

State Funding Initiative

Fiscal Year 2011–2012

St. Johns River Water Management District

Water is Florida's most important natural resource and is central to our quality of life. The mission of the St. Johns River Water Management District (SJRWMD) is to ensure the sustainable use and protection of water resources for the benefit of the people of SJRWMD and the state of Florida.

Within the SJRWMD boundaries are the longest river in the state, the St. Johns; more than one-third of the state's 7,700 lakes, including the second-largest lake, Lake George; and the Indian River Lagoon, one of four Florida estuaries in the National Estuary Program.

The rapid growth in Florida's population has resulted in increased efforts for water resource development and restoration. Partnerships with other governmental agencies, organizations, and the public are a key element to successful implementation of projects aimed at protecting and restoring our water resources. SJRWMD recognizes the benefits of working cooperatively with others and that many projects require input and resources from numerous organizations. To meet its responsibilities, SJRWMD has established partnerships with federal, state, and local agencies over the years. The following pages describe the funding priorities for fiscal year 2011–2012.

Program and Funding Priorities

Water Quality Improvement and Restoration Initiatives—\$49,202,000 in requested funding

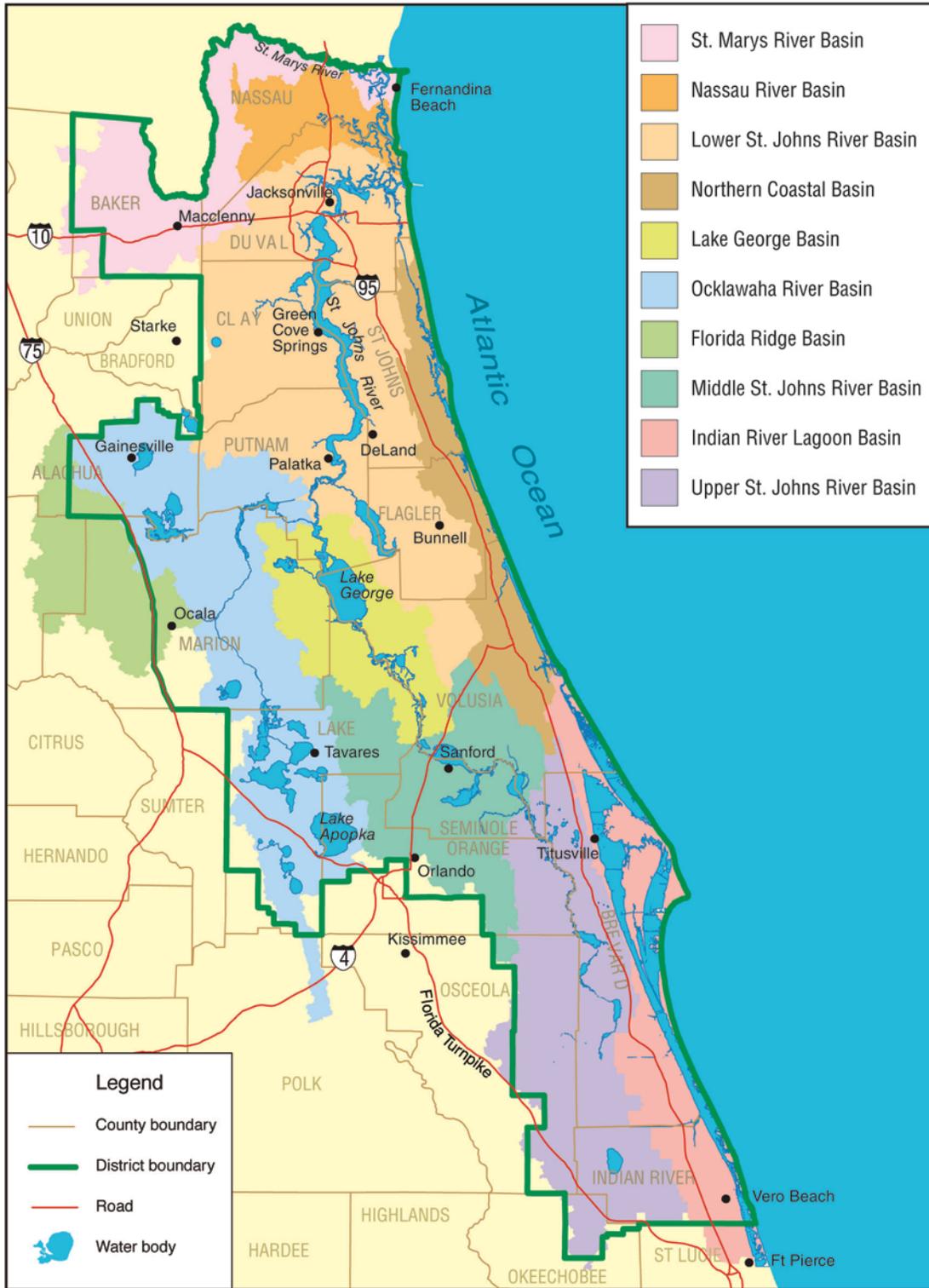
Restoring appropriations from the Ecosystem Management and Restoration Trust Fund is a legislative priority of SJRWMD.

The eight priority basins within SJRWMD are listed below. Project goals and descriptions for each basin are provided on the following pages. Projects are designed to improve water quality for total maximum daily load (TMDL) and numeric nutrient standards and to restore water resources for the benefit of local and state economies.

