



Photo Courtesy of Wes Lester, COJ

RIVER ACCORD 2012 ANNUAL REPORT

August 17, 2012

Dear Friends of the St. Johns River:

This year, *The River Accord* has made great progress in addressing important river issues:

There have been many successes in Accord implementation and pollutant reduction during the year. For example:

- One wastewater treatment facility (WWTF) project in the freshwater section was completed with a reduction of 6,314 kg/yr of Total Nitrogen (TN).
- NAS began construction to remove all discharge from the river.
- WSEA and JEA extended lines to Oakwood Villas Phase 2 and Lincoln Villas Estates Phase 1. Work will continue in Lincoln Villas, and the majority of the homes in the area will be connected by 2014.
- JEA has reduced the amount of nitrogen discharged into the St. Johns River by more than 62 percent between 2000 and 2012, from >1400 tons per year in 2000 to approximately 520 tons per year in 2012.
- In the last 12 months, JEA has begun a final phase of improvements at its largest regional plant, Buckman, aimed at further reducing the nutrient discharge to the river.
- In 2010, two municipal separate storm sewer system (MS4) projects were completed in the freshwater section for a total reduction of 829 kg/yr of TN. The total reductions in TN have achieved the required reductions for the MS4s in the freshwater reach.
- It was reported in the 2011 Lower St Johns River (LSJR) Total Maximum Daily Load (TMDL) BMAP Annual Report that for the 2010-2011 reporting period, the combined LSJR marine reach point source nitrogen load has been reduced by 59 percent from the starting point load.
- The Duval County Health Department (DCHD) conducted over 4,700 door-to-door inspections to identify failing septic tanks with the potential for direct and indirect discharge into the LSJR or its tributaries and provided each homeowner with educational materials and consultation on the proper use and maintenance of OSTDS.
- The Total Phosphorous (TP) reductions were met with the completion of the projects in 2009.
 - An additional 11 MS4 projects were completed in the marine section for a reduction of 11,297 kg/yr of TN.
 - In the freshwater section, three non-MS4 TP projects were completed this year yielding 723.2 kg/yr of TP reductions.
 - A total of seven non-MS4 projects were completed this year for TN, which reduced 7,879 kg/yr of TN.
 - There were also three non-MS4 projects completed in the marine section for 881 kg/yr of TN reduction.
- The Florida Department of Agriculture and Consumer Services (FDACS) continued to sign up growers under the vegetable and agronomic crop, leatherleaf ferns, sod, and cow/calf best management practice (BMP) manuals
- The dairy operations included in the TMDL loading have since been abandoned; therefore, it does not appear that additional regional treatment options are needed in the marine reach. Water quality monitoring has documented huge improvements in water quality for several streams of this region, including Governor's Creek and Peter's Creek. Construction completed on 4 stormwater treatment facilities; design on 4, and 11 underway.
- Construction completed on several public access amenities (see Part 4.)

BMAP monitoring plan efforts continued in the freshwater section, marine section, and tributaries.

- The river transect sampling in the freshwater section occurred on schedule in April through October.

- The two new BMAP continuous Dissolved Oxygen (DO) stations were reinstalled in the marine section. The entities have continued the ambient water quality sampling in the tributaries, and the high-flow sampling.
- Monitoring in the LSJR has confirmed the effectiveness of reported reductions in point and non-point source pollution. River nitrogen concentrations in both the freshwater and marine reaches have exhibited significant reductions, and phosphorus concentrations exhibit significant declines during low flow years, when previously point sources of nutrient pollution were proportionally large contributors.
- Since 2008, the river has achieved its site-specific target for dissolved oxygen levels that support aquatic animal health, and, with the exception of 2010, have achieved the targets designed to reduce the effects of nuisance algal blooms.

America's Great Waters Coalition Designation

On April 18, 2012, America's Great Waters Coalition Designated the St Johns River to its list to advocate for the river's restoration needs.

The nation's Great Waters are the backbone of America's heritage and economy, impacting people, businesses, communities, and wildlife. Damaged waterways erode property values, undermine economic vitality, and threaten our quality of life.



Photo provided by SJRWMD

The St. Johns River is ecologically and historically rich, and brings new geographic presence and diversity to the Coalition.

The St. Johns River is an American Heritage River, recognized for its historical significance and was the site of one of America's first settlements at Fort Caroline, established 50 years before Jamestown.

"While the Great Waters vary in geographic location and physical characteristics, they are plagued by similar problems such as pollution, altered water flows, habitat loss and destruction, invasive species, climate change, and more," said Adam Kolton, co-chair for the America's Great Waters Coalition and senior director of congressional and federal affairs at the National Wildlife Federation. He continued, "Federal support for restoration work is essential for protecting these important waterways."

The Coalition consists of more than 70 local, regional, and national organizations that believe that speaking with a united voice and working together will help nationalize Great Waters' priorities, and will bring more strength to each region's restoration efforts.

This will bring increased national attention to these river basins' incredible natural resources, economic and societal values, and the great challenges facing them today. Together we can work toward solution-oriented conservation and restoration approaches needed to sustain the long-term health of these Great Waters.

For info, contact Mark Middlebrook, Executive Director of the St. Johns River Alliance
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The St. Johns River is a gift. Through the efforts of The River Accord, it is one that future generations will be able to enjoy.



Photo provided by SJRWMD

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ACRONYMS AND DEFINITIONS

AOI = as used in this report means “area of interest” a phrase used in the original River Accord agreement document and includes 1) accountability; 2) improving water quality; 3) sediment and stormwater; and 4) improving public access.

BMAP = basin management action plan

BMP = best management practice

FDACS = Florida Department of Agriculture and Community Services

DCHD = Duval County Health Department

DO = dissolved oxygen, amount of oxygen available for submerged plants and fishery

Freshwater = portion of stream minimally affected by salt from tidal cycle and supporting certain species

IFAS = Institute of Food and Agricultural Service, University of Florida

LSJR = Lower St. Johns River (downstream of the Oklawaha River confluence)

Marine = portion of stream significantly affected by salt from tidal cycle and supporting certain species

NOI = Notices of Intent to implement BMPs for potato farms

OSTDS = onsite sewage treatment and disposal systems, commonly referred to as septic tanks

SJRWMD = St. Johns River Water Management District

TAT = Tributary Assessment Team

TCAA = Tri-County Agricultural Area, ie the farms of Putnam, St Johns and Clay counties

TN = total nitrogen

TP = Total phosphorous

WSEA = Water Sewer Expansion Authority

WBID = waterbody identification number, a designation for a particular segment of a creek, stream, or the river

WWTF = wastewater treatment facility or sewage treatment plant



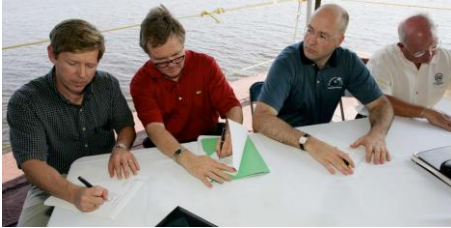
Aquatic grass grows naturally along the shallow shoreline of the river banks and provides habitat for various species including nursery beds for fisheries.

Photo provided by SJRWMD

OVERVIEW:

What is the River Accord?

The St. Johns River is Jacksonville's lifeline in many ways. It defines our history, our culture, our economy, our character, and ultimately, our future. In 2006, when the original River Accord Partners agreed to work together to improve the health of the St. Johns River, we all faced a crisis: an extensive harmful algal bloom, choking parts of the river and prompting the state health department to issue warnings that the river was unhealthy for humans.



In short, the St. Johns River needed help and on July 27, 2006, The River Accord was formed with partners including Jacksonville Mayor John Peyton, Fred Odom (WSEA), Greg Strong (DEP) and Kirby Green (SJRWMD) signing the accord agreement.

Mayor Peyton and other key partners agreed to invest in the river's future through ***The River Accord: A Partnership for the St. Johns***, a 10-year, \$700 million initiative to begin restoring the health of the Lower St. Johns River Basin. Based on decades of research about river restoration programs, the Accord committed to reduce the amount of nitrogen discharged into the river by:

- Phasing out older technology wastewater treatment plants
- Improving other wastewater treatment plants and building pipelines necessary to reuse treated wastewater for irrigation of lawns, parks, and golf courses
- Eliminating failing septic tanks
- Capturing and treating stormwater before it enters the river. The investments by the Accord partners are the largest to date in the lower St. Johns River's history. It includes a citywide no-net-gain goal for septic tanks, an expansive program to improve access to the river, an annual state of the river report and a research program to examine why the river's tributaries are filling in with silt.

The River Accord has four general areas of interest (AOIs):

1. Program accountability
2. Improving water quality
3. Tracking the river's sedimentation
4. Improving access

AOI #1 PROGRAM ACCOUNTABILITY

To ensure the initiative meets its goals, The River Accord features a steering committee composed of representatives from partnering agencies. They meet quarterly and produce written annual reports that are delivered to the Mayor of Jacksonville, Jacksonville City Council, executives at DEP and the governing boards of the JEA, SJRWMD and WSEA.

River Accord Annual Report

One of the key requirements of The River Accord is program accountability. To that end, The River Accord partners collectively produce an annual River Accord report, detailing activity that affects the overall health of the St. Johns River and tracking the progress of specific items outlined in the 2007 River Accord Memorandum of Understanding. This 2012 Annual River Accord Report herein was created to address the accountability mandate for the past year.

State of the River Report

A team of faculty members from the University of North Florida and Jacksonville University publishes an annual State of the River Report to provide an independent evaluation of the health and restoration progress of the Lower St. Johns River Basin.

The State of the River Report is written for river stakeholders and an abbreviated version and website is made available for the public. The 2012 report will be released August 17, 2012, during the EPB/UNF Environmental Symposium at UNF. The full text may be viewed at www.sjrreport.com.

AOI #2 IMPROVING WATER QUALITY

Poor water quality can contribute to a host of challenges including fish kills and algae, both of which can have a harmful effect on the river, its aquatic life and all living creatures.

This section is divided into two parts:

1. The St Johns River Mainstem (the Lower St. Johns River itself, not including the tributaries.)
2. The Tributaries to the St. Johns River.

Each part includes a discussion of the issues, the remedies, and the progress in river improvement.

ST. JOHNS RIVER MAIN STEM

St. Johns River Assessment

When too much nitrogen and phosphorus are introduced into a waterway, increases in their concentrations may trigger algal blooms. Nitrogen and phosphorus themselves occur naturally, but an overabundance can cause significant imbalances in the St. Johns River's ecology, which can cause blooms.

