, air and water policy development.

Ambient ground-level ozone concentrations measured by MCNRD for Clean Air Act (CAA) compliance will follow regional trends in NOX and SOX emissions.

- 6. Stormwater Retrofit, Washington Park Borrow Pit (\$1,850,000)
The purpose of this project is to utilize an existing 90 acres borrow pit for a Regional Stormwater Management Facility for retrofitting untreated stormwater managements systems, provide water quality and pollution reduction within the Canal Road Drainage Basin. The 90 acres parcel was used as a borrow pit for the construction of US 41. Manatee County is the owner of this 90 acre parcel. The Canal Road Drainage Basin is a 900 acres watershed that drains into Terra Ceia Bay, an Outstanding Florida Water (OFW), Manatee River and ultimately Tampa Bay. The water shed consists of mixed use of residential, industrial and agricultural land use. The 90 acres could provide multipurpose use as a Public Park site, Stormwater management facility, flood control project, Canal Road Public Safety improvement, wetland enhancement, wild life habitat, walking trails and educational uses.

Total Restore Water Quality..... \$6,203,762

Replenish and Protect Living and Coastal and Marine Resources:

- 1. Larry Borden Artificial Reef Habitat Enhancement (\$500,000)
Artificial reef construction and habitat enhancement/creation.
- 2. Robinson Preserve Oyster Bars and Nesting Areas (\$285,000)
This project consists of enhancing existing coastal habitat at Robinson Preserve by creating sea and shorebird nesting areas, and oyster bars. Preliminary goals are to create over 25,000 square feet of oyster beds, 3-4 suitable nesting sites.
- 3. Restore and Conserve Habitat – Sarasota Bay Seagrass Monitoring Program (\$107,182)
Create a coordinated seagrass monitoring program in northern Sarasota Bay, in cooperation with Sarasota County and SBEP, which is needed to improve knowledge and management of this critical habitat. Monitoring strategies will be consistent with that currently be conducted in other portions of Sarasota Bay.

Total Replenish and Protect Living/Coastal/Marine Resources \$892,182

Enhance Community Resilience:

- 1. Monitoring of Petroleum Tanks and Hazardous Waste Storage(\$ 439,050)
The project is a substantial expansion of the unfunded hazardous waste program in Manatee County. Public outreach and education will be provided through detailed inspections at suspect properties/businesses. This field presence will allow for careful evaluation of potential sources of pollution, including hazardous materials, pollutant storage and septic tanks, water wells, inappropriate fertilizer management, and illicit stormwater discharges.

2. Green Bridge Fishing Pier Restoration (\$1,100,000)

This project will fund the rehabilitation of the Green Bridge Fishing Pier. This structure was transformed into the fishing pier with the construction of the new Green Bridge in ~1986. At that time the north 70 spans were left in place to function as a recreational pier of approximately 2,100 feet long reaching into the Manatee River from the north shore in Palmetto. This structure appears to date from 1927 as a predominately reinforced concrete cast in place structure. While this form of construction is not typical by today's standards it is durable. Hence the structure is still in use today. However it is in great need of repair soon or the repair efforts will be cost prohibitive as compared with demolition or replacement. Also the structure maybe closed to the public if determined structurally unsafe.

A detailed bridge inspection was conducted on the structure in early 2011 to determine its condition. The inspection revealed large scale concrete and reinforcing steel repair needs but no immediate structural issues. The salt water environment has penetrated most of the underside concrete and began corrosion of the reinforcing steel. In numerous locations on piers, pier caps, deck beams and bottom of bridge deck the steel corrosion has broken the concrete and exposed the steel. Without treatment and repair, the structure will continue to decay at an accelerated pace. The accelerated decay is because much of a concrete structure's life is from the time it takes the chlorides to migrate through the concrete to the reinforcing steel to begin corrosion. At this point the migration is complete and the corrosion process has already started.

The pier has been a mainstay of the Manatee River front for more than 20 years. It is currently seen as a community asset by the County and the City of Palmetto, in whose corporate limits it resides. Manatee County is responsible for operation and maintenance of the structure through final demolition of the structure as a condition of the lease agreement with the State of Florida who actually owns the structure. Its continued use to access the Manatee River for fishing, bird and manatee watching, sightseeing, walking and other leisure activities remains critical to the entire area economy and quality of life.

Total Enhance Community Resilience \$1,539,050

GRAND TOTAL \$68,641,890