- Lower St. Johns River Basin—budget request: \$16,000,000
- Middle St. Johns River Basin—budget request: \$3,250,000
- Upper St. Johns River Basin—budget request: \$6,500,000
- Upper Ocklawaha River Basin (including Lake Apopka) —budget request: \$2,900,000
- Indian River Lagoon Basin—budget request: \$17,600,000
- Northern Coastal Basin—budget request: \$6,300,000
- Orange Creek Basin—budget request: \$127,000
- St. Marys River Basin—budget request: \$3,025,000

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St. Johns River Water Management District Basins



Lower St. Johns River Basin (LSJRB)

Tri-County Agricultural Area (TCAA) Nutrient Runoff Reduction

Budget Request: \$2,500,000

Description: The TCAA is composed of approximately 36,000 acres of row crops, primarily potatoes and cabbage. The requested funding will be used for the design and construction of agricultural best management practices (BMPs) and water quality improvement infrastructure, which may include the following:

- Wet detention ponds
- Infiltration basins
- Constructed wetlands
- Water reuse
- Chemical injection
- Conveyance BMPs
- In-field agricultural water management/irrigation BMPs
- In-field fertilization BMPs such as fertilizer banding
- Land acquisition

SJRWMD, Department of Agriculture and Consumer Services (DACS) and the Florida Department of Environmental Protection (DEP) have worked with TCAA growers to significantly reduce fertilizer application because this is the logical first step and most cost-effective approach toward meeting water quality targets. As such, funding for the projects listed above are conditional upon acceptance by the TCAA growers to limit application of phosphorus to acceptable levels.

Lake George Nutrient Reduction Initiative

Budget Request: \$3,500,000

Description: SJRWMD is investigating active lake management techniques within Lake George, in concert with other potential projects, with a goal of reducing total phosphorus loadings to the LSJRB by 84 metric tons per year.

Requested funding for the Lake George Nutrient Reduction Initiative will be used for pilot and full scale projects, when feasible, needed to meet or exceed the nutrient reduction goal for lake waters entering the LSJRB. Potential projects include the following:

- Adapting existing aquatic plant management methods within Lakes George, Dexter, and Woodruff
- Periphyton flow-way treatment
- Ballasted flocculation or other chemical additions
- Gizzard shad harvesting
- Constructed wetland treatment
- Constructed floating macrophyte treatment
- Diversion of water for reuse
- Dredging

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- Non-plant biological controls
- Retention/infiltration

Discharge Reduction and Reuse Initiative

Budget Request: \$5,000,000

Description: The requested funding will be used to meet or exceed the nutrient TMDLs that have been established for the LSJRB. This subproject will improve and reduce wastewater discharges to the river and maximize reuse.

Upcoming projects include the following:

- Green Cove Springs Wastewater Treatment Plant (WWTP) improvements
- Additional JEA reuse and WWTP improvements projects
- Additional regional transmission systems for reuse water
- Additional reclaimed water transmission improvements in St. Johns and Clay counties

Tributary Remediation and Nonpoint Pollutant Source Reduction

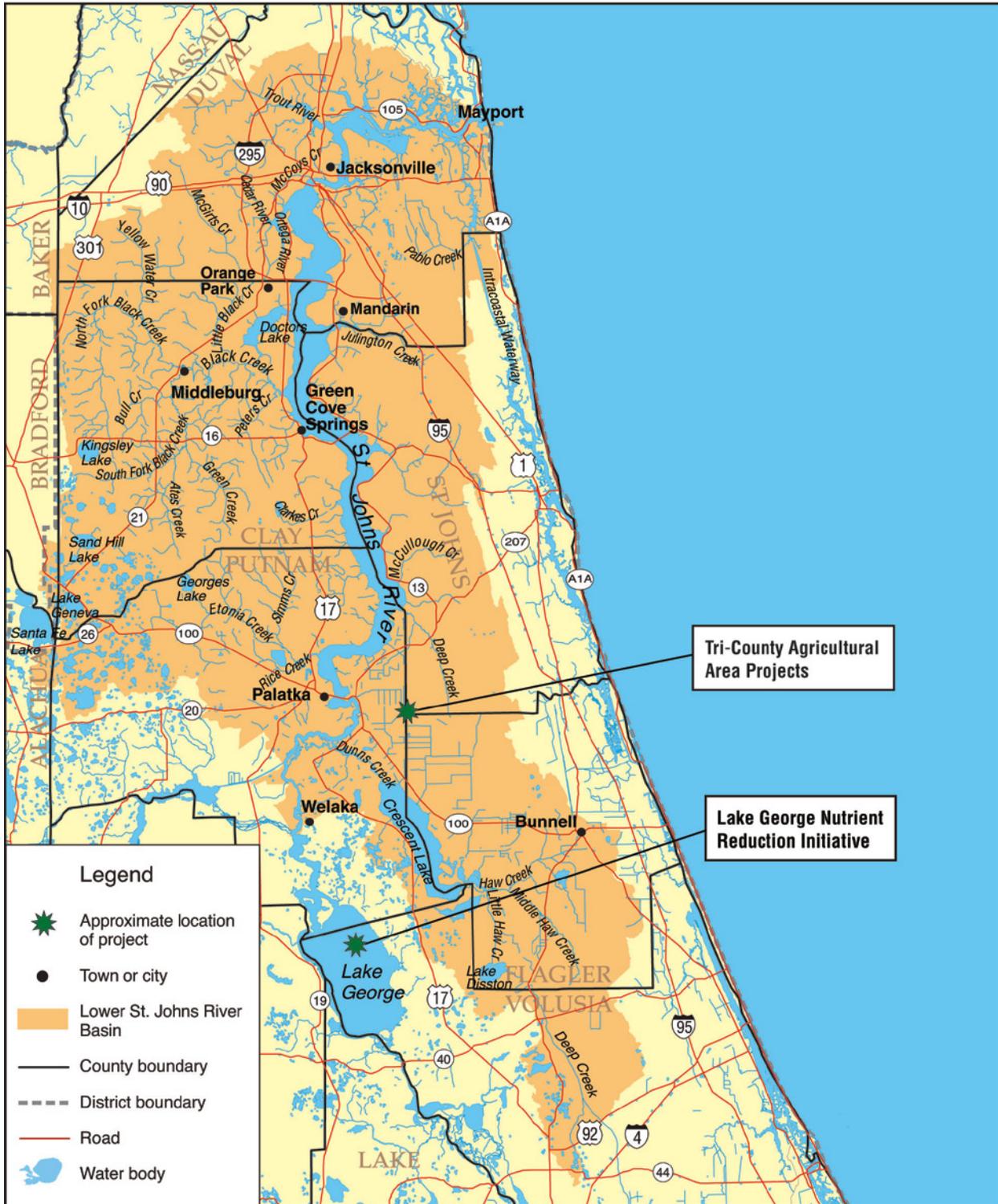
Budget Request: \$5,000,000

Description: The requested funding will be used (1) to continue reducing bacteria levels in degraded tributaries, and (2) for reducing suspended solids and nutrients entering tributaries and the mainstem of the river, by providing: sanitary sewer lines in failing septic tank areas; stormwater treatment systems in areas where load reductions are available to confirm the cost-effectiveness; and implementation of stormwater projects contained in stormwater management plans. Specific projects are:

- Sandalwood Canal Regional Stormwater Treatment Facility (Jacksonville)
- Hogans Creek Remediation (Jacksonville)
- Implementation of Master Stormwater Management Plan—Gum Street, Clay Street, Walburg Street, and Ferris Street watersheds (Green Cove Springs)
- State Road A1A Stormwater Treatment Facility (Jacksonville Beach)

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Lower St. Johns River Basin



Middle St. Johns River Basin (MSJRB)

Lake Jesup Restoration

Budget Request: \$1,500,000

Description: The requested funding will be used for feasibility analyses and construction of alternative treatment systems, stormwater treatment, regional stormwater facilities, and lake treatment projects that will reduce pollutant loading and sedimentation from tributary discharges while also controlling flooding. Lake treatment projects will involve removing water from the lake, treating the water to remove excessive nutrients, and circulating the water back to the lake. Subprojects will be targeted within the watersheds of Howell, Gee, and Soldier creeks, and Bear Gully Canal.

Wekiva River Watershed Improvements

Budget Request: \$250,000

Description: The requested funding will be used to implement stormwater retrofit subprojects in the Little Wekiva River watershed and the Wekiva River watershed. A stormwater master plan has been completed for the Little Wekiva River watershed as a joint effort among the cities of Altamonte Springs and Orlando, Seminole and Orange counties, and SJRWMD.

St. Johns River Nutrient Reduction Implementation

Budget Request: \$1,000,000

Description: This project will include the implementation of site-specific treatment systems to verify cost-effective methods in reducing the nutrient load carried by the river. Project siting may be coupled with other facilities, such as alternative water supply development projects, to produce multiple-use operations wherever possible.

Lake Monroe Watershed Plan Implementation

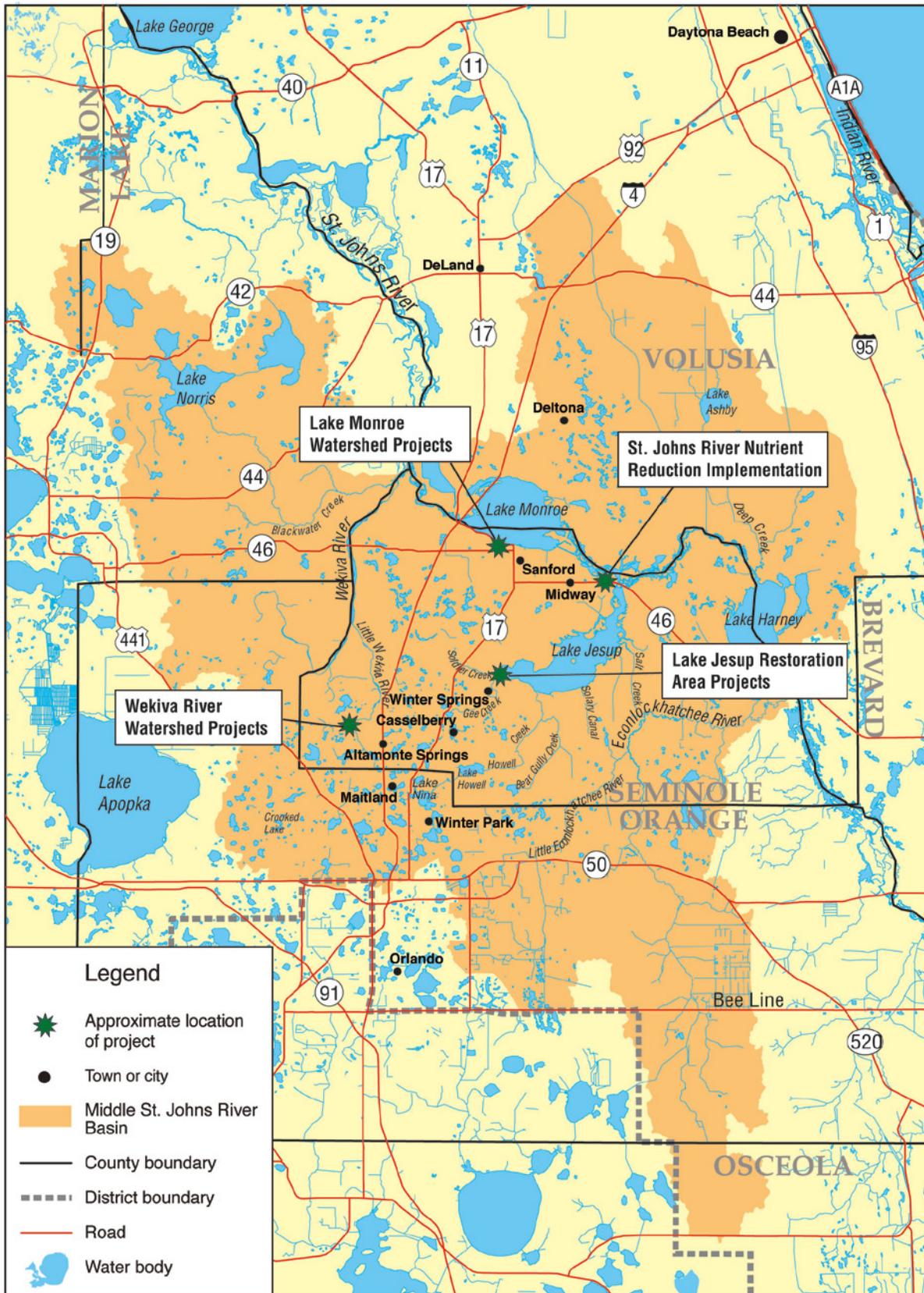
Budget Request: \$500,000

Description: Wet-weather discharge of treated wastewater enters Lake Monroe and the remediation of existing storm sewer systems is needed to help reduce excess flows of storm water/surficial groundwater to the wastewater treatment plant during the rainy season.