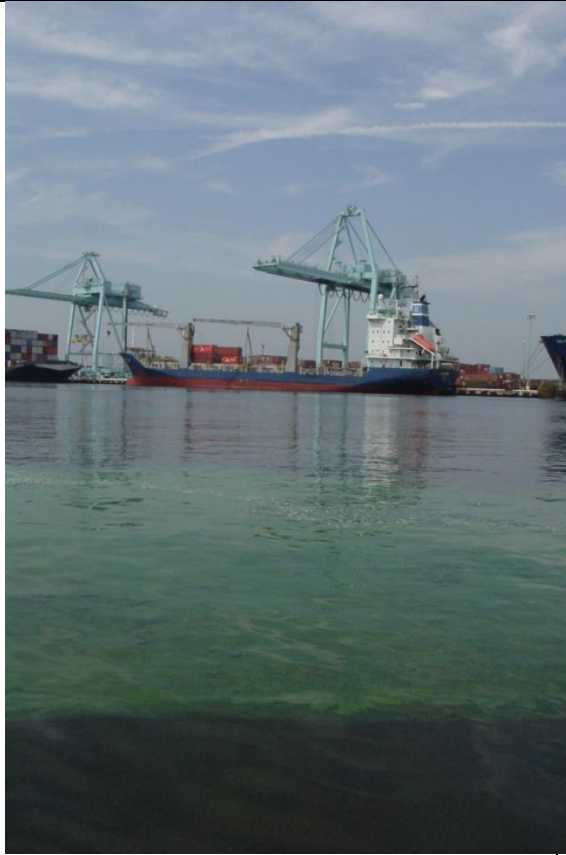


Photo provided by SJRWMD

Summer and early fall are the times of year that the St. Johns River typically exhibits its most visible response to water quality problems. Algal blooms on the river can be dramatic and are a result of excess nutrients from fertilizer, wastewater and stormwater runoff, coinciding with lots of sunlight, warm temperatures and a wide, shallow river. An algal bloom is a rapid increase in the algae population in the river.

Algae can multiply quickly in waterways with an overabundance of nitrogen and phosphorus, particularly when the water is warm and the weather is calm. This proliferation causes “blooms” of algae that turn the water green, often with floating layers of green scum.

When algal blooms block sunlight from reaching underwater plants, an ecosystem can be impacted. As with most plants, sunlight is vital for the growth of aquatic vegetation, which provides food and a place to live and grow for fish and animals. Blooms can last for months at a time, which can harm a waterway’s ecosystem by causing declines in dissolved oxygen, underwater plant growth and fish populations.

In the lower St. Johns River, as algae move downstream from fresh waters into saltier waters, they begin to become stressed and die. Dying algae lower levels of dissolved oxygen in the water, which fish and other aquatic animals breathe.

Some fish species with little tolerance for low levels of dissolved oxygen may die. In addition, some algal species can directly lead to fish kills, either by ingestion of algal toxins or by clogging the gills.

While the possibility of algal toxins in the environment is a serious concern, the more common problem associated with harmful algal blooms is the impact upon recreational activities and commerce due to the unsightly green scum and accompanying unpleasant odor.

The five agencies engaged in water and biological quality monitoring in the Lower St. Johns River Basin coordinate with each other to optimize coverage and eliminate duplication in efforts.

In addition to the standardized monitoring performed on site, field scientists record observations that are uploaded to a multi-agency internet web site to enhance comprehensive assessments of river basin-wide conditions.

During events of ecological significance, such as large algal blooms, fish kills, marine mortality events, etc., these agencies will coordinate activities and may collect data at the request of other agencies in order to provide the most current assessment of events in progress.

City of Jacksonville (COJ)

The City of Jacksonville Environmental Quality Division conducts surface water quality monitoring in the St. Johns River, tributaries of the St. Johns, and Nassau River/Timucuan Preserve area by trained and dedicated staff members.

The St. Johns River is monitored monthly at ten fixed sites, extending from the mouth of the river upstream (south) to Mandarin Point.



COJ Research Vessel Anna McLeod

The long-term data set (from 1983) allows for analysis of surface water quality trends and provides data for management and permitting decisions, and developing Total Maximum Daily Loads.

Constituents include metered measurements (dissolved oxygen, percent saturation of dissolved oxygen, pH, temperature, salinity, and specific conductance), field observations of Secchi depth and meteorological conditions, chlorides, color, turbidity, hardness, total suspended solids, Biochemical Oxygen Demand (BOD), and five nutrients (nitrogen and phosphorus compounds).

Tributaries of the St. Johns River are monitored at approximately 100 locations quarterly. Parameters measured consist of the metered measurements noted above and fecal coliform bacteria. The tributaries provide significant littoral zone habitat for a variety of species and are extremely important to the ecology of the St. Johns River estuary system. Pollution impacts in the tributaries can be pronounced, since they have a smaller dilution potential than larger water bodies. In addition to the routine tributary sampling, approximately 35 additional sites are monitored monthly on ten BMAP waterbodies that are impaired for fecal coliform bacteria (BMAP waterbodies) in an effort to discover and eliminate sources of fecal bacteria.

The Timucuan Program began in February 1997 and is a cooperative effort between the city and the National Park Service (NPS). The purpose of this effort is to collect water quality data for the surface waters in and adjacent to the Timucuan Ecological and Historic Preserve. Twelve sampling locations are monitored bi-monthly. The information will be used by the NPS and the city to make management and land-use decisions in this area of the county. Parameters measured are the same as for the River Run with the addition of chlorophyll.

For more information on the surface water monitoring programs conducted by COJ, go to <http://www.coj.net/departments/environmental-and-compliance/environmental-quality/surface-water-quality.aspx>.

JEA

To ensure protection of the St. Johns River water quality from treated discharge effluent, JEA monitors these discharge areas monthly for a variety of constituents both upstream and downstream of the discharge points. Additionally, as a member of the Tributary Assessment Team, JEA actively participates in monitoring tributaries impaired for fecal coliform bacteria, and currently has assigned several WMIDs to monitor monthly.

Department of Environmental Protection (DEP)

The DEP Northeast District has several water monitoring programs and many special studies.

For more information about these programs go to <http://www.dep.state.fl.us/northeast/water/SWAMP.htm>.
Continuous Data - The department has two continuous sampling sites that take pH, dissolved oxygen, conductivity, and temperature readings every 15 minutes.



Taken from URL at left

Stream Condition Index (SCI) - The Department conducts SCI's to determine the health of a stream based on the biota and habitat within the stream.

For information on these two St. Johns River programs and more go to [http://www.dep.state.fl.us/northeast/stjohns/Assessment and Monitoring.htm](http://www.dep.state.fl.us/northeast/stjohns/Assessment_and_Monitoring.htm).

St. Johns River Water Management District (SJRWMD)

Protecting and restoring water quality is a core mission of the St. Johns River Water Management District. A key component of this work is water quality monitoring and reporting. The agency's Bureau of Water Resource Information currently operates the district-wide water quality monitoring network, in coordination with the Florida Department of Environmental Protection (DEP). The water quality monitoring network was initially designed and implemented in the early 1980s and has since been improved and expanded.

The current network is comprised of approximately 350 long-term sampling stations located on rivers, streams and lakes throughout the District's 18-county service area. Although many stations along the center of the lower St. Johns River main stem are sampled on a biweekly basis, other are sampled on a monthly and a bimonthly basis by trained field scientists.

Because the lower St. Johns River is dynamic and highly variable, it has a relatively high sampling frequency of twice per month for 11 stations from Lake George to Jacksonville.



Photo provided by SJRWMD

Collected samples are analyzed for a variety of analytes, including nutrients and major ions. Although the majority of the samples are analyzed at the District's laboratory, some are analyzed at the DEP lab in Tallahassee. Sample results, as well as collected physical measurements, are stored at the District in a dedicated database, and are also uploaded to the U.S. Environmental Protection Agency's national Storage and Retrieval (STORET) database. Historical data provides a wealth of information that enables the District to report about the status and trends at these monitoring stations, so, residents can use the information to acquire a basic knowledge of water bodies in which they have an interest. These reports are available at the District's web site: <http://floridaswater.com/hydrologicdata/waterquality/>.

Fisheries-Independent Monitoring (FIM) Program:

The Florida Fish and Wildlife Conservation Commission (FWC) Fish and Wildlife Research Institute's (FWRI) Fisheries-Independent Monitoring (FIM) program is a long-term program designed to monitor the relative abundance of fishery resources in Florida's major estuarine, coastal, and reef systems. The program was developed to: 1) address the critical need for effective assessment techniques for an array of species and sizes of fishes and selected invertebrates; 2) provide timely information for use in

management plans; and 3) monitor trends in the relative abundance of taxa in a variety of estuarine and marine systems throughout Florida.

The FIM program began sampling in northeast Florida estuaries in 2001. Current monthly sampling efforts within the lower St. Johns River include 79 randomly selected sites from the mouth of the river upstream to the city of Palatka. The FIM program uses a multi-gear approach (i.e., seines and trawls) to collect data on various life history stages of fishes and selected invertebrates, from initial recruitment into the estuary through harvestable sizes, thereby providing a continuous gauge on the status of a particular species. All fish and selected invertebrate species captured are identified to the lowest practical taxonomic level, counted, and a random sample is measured. Environmental data consisting of water chemistry, habitat characteristics, and physical parameters such as current and tidal conditions are also recorded for each sample.

Along with monitoring fisheries resources, the FIM program routinely collects data on the age and growth, mercury content, genetics, and reproductive potential of many recreationally or commercially important species. The program also collects specimens that show signs of gross external abnormalities (GEAs), which are defined as those illnesses or deformations easily observed in the field. Typical GEAs observed may include tumors, ulcers, fin rot, skeletal deformities, or parasites. Baseline information on the frequency of occurrence of GEAs is necessary to identify changes in the ecological health of Florida's estuaries and provides valuable information on the level of environmental stress placed upon species in estuarine and coastal waters.

More information about the FIM program can be found on the FWRI web site:
<http://myfwc.com/research/>.