The city of Sanford has begun a multiyear project to reduce the infiltration and inflow to its wastewater treatment system that, in turn, will reduce the city's need to discharge effluent to Lake Monroe during high-flow times. This funding request will support this effort with the city of Sanford. Other local governments developing regional stormwater treatment projects may be considered for funding.

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Middle St. Johns River Basin



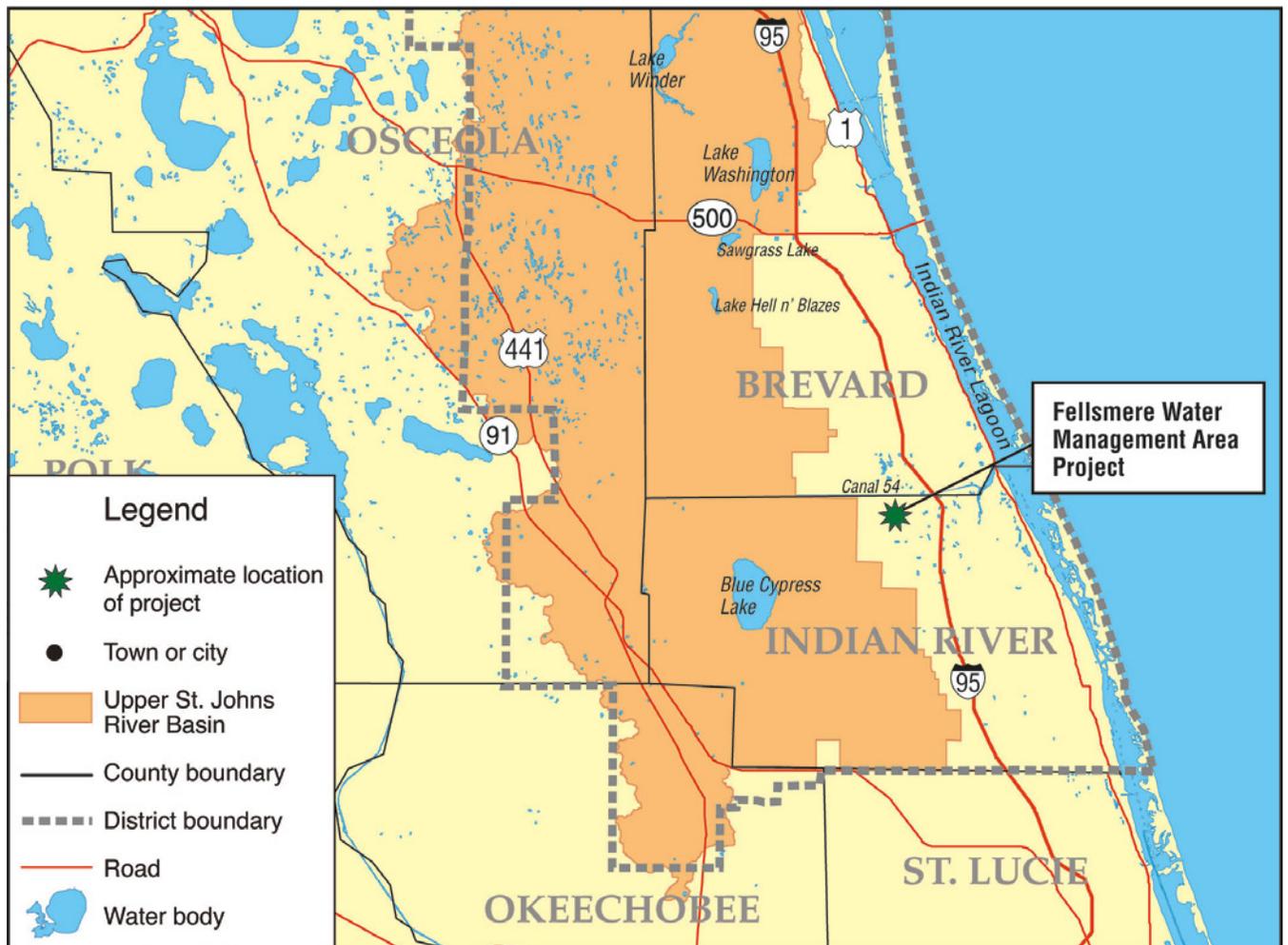
Upper St. Johns River Basin (USJRB)

Fellsmere Water Management Area (FWMA)

Budget Request: \$6,500,000

Description: The requested funding will be used to initiate construction of phase 2 of the FWMA. This phase includes continuing construction of the eastern project levee and water control structures. The FWMA will improve water quality in the upper St. Johns River, provide treatment for agricultural runoff, allow significant stormwater storage for extreme storms, and reduce the occurrence of freshwater releases through Canal 54 (C-54) to the Indian River Lagoon estuary. Improved water quality entering the upper St. Johns River will help to implement total maximum daily loads (TMDLs) and reduce the use of groundwater withdrawals for irrigation. In addition, this subproject will provide low-flow augmentation in support of the water resource development project—Taylor Creek Reservoir. (This project is also listed in the Indian River Lagoon section.)

Upper St. Johns River Basin



Upper Ocklawaha River Basin (UORB) (including Lake Apopka)

In-Lake Nutrient Reduction via Rough Fish Harvesting

Budget Request: \$500,000

Description: The requested funds will be used to support the shad-harvesting program within the Ocklawaha River Basin and Lake Apopka. The removal of gizzard shad is a cost-effective method of removing total phosphorus, which improves water quality and vegetated habitat for game fish and wildlife. More than 20 million pounds of gizzard shad have been harvested from Ocklawaha River Basin lakes. This harvesting has resulted in direct removal of about 144,000 pounds of total phosphorus and 432,000 pounds of total nitrogen from these lakes. In addition, the removal of these fish has prevented the recycling of 360,000 pounds total phosphorus back into these lakes by the fish.

Restoration of the North Shore of Lake Apopka

Budget Request: \$1,000,000

Description: Soil remediation has reduced pesticide levels by 65 percent on more than 4,000 acres of the North Shore Restoration Area. The remaining work includes completion of the infrastructure needed to restore emergent wetlands in former farm fields. Other work consists of treatment of storm water discharged to Lake Apopka, to reduce nutrient loads, and the testing and monitoring of soils in support of the remediation and restoration.

Implement Enhanced Lake Level Fluctuations and Minimum Flows and Levels

Budget Request: \$300,000

Description: Forty years of artificially stabilized water levels in the Harris Chain of Lakes have contributed to the poor water quality and the loss of lakeshore habitats for fish and wildlife. SJRWMD proposes to restore more natural water level fluctuations in the lakes to help reverse this damage. The project will implement new lake level management criteria to approximate, within flood protection and navigation constraints, natural water levels and flows for the purposes of enhancing restoration of fish and wildlife habitats and water quality and to provide for the development of minimum flows and levels (MFLs).

Control of Nuisance Aquatic Vegetation

Budget Request: \$200,000

Description: Efforts by Lake County need a continuation of support to control hydrilla in the UORB. This support is needed to sustain the long-term improvements that are occurring in the Harris Chain of Lakes.

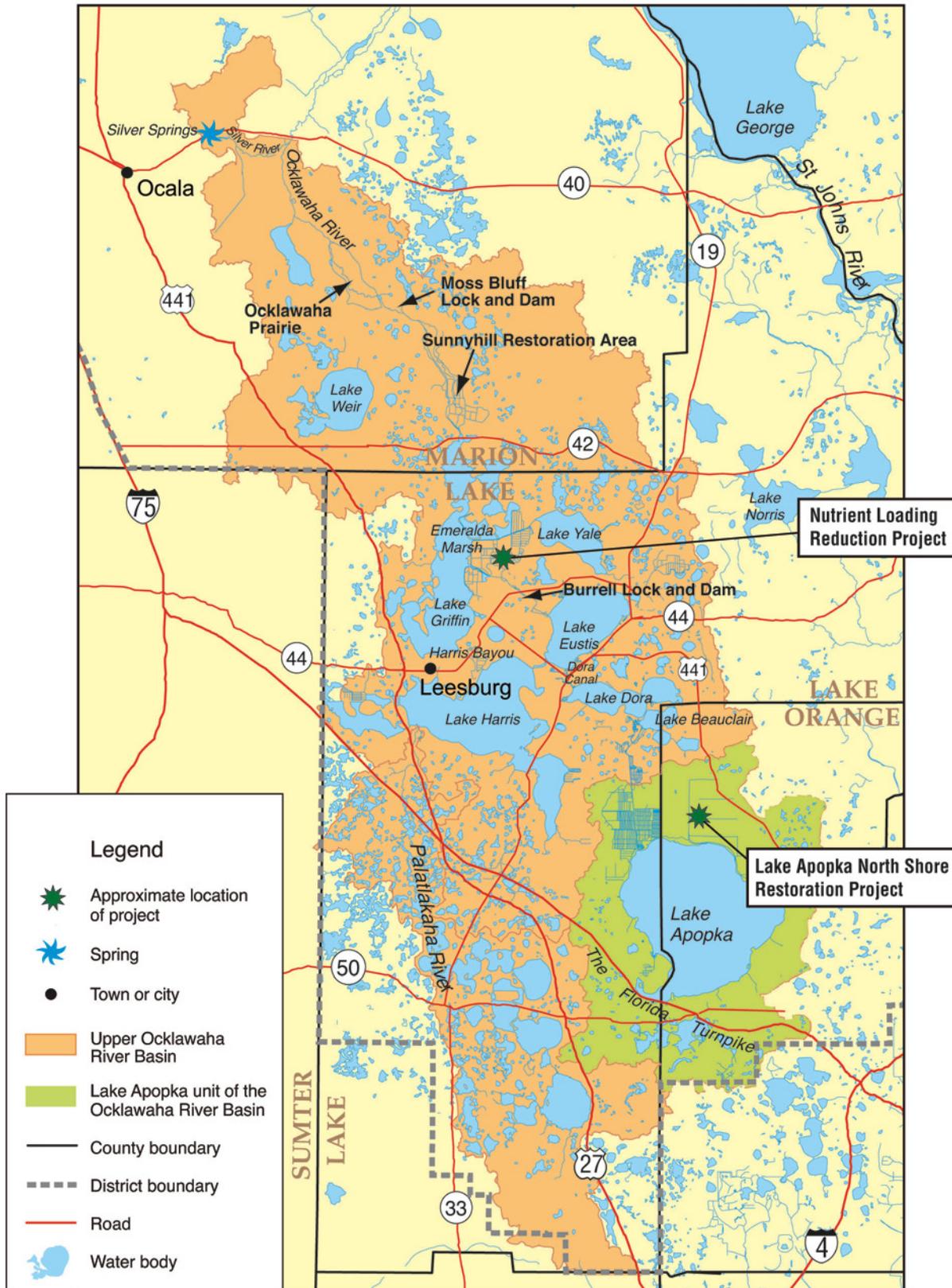
Nutrient Loading Reduction

Budget Request: \$900,000

Description: The requested funding will support acquisition of alum to be used to reduce nutrient loading and improve water quality. SJRWMD alum injection systems at the North Shore Restoration Area on Lake Apopka and at Emeralda Marsh along Lake Griffin and the Lake County Water Authority's Nutrient Reduction Facility adjacent to the Apopka-Beauclair Canal significantly reduce phosphorus loading to Lakes Apopka, Griffin, Beauclair and Dora.