Water Quality Cleanup Targets

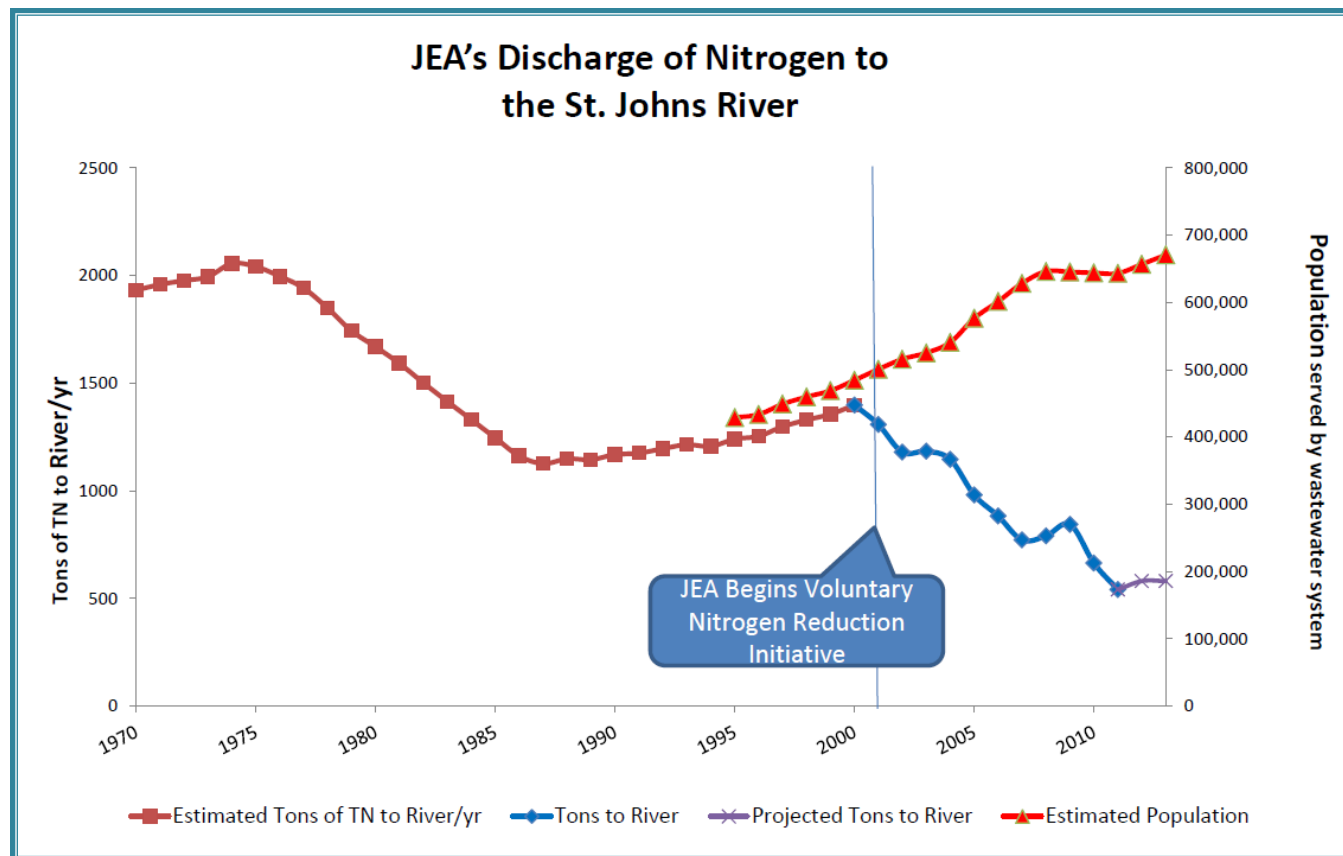


Water quality targets called Total Maximum Daily Loads (TMDLs) for the mainstem of the river were adopted in June of 2008 by DEP. A plan detailing how local governments, industry and utilities those targets, called the Basin Management Action plan (BMAP), was adopted in October of the same year. DEP also develops an annual progress report on implementation of the specific actions detailed in the BMAP.

According to the 2011 progress report, two WWTF projects in the freshwater section were completed with a reduction of 2,485.9 kg/yr of TP and 9,640.9 kg/yr of TN. The WWTFs in the freshwater section have achieved their portion of the TN and TP required reductions. In addition, three wastewater projects were completed in the marine section for a total reduction of 30,473 kg/yr of TN. Two municipal separate storm sewer system (MS4) projects were completed in the marine section for a reduction of 18,505 kg/yr of TN. In the freshwater section, one non-MS4 project was completed this year yielding 194.7 kg/yr of TP and 1,417.5 kg/yr of TN reductions.

BMAP monitoring plan efforts have continued in the freshwater section, marine section, and tributaries. The river transect sampling in the freshwater section occurred on schedule in April through October, and the 2011 sampling was the last of the three years required by the BMAP. The continuous dissolved oxygen (DO) stations in the marine section were maintained throughout the year. The responsible entities have continued the ambient water quality sampling in the tributaries. In addition, the high-flow sampling continued and 2011 was the last of the three years of sampling required by the BMAP.

JEA has reduced the amount of nitrogen discharged into the St. Johns River by over 62 percent between 2000 and 2012. To date, nitrogen has been reduced from 1,400 tons per year in 2000 to approximately 520 tons per year in 2012. As shown in the graph below, this reduction in nitrogen loading to the river has been accomplished while the population served by these plants has been growing significantly.



The River Accord agreement signed in 2006 is JEA's ongoing commitment to seek further reductions in our nitrogen discharged into the River.

JEA will achieve the goals of the River Accord through three efforts described below:

1. Upgrading JEA's five regional treatment plants to advanced nutrient removal:
 - a. Improvement projects have already been completed at three regional treatment facilities, Mandarin, Southwest, and Arlington East.
 - b. Since the last update, JEA has begun construction on a \$21 million upgrade to its largest regional plant, Buckman. The Upgrade at Buckman is scheduled to be completed in 2013.
2. Phasing out six older technology plants:
 - a. Three older technology plants have previously been phased out.
 - b. Construction is ongoing for the phase out of the fourth and fifth plants, Royal Lakes and San Jose. The Royal Lakes plant should be taken off line before the end of June 2012, and the San Jose plant is schedule for decommissioning in March 2013.
3. Increasing reclaimed water use:
 - a. JEA has completed approximately 153 miles of reclaimed water lines.

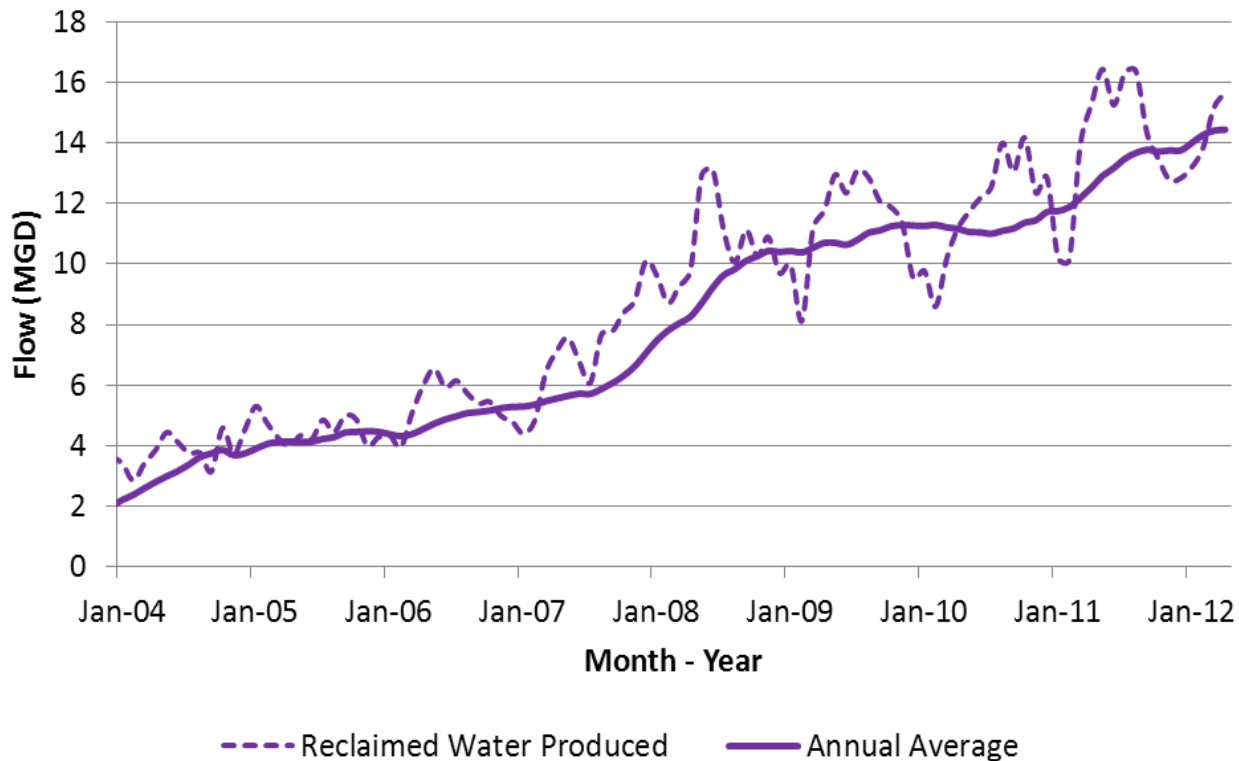
- b. JEA is in the design phase of a \$1 million project to take an additional 2-3 MGD of reclaimed water from the District II wastewater plant to our power generating facilities at Northside and St. Johns River Power Park. Reuse water is being used at the power facilities for a variety of process and cooling water purposes. The use of reclaimed water at the power plant offsets water that otherwise would be drawn either from wells or directly from the St. Johns River.



Photo provided by JEA

The graphic which follows shows the increase in reclaimed water use since the signing of The River Accord. Since new development growth has slowed, JEA has focused on connecting existing water users close to the existing infrastructure and serving new residential customers in growing communities such as the Nocatee, Durbin Crossing, and Rivertown. JEA and its River Accord partners remain committed to supporting the expanded use of the reclaimed water system and extending the system to new growth areas when they develop.

JEA's Increasing Reuse Production



Accord Response #2:

St. Johns River Water Management District Reclaimed Water and Wastewater Treatment Projects in the Lower St. Johns River Basin



The St. Johns River Water Management District (SJRWMD) has established significant partnerships and cooperative projects with local governments in the lower basin. Much progress has been made in the Lower Basin Reuse and Wastewater Treatment Upgrade Initiative, which is helping to remove nitrogen discharges from the river and improve water quality. At the same time, these projects are making more reclaimed water available for irrigation, which will conserve existing drinking water supplies.

Numerous projects in counties across northeast Florida are completed or nearing completion.

SJRWMD's next steps will include working with NOAA and DEP on remote-sensing methods to monitor algal bloom formation and progression. By better understanding how blooms form and develop within the water body, more targeted management methods may be developed. Other activities will focus on upstream sources of nutrient pollution, such as developing nutrient reduction projects in the Middle St. Johns River and Lake George basins. SJRWMD also is monitoring a new approach to satisfying EPA directives, including a dissolved oxygen (DO) standard that better recognizes low DO common to blackwater systems such as the St. Johns River.