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Upper Ocklawaha River Basin and Lake Apopka



Indian River Lagoon Basin (IRLB)

Fellsmere Water Management Area (FWMA)

Budget Request: \$6,500,000

Description: The requested funding will be used to initiate construction of phase 2 of the FWMA. This phase includes continuing construction of the eastern project levee and water control structures. The FWMA will improve water quality in the upper St. Johns River, provide treatment for agricultural runoff, allow significant stormwater storage for extreme storms, and reduce the occurrence of freshwater releases through Canal 54 (C-54) to the Indian River Lagoon estuary. Improved water quality entering the upper St. Johns River will help to implement TMDLs and reduce the use of groundwater withdrawals for irrigation. (This project is also listed in the Upper St. Johns River Basin section.)

C-1 Rediversion—Turkey Creek Basin

Budget Request: \$5,000,000

Description: The requested funding will be used to initiate phase 2 of the Canal 1 (C-1) rediversion subproject. This phase will construct the C-10 Reservoir, to provide additional storage and treatment volume for the rediverted canal waters. The project, when completed, will remove a substantial amount of the excessive freshwater and nutrients that have plagued the central lagoon's seagrass resources for more than 50 years.

Cooperative Surface Water Program—Sottile Canal Stormwater Park

Budget Request: \$3,000,000

Description: The requested funding will be used to construct a stormwater park on the Wheeler property, along Sottile Canal. The park will consist of a series of stormwater facilities, including a large settling pond, two wet detention ponds, two aboveground impoundment areas, created and restored wetlands, and walking trails. This cooperative project with the Brevard County Stormwater Utility Division will improve the quality of discharges to the St. Sebastian River and the lagoon, relieve localized flooding, rehydrate the Herndon Swamp wetland slough area and help to implement future TMDLs.

Rehabilitation of Coastal Wetland Habitat

Budget Request: \$500,000

Description: The requested funding will be used to continue implementation of various coastal wetland restoration techniques. These techniques include simple reconnection of impounded wetlands to lagoon surface waters by the placement of culverts in mosquito control dikes, total removal of the dikes where mosquito control is not an issue, and restoring productive wetlands in dragline-disturbed marshes. The benefit of these types of restoration is nearly 25:1 in terms of fisheries value alone.

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Local Government Cooperative Stormwater Programs—Priority Basins

Budget Request: \$1,000,000

Description: The requested funding will be used for construction of drainage and water quality treatment systems specified in the cooperative master stormwater plans developed jointly by SJRWMD and the local governments. Local partners will provide the necessary funding match.

Eau Gallie River and Elbow Creek Muck Removal (Phase 1)

Budget Request: \$800,000

Description: The requested funding will be used to complete all geotechnical engineering design and permitting required to dredge accumulated muck sediments from the Eau Gallie River and Elbow Creek tributaries to the lagoon. Funding will also be used to identify a spoil deposition area and to investigate advanced dewatering techniques needed to meet the limited-volume capacity of the spoil deposition area.

The dredging activities are necessitated by decades of sediment deposition in the river resulting from local development and residential runoff. This dredging will provide immediate improvements in water quality and in the ecology of the lagoon and Eau Gallie River systems. This subproject will help to implement future TMDLs applied to the Eau Gallie River.

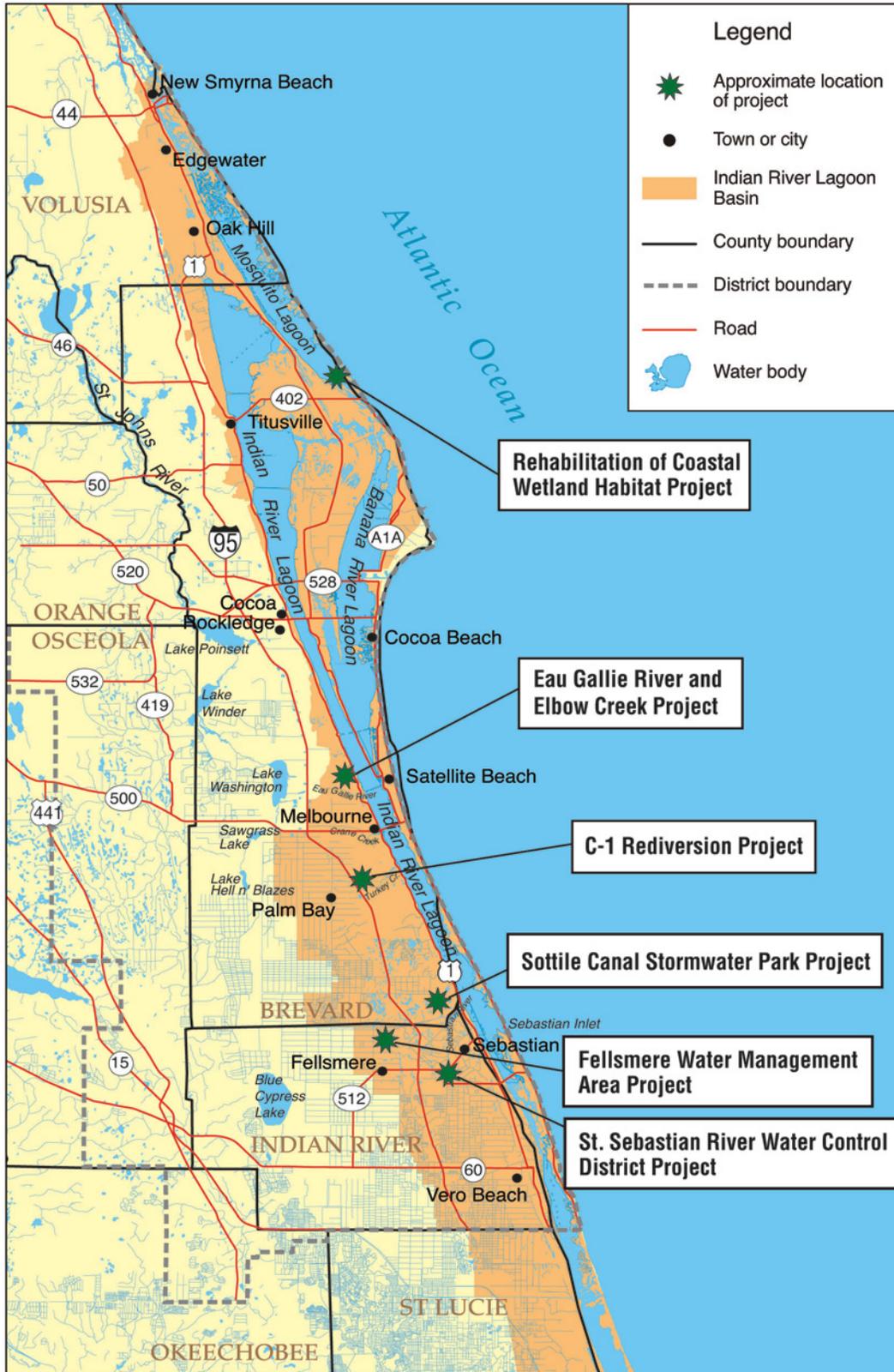
Cooperative Surface Water Program—Sebastian River Water Control District