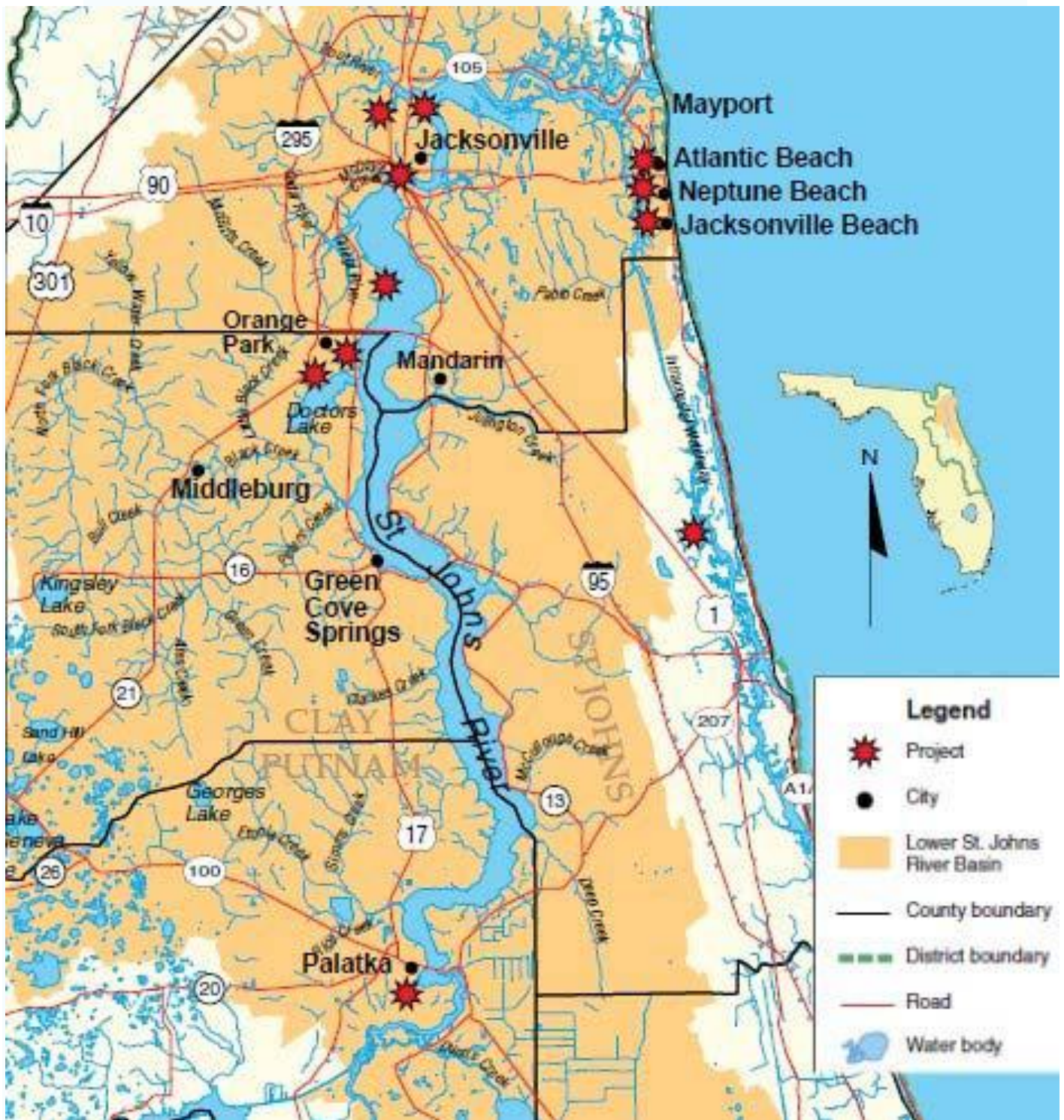
Photo provided by John Flowe

SJRWMD AND Local Cooperative Project Accomplishments To Date:

Through a cooperative effort, these near-term projects are intended to remove nitrogen discharges from the river — helping to improve water quality in the Lower St. Johns River Basin; making reclaimed water available for appropriate uses; and expanding existing potable water supplies for other higher-quality uses.

- JEA — \$8.9 million. SJRWMD and the Florida Legislature provided funding support of of the previously mentioned wastewater treatment upgrades and reclaimed water systems expansion projects.
- Clay County Utility Authority — \$30.7 million. Project will redirect water from the Miller Street wastewater treatment plant and the town of Orange Park to the high-growth area to the west. These projects will reduce the amount of total nitrogen discharged to the St. Johns River by an estimated 107,396 lbs./yr. Status: In progress – Miller Street upgrade completed, distribution system still in progress
- City of Palatka — \$7.7 million. The project will initially expand reuse to the city's golf course, Ravine State Gardens and various recreational ball fields, and ultimately remove all discharges to upland irrigation. Nitrogen reductions to the St. Johns River are estimated to be 158,600 lbs./yr. and phosphorous reductions are estimated to be 21,100 lbs./yr. Status: In progress.
- Town of Orange Park — \$5.5 million. Project includes upgrades to the existing wastewater treatment plant, which will allow for expanded use of reclaimed water for use on parklands and commercial lands. The expected average annual nitrogen reduction to the river is 47,940 pounds. Status: Completed
- St. Johns County — \$8.3 million. Project will be to install a trunk line to support a planned unit development in which the developer will be required to install a dual water line system. The project is anticipated to reduce nutrient loadings to the river by 10,000 lbs./yr. at build-out. Status: Not yet initiated.
- Neptune Beach — \$2.3 million. Wastewater treatment improvements to advanced secondary nutrient reduction standards and installation of facilities to provide reclaimed wastewater to municipal properties. This work will reduce total nitrogen entering the river by 17,380 lbs./yr. Status: Completed.
- City of Atlantic Beach — \$12 million. Project improves wastewater treatment to meet total maximum daily load requirements resulting in a reduction of 61,791 lbs./yr. of total nitrogen reaching the river. Status: Nearing completion.
- City of Jacksonville Beach — \$15 million. This wastewater treatment project will improve the city's discharge to advanced wastewater treatment standards. Nutrients (nitrogen) removed from the river per year: 65,000 pounds. Status: Nearing completion.
- NAS Jacksonville (U.S. Navy) — \$4.2 million. This project will remove all discharge from the river and apply it to reuse sites on the military base. Discharge of 44,525 lbs./yr. of total nitrogen eliminated. Status: Phase 1 in progress. NAS Jacksonville is aiming to reuse 100 percent of its wastewater thereby eliminating the need to withdraw approximately 37 million gallons per year of potable water from the Florida aquifer and 315 million gallons annually of treated wastewater

to the St. Johns River. The Station is working closely with the City of Jacksonville to complete the reuse project using St. Johns River Water Management District matching funding in 2014.



Agricultural Projects



The following section is an excerpt from the **2011 PROGRESS REPORT For the Lower St. Johns River Main Stem Basin Management Action Plan**. The full 121 Page report is available online at.

<http://www.dep.state.fl.us/water/watersheds/docs/bmap/lshr-bmap-apr-2011.pdf>

Florida Department of Agriculture and Consumer Services

BMP Implementation Status

Florida Department of Agriculture and Consumer Services (FDACS) has continued to sign up growers under the vegetable and agronomic crop, sod, and cow/calf BMP manuals. Because of limited staff, the goals for enrolling all cow/calf and vegetable/agronomic crop operations in 2011 have not been met. The cumulative enrollment numbers, based on Notices of Intent (NOIs), are contained in Table 14 (from the 2011 BMAP report). To date, no producers have opted to monitor water quality instead of implementing BMPs.

TABLE 14: AGRICULTURAL ACRES ENROLLED IN BMPs AS OF DECEMBER 31, 2010

2004 SJRWMD LAND USE	2004 ACRES	FDACS-ADJUSTED ACRES FOR ENROLLMENT	RELATED FDACS BMP PROGRAMS	ACREAGE ENROLLED ¹	RELATED NOIs	REMAINING ACREAGE ²
Pasture	55,457	N/A	Cow/Calf, Future (Hay)	13,394	14	42,063
Row/Field/Mixed Crops	42,546	TBD	Vegetable/Agronomic Crops	18,157	37	24,389
Fallow Cropland	1,446	N/A	N/A	N/A	N/A	N/A
Horse Farm	3,145	TBD	Future Equine	N/A	N/A	3,145
Citrus	375	TBS	Ridge Citrus, Flatwoods Citrus	0	N/A	375
Abandoned Citrus	30	N/A	No enrollment needed	N/A	N/A	N/A
Tree Crops	298	TBD	Specialty Fruit & Nut	0	N/A	298
Nurseries and Vineyards	56	TBD	Future Nursery, Specialty Fruit and Nut	0	N/A	56
Tree Nurseries	1,207	TBD	Future Nursery, Specialty Fruit and Nut	0	N/A	1,207
Ornamentals	964	TBD	Container Nursery	0	N/A	964

Shade Ferns	336	TBD	Leatherleaf Ferns3	1,031	85	0
Hammock Ferns	362		Future Nursery	0	N/A	
Sod Farms	4,678	TBD	Statewide Sod	1,981	4	2,697
Specialty Farms	26	TBD	Conservation Plan Rule	0	N/A	26
Dairies	1,070	TBD	Conservation Plan Rule	0	N/A	1,070
Cattle Feeding	475	TBD	Conservation Plan Rule	0	N/A	475
Poultry Feeding	196	TBD	Conservation Plan Rule	0	N/A	196
Other Open Lands – Rural	854	N/A	No enrollment needed	N/A	N/A	N/A
Totals	113,521	-	-	34,563	140	76,961