Budget Request: \$800,000

Description: The requested funding will be used for the construction of erosion control and sediment control BMPs in the Sebastian River Water Control District.

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Indian River Lagoon Basin



Northern Coastal Basin (NCB)

Nova Canal Watershed—Port Orange Halifax Canal Water Control Structure

Budget Request: \$3,000,000

Description: The requested funding will be used to construct a water control structure in the Nova Canal watershed of the Halifax Canal. The project will increase both stormwater storage and treatment capacity and will provide the ability to divert stormwater discharges from the Halifax River to alternative water supplies.

The subproject will provide the NCB program with the ability to achieve TMDLs in the Halifax River; provide up to 2 million gallons per day (mgd) of alternative water; and enhance local capacity to provide flood abatement along Dunlawton Avenue (the emergency evacuation route for the barrier island from the town of Ponce Inlet to the city of Daytona Beach Shores). The city of Port Orange will be the local project partner and will assume operation and maintenance of the facility.

Matanzas River Basin Priority Water Resource Restoration and Management Initiatives

Budget Request: \$800,000

Description: The requested funding will be used to implement a priority saltmarsh habitat restoration project on 20 acres along the Matanzas River. St. Johns County is a local partner, and the Guana Tolomato and Matanzas National Estuarine Research Reserve will be responsible for ongoing management on the project site.

Halifax River Basin Priority Shoreline Habitat Restoration and Management Initiatives

Budget Request: \$500,000

Description: The requested funding will support implementation of priority projects identified in the NCB Halifax River Shoreline Habitat Restoration and Management Plan to enhance degraded and eroded shorelines to sustainable living shorelines. Local project partners include the cities of Port Orange, South Daytona, and Ormond Beach, who will provide operation and maintenance of the projects.

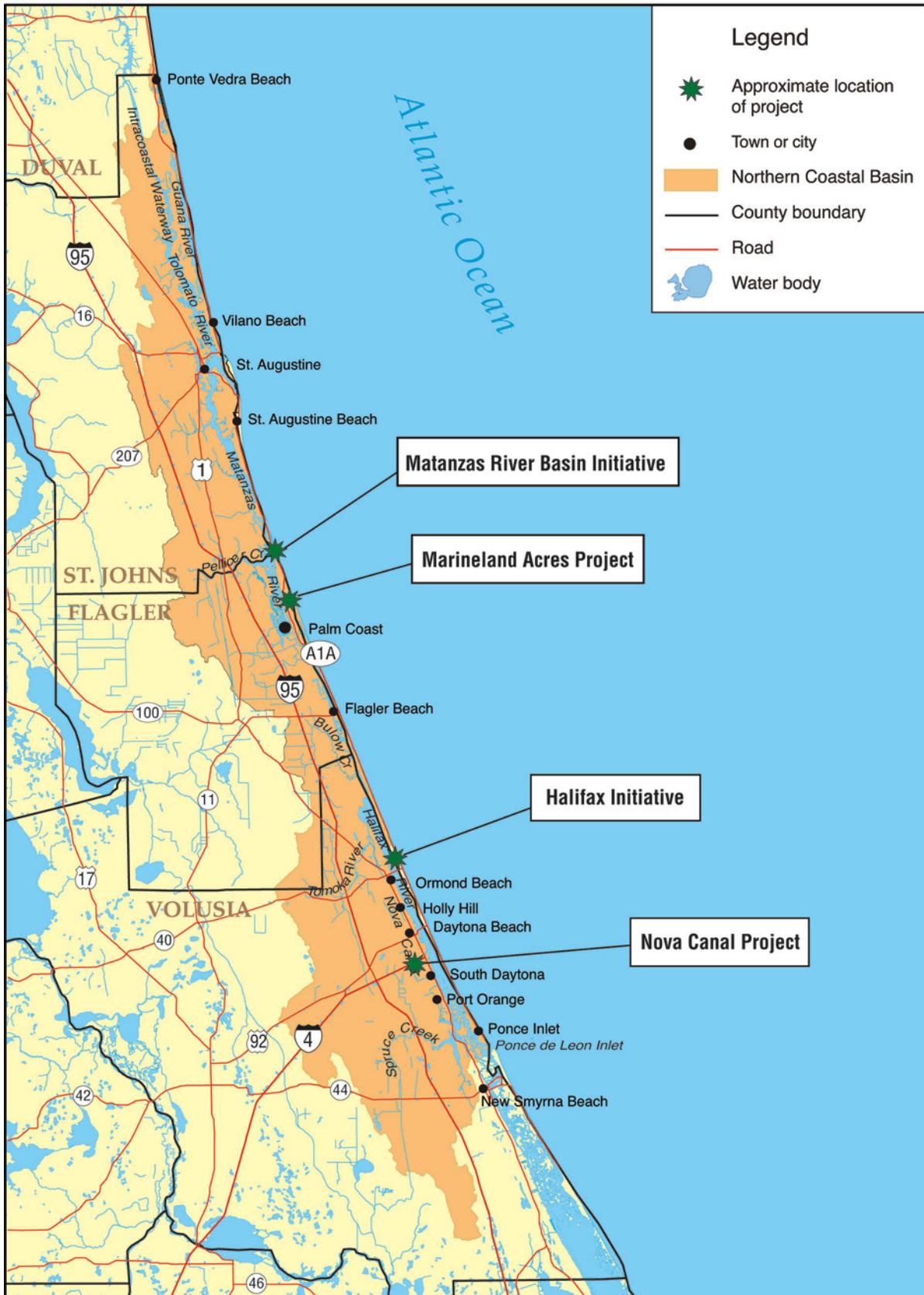
Marineland Acres Stormwater Retrofit Improvements

Budget Request: \$2,000,000

Description: The requested funding will support implementation of stormwater retrofit and drainage improvements in the Marineland Acres watershed in northern Flagler County. Project improvements are designed to alleviate flooding, improve water quality, and provide stormwater treatment. Flagler County will be the local partner and provide operation and maintenance of the facility.