Tri County Agricultural Area

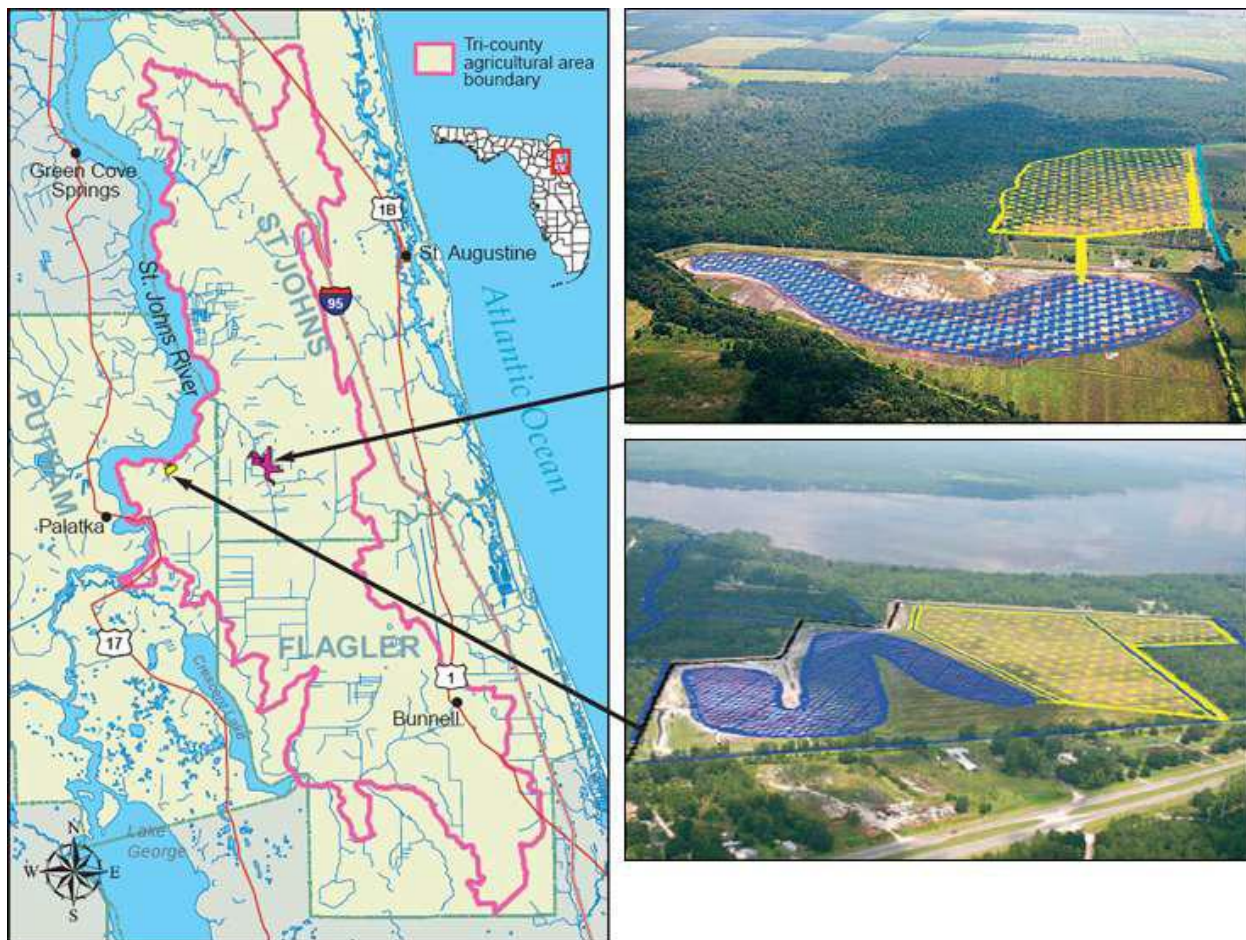
The Tri-County Agricultural Area (TCAA) is included in the LSJR BMAP for nutrients. Vegetable growers are under a statutory mandate either to sign up for the FDACS BMP program or monitor the quantity and quality of the water leaving their farms.

Although submittal of Notices of Intent (NOIs) to implement the FDACS BMPs by potato farmers in the TCAA has lagged in the past, recent discussions with potato growers and representatives of FDACS, SJRWMD and UF-IFAS to develop guidance on the implementation of BMPS has reach a consensus on this guidance. As a result, growers that previously were hesitant to enroll in the FDACS BMP program are now doing so, and 28 of about 35 TCAA potato farms have signed up in the past 10 months. During these discussion some TCAA farmers inquired about the modeling used to develop the TMDL and have asked for information to help them understand the results of that monitoring and whether it is properly applied to agriculture in the TCAA.

In response to this inquiry, the University of Florida Water Institute and Institute of Food and Agricultural Sciences Extension (in cooperation with FDEP, FDACS and the SJRWMD) reviewed information resources used by the SJRWMD and FDEP to estimate nutrient loadings and establish nutrient load reduction allocations associated with the Lower St. Johns River (LSJR) total maximum daily load (TMDL).

The project reviewed specific reports and documents related to the development of the LSJR TMDL and basin management action plan (BMAP) and prepared a report that reviewed and evaluated the assumptions, methods, and data sources used to develop the TMDL.

More about this effort may be found at: <http://waterinstitute.ufl.edu/WorkingGroups/TCAA/index.html>.



Source of graphic is <http://www.sjrwmd.com/lowerstjohnsriver/regionalstormwater.html>

The stormwater treatment areas in St. Johns County (top right) and Putnam County (bottom right) are both located in the tri-county agricultural area (left). The SJRWMD has constructed two regional stormwater treatment (RST) facilities in the TCAA to capture runoff from agricultural watersheds and remove nutrients prior to discharging to tributaries leading to the river. The areas each have filled with water to make wetlands and a deep pond, which filter pollutants from the rain and irrigation runoff from the agricultural farms before they flow into the St. Johns River. Blue shading has been added to the above photographs to show the location of the deep ponds; yellow shading represents the wetlands. These two facilities combined capture and treat runoff from a total of 3,224 acres of agricultural lands draining into Deep Creek and Dog Branch.

Currently, St. Johns County and the SJRWMD are utilizing funds appropriated by the state to make improvements to the facility at Deep Creek to increase nutrient reduction efficiencies. Additionally, St. Johns County is utilizing state funding (with the assistance of the SJRWMD) to develop an additional agricultural runoff treatment facility near Hastings, Fla. This facility will treat 1,425 acres of agricultural runoff also draining to Deep Creek.



Photo Courtesy of SJRWMD

Other Cooperative Agricultural Projects

In addition, FDACS, St. Johns River Water Management District (SJRWMD), and several other agencies formed the Tri-County Agricultural Area (TCAA) Water Management Partnership to implement on-farm and regional water management projects and practices to reduce runoff of nutrients to the LSJR, improve water conservation, and result in more efficient farm management.

As part of this program, SJRWMD and FDEP have provided funding towards the development of alternative nutrient and water management practices.

In addition, FDACS, FDEP and the SJRWMD have initiated a program in conjunction with the the TCAA growers and other stakeholders to cost share the implementation of certain BMPs. This program, named the TCAA Water Management Partnership is being led by FDACS with funding support of \$1.5 million from the SJRWMD and approximately \$3.5 million from the FDEP.

Even though a large amount of fertilizer application occurs on public and commercial properties such as parks and golf courses, excess or improper application of fertilizers by residential users or professional lawn services introduces a significant amount of nutrients into the river.

Nitrogen enters the river in the following ways:

- The over-application of fertilizer
- Application of fertilizer during rainfall; and
- Over-irrigation resulting in runoff.

Ordinance 2008-28-E established fertilizer and best management practices (BMPs) in the City of Jacksonville Ordinance Code. It requires commercial fertilizer applicators to be trained in the State BMPs and bulk storage facility operators to have a spill prevention plan. In order to accomplish the intended goals and objectives of the ordinance, the Environmental and Compliance Department (ECD) has created an educational campaign to inform the residents about the value of natural water resources, and to educate them about ways to effectively apply fertilizer on home lawns.

A major purpose of the City of Jacksonville's educational campaign was public and business partnering to increase ordinance compliance. The City conducts irrigation and fertilizer educational outreach at town meetings, homeowner association meetings, businesses, and civic organizations' meetings.

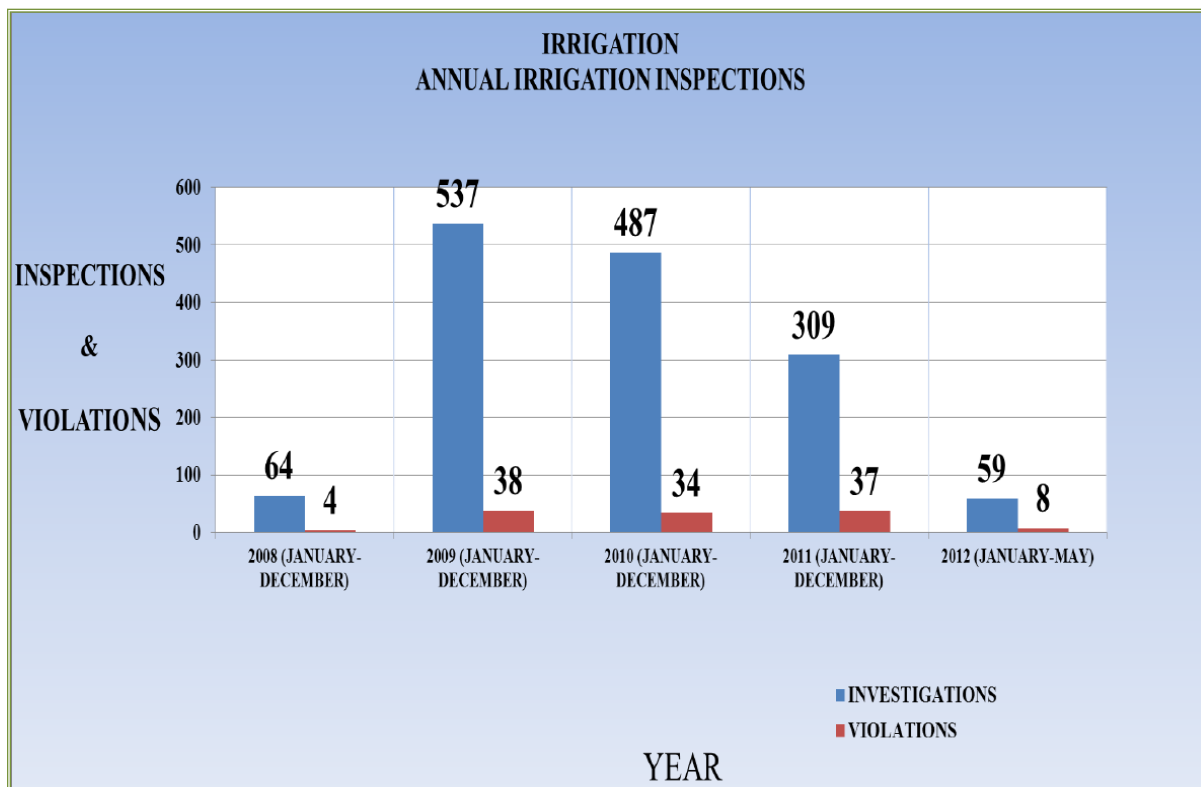
To date, over 40,000 irrigation and fertilizer brochures have been printed and approximately 37,166 have been distributed at these events.

Data suggests that 50 percent of northeast Florida's groundwater is being used for irrigation purposes. This over-watering contributes to water waste and compromises overall water quality.

In light of this fact, city government realized the need to enact landscape irrigation requirements that will reduce the impact to the Floridan aquifer – our drinking water supply – and eliminate excess runoff of nutrients into the river.

The landscape irrigation requirements provide for residential and non-residential properties to irrigate on scheduled days.

For a copy of the brochure, please visit www.coj.net and search for “fertilizer” or “irrigation.”



**Accord Response #5:
St. Johns River Water Management District Irrigation Restrictions**



Watering restrictions have been in place since 1991 in the 18 counties of SJRWMD. In March 2009, SJRWMD tightened its landscape irrigation rule. The new restrictions specify the days of the week for landscape irrigation throughout SJRWMD's 18 counties, which includes Duval County. Under the new restrictions, landscape irrigation is limited to two days a week during daylight saving time and one day a week during Eastern Standard Time.

In addition to limiting residential irrigation use, the irrigation of golf courses, nursery plants, agricultural crops, cemeteries, and recreational areas are regulated by SJRWMD through consumptive use permits. Details are available online at www.floridaswater.com/wateringrestrictions

**Success in Nutrient Reduction
as a Result of Accord Implementation**



There have been many successes in BMAP implementation during the third reporting period.

- For example, two WWTF projects in the freshwater section were completed with a reduction of 2,485.9 kg/yr of TP and 9,640.9 kg/yr of TN. The WWTFs in the freshwater section have achieved their portion of the TN and TP required reductions.
- In addition, three wastewater projects were completed in the marine section for a total reduction of 30,473 kg/yr of TN. Two municipal separate storm sewer system (MS4) projects were completed in the marine section for a reduction of 18,505 kg/yr of TN. In the freshwater section,

one non-MS4 project was completed this year yielding 194.7 kg/yr of TP and 1,417.5 kg/yr of TN reductions.



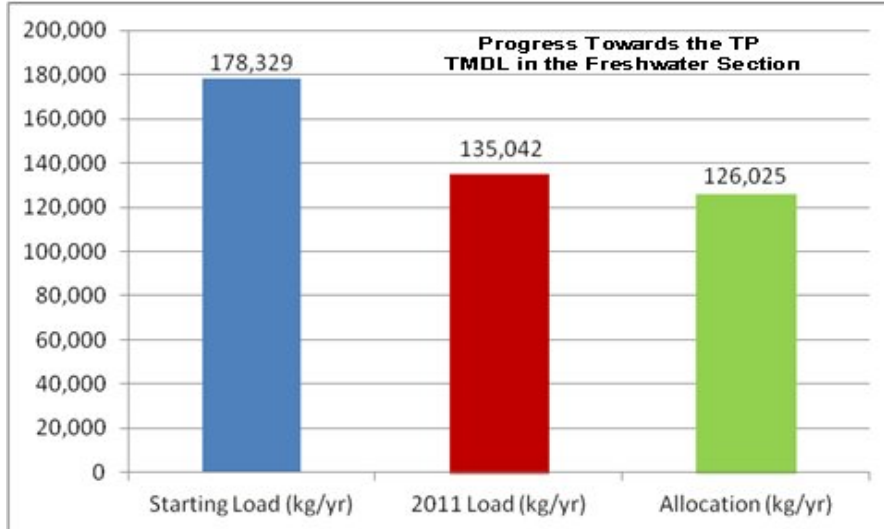
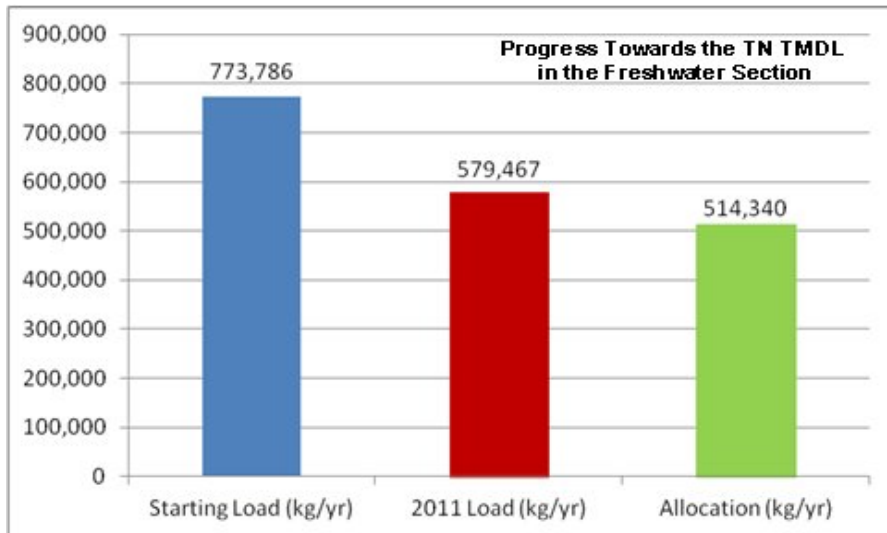
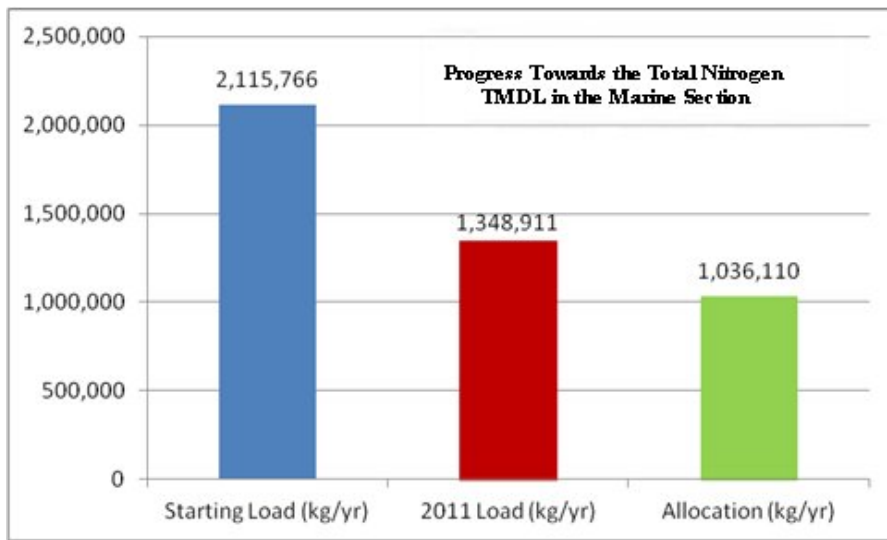
Photo provided by John Flowe

The fourth annual BMAP progress report will encompass the period of January 1, 2012 through December 31, 2012. During this time,

- The City of Palatka will complete its WWTF project in the freshwater section;
- The City of Jacksonville Beach will complete its WWTF project in the marine section;
- The City of Jacksonville will continue to phase-out septic tanks and design stormwater projects to meet its marine section MS4 allocation;
- Camp Blanding will continue the maintenance and repair of its swales in the marine section;
- DACS will continue to enroll agricultural producers in BMP programs and will be adopting an equine BMP manual and a consolidated citrus BMP manual.

In addition, the freshwater ambient water quality sampling, DO sampling, and tributaries sampling will continue through the monitoring plan.

The table and figures below illustrate the load reductions made by the stakeholders in the LSJR Basin and the remainder of the nutrient loading in each segment of the river to achieve the TMDLs:



TRIBUTARIES OF THE LOWER ST. JOHNS RIVER

Tributary Assessment



In the Lower St. Johns River, 55 tributaries were initially verified as impaired for fecal coliform bacteria. These tributaries are located throughout Duval County and in small portions of Clay and St. Johns counties. DEP has currently verified a total of 75 tributaries of the Lower St. Johns River as impaired for fecal coliform and TMDLs must be developed for these waterbodies.

Since 2006, the Tributary Assessment Team (TAT) has been working to monitor and assess these impaired tributaries, and to identify and reduce sources of bacterial contamination. This work by local stakeholders, in conjunction with DEP, forms the basis for the development of individual TMDLs and BMAPs to restore and protect water quality in the impaired waterbodies.

Major sources of the bacteria include:

- Sanitary Sewer Overflows
- Failing septic tanks
- Illicit Discharge Pipes
- Sediments
- Pet waste

Tributary Total Maximum Daily Loads

Total Maximum Daily Loads (TMDLs) are water quality targets for specific pollutants (such as fecal coliform or nutrients) that are established for impaired water bodies that do not meet their designated uses based on Florida water quality standards.

During Cycle 1 of the DEP watershed management cycle to assess water quality impairments in the Lower St. Johns River Basin, DEP identified 55 tributaries that have verified fecal coliform impairments. During Cycle 2, an additional 20 tributaries were identified as impaired for fecal coliform. Therefore, there are currently a total of 75 fecal coliform impaired tributaries in the basin.

As of June 2012, FDEP has adopted fecal Coliform TMDLs for 37 of the impaired WBIDs listed above.

Tributary Basin Management Action Plan (BMAP) for the Lower St Johns River Tributaries



Basin Management Action Plans (BMAP) are plans for restoring and maintaining water quality restoration. The adopted BMAPs for the water body identification (WBID) numbers listed below list specific projects, and operations to identify existing and prevent future sources. It is important to note that many of the projects and maintenance operations implemented in a county often are county wide, and therefore improve water quality in more WBIDs than just those listed by the BMAPs.