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Northern Coastal Basin



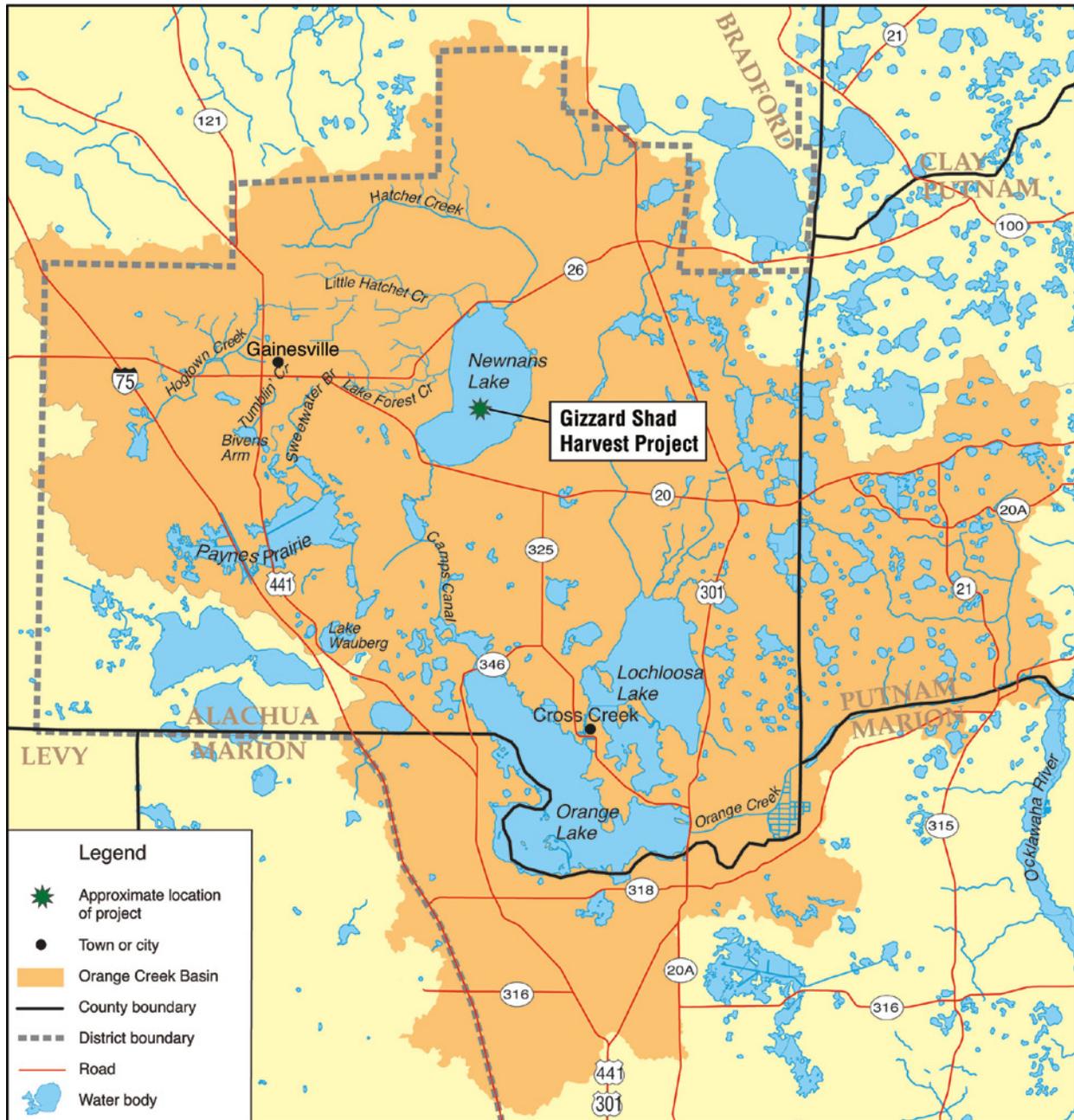
Orange Creek Basin (OCB)

Gizzard Shad Harvest from Newnans Lake

Budget Request: \$127,000

Description: The requested funding will be used to complete the initial 3-year gizzard shad harvest. Gizzard shad feed on bottom sediments and zooplankton, contributing to lake degradation by resuspension of bottom sediments, recycling of nutrients (particularly phosphorus) from sediments to the water column, recycling of nutrients within the water column, and reducing populations of zooplankton that control phytoplankton and algae.

Orange Creek Basin



St. Marys River Basin

Master Stormwater Planning—Baker and Nassau Counties

Budget Request: \$400,000

Description: The requested funding will be used to complete countywide stormwater master plans that are needed to identify and estimate costs of important projects for nonpoint pollution reduction. These plans provide an effective means of applying for outside project funding to help ensure that water quality in the basin does not decline to a condition that would require much more expensive restoration efforts.

Reclaimed Water Transfer from Baldwin Wastewater Treatment Facility (WWTF) to JEA Brandy Branch Generating Station

Budget Request: \$2,625,000

Description: JEA and the city of Baldwin have been planning to take filtered effluent from the Baldwin WWTF for use in the JEA Brandy Branch Generating Station. This project would serve two environmental functions: (1) reduce the discharge of effluent and associated nutrients to surface waters, and (2) reduce groundwater withdrawals from the Floridan aquifer.