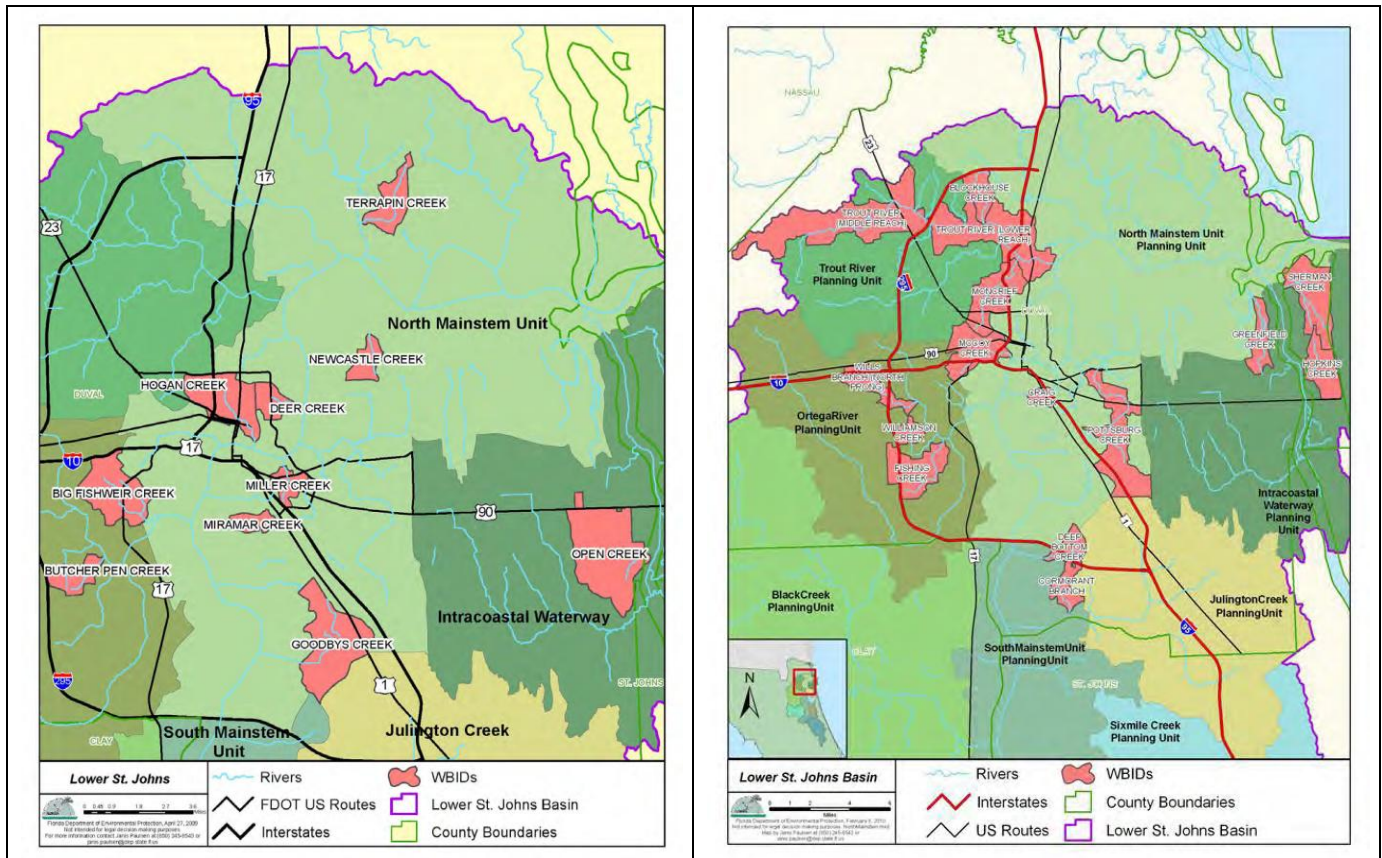
The first Basin Management Action Plan (BMAP) for the Lower St. Johns River tributaries addresses 10 tributaries impaired for fecal coliform. These initial 10 tributaries were identified as the worst-case WBIDs, based on a ranking method establishing the severity of bacterial contamination.

- | | | | |
|--------------------|-------------------|----------------|---------------|
| 1. Newcastle Cr | 4. Deer Cr | 7. Miller Cr | 9. Miramar Cr |
| 2. Big Fishweir Cr | 5. Butcher Pen Cr | 8. Goodby's Cr | 10. Open Cr |
| 3. Hogan Cr | 6. Terrapin Cr | | |

In July 2010, a BMAP was adopted for the next 15 fecal coliform impaired tributaries for the lower basin.

- | | | | |
|----------------|------------------|--------------------|--------------------|
| 1. Craig Cr | 5. Blockhouse Cr | 9. Pottsburg Cr | 13. Deep Bottom Cr |
| 2. Moncrief Cr | 6. Greenfield Cr | 10. Fishing Cr | 14. Wills Br |
| 3. Sherman Cr | 7. Williamson Cr | 11. Cormorant Br | 15. Lower Trout Rv |
| 4. McCoy's Cr | 8. Hopkins Cr | 12. Upper Trout Rv | |

Those tributary basins are shown in the maps which follow:



Project activities included in both Tributaries BMAPs include: Septic tank phaseouts; sewer pipes lined, cleaned and inspected for leaks; upgrades to lift stations; installation of emergency generators at pump stations; identification and elimination of potential illicit connections (PICs); continuation of ongoing programs such as the Fats, Oils and Grease (FOG) program, storm system inspection and maintenance and litter control; pet feces control ordinance; flood control projects to prevent sewage from reaching the ground's surface due to infiltration; and enhanced monitoring.

One key element is the activities of the Tributaries Assessment Team (TAT), the water quality monitoring team which also supports the BMAP. This group, made up of representatives from federal, state and local agencies and utilities, conducts routine monitoring of the tributaries. When high fecal coliform counts are found, the group follows up quickly with more focused monitoring to determine the

sources of the high counts observed, allowing for a more rapid response to eliminate the fecal coliform loadings.

BMAP stakeholders report project progress and monitoring results annually. They also meet annually to review the events of the past year and steps moving forward. Adopted BMAPs and Annual

Reports can be found on the web at <http://www.dep.state.fl.us/water/watersheds/bmap.htm>

Accord Response #6

Phasing Out Septic Tanks in Areas With High Failure Rates



There are approximately 65,000 septic tanks throughout Duval County. Many of these septic tanks are failing and polluting the St. Johns River and its tributaries. In addition to creating unacceptable public health risks, failing septic tanks can inhibit private investment and economic development. Thirty-seven areas in Duval County have been designated as septic tank failure areas by the Duval County Health Department. These areas account for approximately 21,000 (31 percent) of the City's septic tanks.

The Water and Sewer Expansion Authority (WSEA) has been successful in phasing out septic tanks since 2004. The authority provided approximately 350 sewer connections to properties on a voluntary basis, as well as sewer infrastructure to 515 properties in Oakwood Villas and 41 properties in Lincoln Villas Phase 1 (under contract with COJ, funded by the State via SJRWMD).

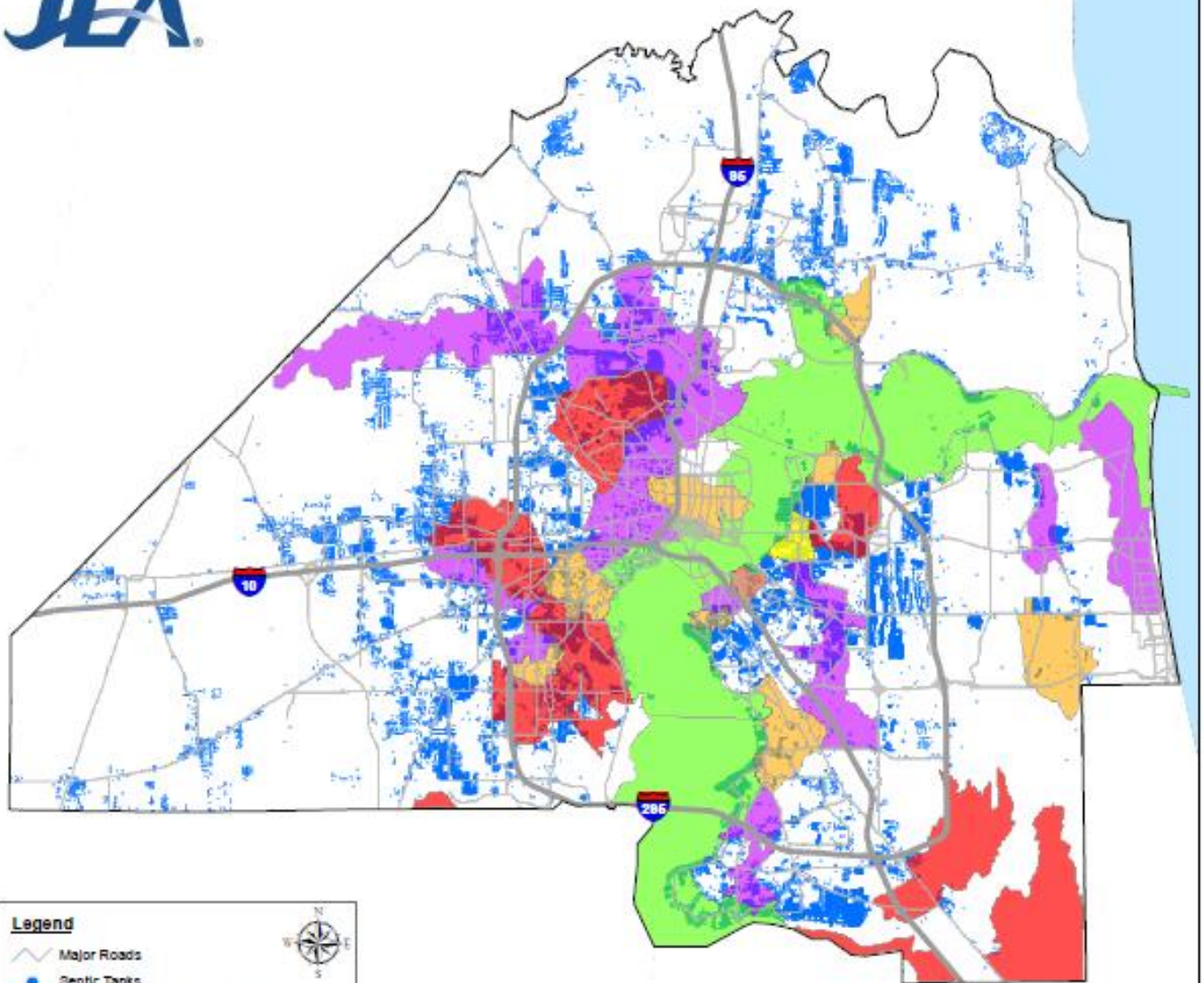
Effective in 2010, JEA succeeded WSEA as the entity contracting with COJ to continue this work. At the same time, COJ/Public Works succeeded Environmental and Compliance Department as contract manager.

Grant funding from the state and federal governments made it possible for septic tank phaseout (STPO) in Oakwood Villas and Lincoln Villas, and will allow for the second phase of Lincoln Villas to move forward in summer of 2012, and be completed by the end of 2013.

As the environmental impacts from failing septic tanks grow, and there is an increased understanding of adverse impacts from these systems on surface waters, the City of Jacksonville's Storm Water Utility has identified \$2 to \$3 million dollars per year to continue the effort towards STPO. This commitment transferred all STPO work to the City of Jacksonville, which resulted in the WSEA being dissolved by city ordinance on June 30, 2011. Additionally, the JEA committed to partner in this effort and has agreed to pay up to a \$1 million for design work and internal services, as well as \$650,000 for capacity fees on STPO work completed with the Storm Water Utility funding.

The STPO mission will shift to align with the requirements set by the state that the City of Jacksonville committed to in the Basin Management Action Plan (BMAP). The city's obligation is to phase out 16,000 septic tanks by 2023. This new program has just been initiated and anticipates activities beginning by the end of 2011. To date, there have been 3,680 septic systems removed countywide with past programs.

Below is a map that identifies the BMAP and TMDL reaches along with the plotting of all septic tanks, thus forming the basis of a conceptual facilities plan.



Legend

- Major Roads
- Septic Tanks
- Adopted Fecal Coliform TMDLs
- LSJ Main Stem Nutrient BMAP Waterbodies
- Arlington River Nutrient TMDL
- Fecal Coliform BMAP I Waterbodies
- Fecal Coliform BMAP II Waterbodies

0 2 4 8 Miles

ETM
VISION • EXPERIENCE • RESULTS

This program supports the endeavors of *BMAP II*, adopted by the Florida Department of Environmental Protection on August 12, 2010, as endorsed by the Lower St. Johns River Tributaries Basin Management Working Group. This is part of a statewide watershed management approach to restore and protect Florida's water quality. The project used a "sufficiency of effort" approach to reduce or eliminate sources of fecal coliform loading associated with onsite treatment and disposal systems (OSTDS, aka septic tanks) in the tributaries of the LSJR and used the following pollution reduction strategies:

- Investigated OSTDS-related complaints involving malfunctioning OSTDS and the pollution of direct or indirect sewage discharge into the LSJR or its tributaries.
- Conducted door-to-door inspections to identify failing septic tanks with the potential for direct and indirect discharge into the LSJR or its tributaries.
- Performed checks and approvals for compliance with rules/regulations on existing OSTDS that could potentially be associated with the direct or indirect pollution discharge of waste into the LSJR and its tributaries.
- Issued OSTDS construction permits and inspected repairs, modifications, and abandonments for OSTDS associated with this project in an effort to prevent direct or indirect discharge of untreated or improperly treated waste.
- Prepared administrative and/or legal action involving those OSTDS in violation of Chapters 381 & 386, FS, and Chapter 64E-6, FAC, that were associated with polluting of the LSJR and its tributaries.
- Provided educational materials and consultation on the proper use and maintenance of OSTDS to homeowners and tenants in the eight project WBIDs.

2011 Program Accomplishments

During the course of this project, DCHD provided monthly progress reports to FDEP which indicate a total of 4,753 sites were investigated. It was discovered that approximately 320 of the properties inspected were connected to a centralized sewerage system and were forwarded to JEA for further review. From the remaining total, 618 sites received an official notice due to violations discovered during the survey period. Violations included a variety of sanitary nuisance conditions such as direct laundry discharge and sewage on the ground surface, unsealed and broken septic tank lids, damaged drainfields, collapsed septic tanks, and illicit discharge pipes. Enforcement continued until all sanitary nuisances had been corrected.

	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	Jul 2011	Aug 2011	Sept 2011	Total
Sites Investigated	941	524	582	625	470	608	511	492	4753
Connected to JEA Sewer	54	39	124	15	19	20	9	40	320
No Access	22	-	3	2	5	7	7	9	55
Laundry Discharge	91	47	9	12	21	26	68	6	280
Sewage on Ground	22	30	2	1	6	1	7	26	95
Broken Tank Lid	11	13	5	4	6	-	5	13	57
Damaged Drainfield	-	5	-	-	4	1	-	1	11
Illicit Discharge Pipe	16	6	-	-	2	2	6	6	38
Damaged Tank	1	-	-	4	2	-	-	1	8
Non-Sanitary Nuisance Violations	57	7	7	4	1	-	11	19	106
Official Notices Issued	192	117	21	21	40	53	99	75	618

The outreach and education provided as part of this project increased public awareness of the many fecal coliform sources and their impacts on water quality. The effects of such awareness should result in an increased number of homeowners having their septic systems pumped out and inspected on a regular basis, more efficient water usage, a decrease in hazardous chemicals being discarded into septic systems, and better maintenance of OSTDS in general. It is expected that these effects will be observed long after the end of this project which should aid in further reductions of fecal coliform bacteria from OSTDS.

As part of the septic tank phase-out agreement with the SJRWMD, the City produced and distributed two video public service announcements in 2010, which were broadcast on all of Jacksonville's local television channels. Those videos are available to view at:

<http://media.coj.net/EQD/Septic.wmv>

<http://media.coj.net/EQD/PetWaste.wmv>

AOI #3 SEDIMENT AND STORMWATER

Tracking Sedimentation & Stormwater Management

Over the years, humans have used the St. Johns River and its tributaries for the disposal of many different wastes and contaminants. Direct discharges from industrial operations, military installations and wastewater treatment plants introduce contaminants such as toxic metals, pesticides, and oil and grease lubricants. Indirect discharges from rainfall runoff wash soil, dust, soot and contaminants from roads, parking lots, agricultural fields, and commercial and residential areas. These contaminants, which are either directly discharged or wash off the land, will attach to suspended particles in the water, and eventually settle on the riverbed.

Contaminants on the riverbed are not easily removed because they degrade very slowly or not at all. The toxicity of these contaminants may threaten sediment-dwelling organisms and vegetative communities, and the aquatic food web that depends on them. Consequently, contaminant-free sediments are critical to maintaining a healthy river. Therefore, sampling the river to understand the distribution and characterization of toxic substances in sediments is important to developing source control measures and remediation measures such as the dredging of contaminated sediments.

Current contaminant source control measures include

- the Cedar River regional stormwater treatment system that captures contaminants and prevents them from being carried downstream into the Ortega and St. Johns rivers.
- enhancements to wastewater treatment facilities and pulp and paper operations

Regulations are being developed for mercury under a statewide or regional TMDL. Numerous contaminant remediation projects around the Jacksonville Naval Air Station have been completed. Plans for the remediation of contamination in Big Fishweir Creek have been developed, and implementation will begin when funding becomes available. Remediation in the Tallyrand and Deer Creek areas is anticipated as strategies are developed to manage this contamination.

The river and its tributaries have been filling with silt at an alarming rate during the past two decades, and millions of dollars must regularly be spent to dredge the channel to Jacksonville's seaport. In order to facilitate compliance with existing laws and regulations regarding siltation, the partners will join with the University of North Florida Environmental Center to deploy monitors to track the amount of silt in the water. The monitors will radio the data in real time, allowing officials to better enforce environmental requirements. The city will seek federal funding for the program, which is projected to cost \$1.5 million.

The quality of runoff entering the Lower St. Johns River and its tributaries from the City's Municipal Separate Storm Sewer System (MS4) is materially important to the overall health of the St. Johns River and must be improved significantly.

Accord Response #9 Jacksonville Stormwater Utility



In 2007, the City of Jacksonville authorized the implementation of the Jacksonville Stormwater Utility. This dedicated stormwater funding source enables the city to directly manage and reliably prioritize and implement projects, programs and services associated with the city's stormwater management system.

Some of the planned projects to improve storm sewer discharges to the Lower St. Johns River are described below.

Project	Drainage Basin	Status	Treatment
Melba/Green Street	LSJRU Trout River Basin	Construction Complete	Flood Control Only
Smith Broward Pond	LSJRU Trout River Basin	Construction Complete	Wet Detention
Woodland Acres/Oakwood Villa Area Drainage Phase I	Arlington River Basin	Construction Complete	Wet Detention
Hugh Edwards Road Drainage	Ortega River Basin	Construction Complete	Wet Detention
Pine Forest/Larsen Acres	LSJRU Trout River Basin	Construction Complete	Wet Detention
Upper Deer Creek Regional Stormwater Management Facility	LSJRU Trout River Basin	Construction Complete	Wet Detention
Venetia Terrace Drainage	Ortega River Basin	Construction Complete	Erosion Control & Wet Detention
Newtown Drainage main trunk-line improvement (Myrtle & Beaver)	LSJRU Trout River Basin	Design Complete and PH 1 of Construction Completed	Flood Control with Future Phase to Include Wet Detention
Air Liquide Pond Retrofit	LSJRU Trout River Basin	Under Construction	Wet Detention
McCoys Creek Pond C	LSJRU Trout River Basin	Under Construction	Wet Detention
Mireulo Circle	LSJRU Trout River Basin	Design Complete, Bid, Pending Construction	Wet Detention
Paul Avenue Outfall Phase I	LSJRU Trout River Basin	Construction Completed	Wet Detention
Paul Avenue Outfall Phase II	LSJRU Trout River Basin	Design Complete, Permitting	Wet Detention
Hamilton Jersey Outfall	LSJRU Trout River Basin	Design in Progress, Permitting	Erosion Control
Pinedale Area	Ortega River Basin	Design in Progress	Flood Control Only
Country Creek Area Drainage Improvements	Ortega River Basin	Complete	Flood Control and Wet Detention
Avenue "B"/Zinia Outfall	Trout River	Under Design	Erosion Control
Hamilton/Jersey	LSJR Upstream of Trout River	Under Design	Flood Control and Dry Detention
Bunche Rd. Drainage	Trout River	Under Design	Flood Control & Wet Detention
Lower Eastside Ph III	LSJR Upstream of Trout River	Under Design	Flood Control
Noroad/Lambing Drainage	Ortega River Basin	Under Design	Flood Control & Wet Detention
Old Plank Rd. Drainage	Ortega River Basin	Under Design	Flood Control & Wet Detention
Mandarin Area Drainage (Grand Crique)	LSJR Upstream of Trout River	Under Design	Flood Control & Erosion Control
Messer Area Drainage	Trout River	Under Study	Flood Control & Wet Detention

The costs for improving Jacksonville's drainage system and satisfying federal and state requirements for treating stormwater runoff have increased dramatically. Recognizing these increased demands, the City of Jacksonville created the Jacksonville Stormwater Utility to directly manage the projects, programs and services associated with the city's stormwater management system.



Image and description courtesy of Petticoat-Schmitt Civil Contractors, Inc.

<http://www.petticoatschmitt.com/sites/default/files/images/metal-conspan-backfill-melba.jpg>

Melba/Green Street Improvements:

Scope included installing 4,167 lf of new storm drain which included 60" RCP under an existing roadway. Installation of 5,200 lf of new watermain, excavation of a new retention pond, installation of an arch culvert underneath a roadway and adjacent to an existing residence. Surface improvements included road reconstruction, milling and resurfacing and new sidewalk construction.

The stormwater utility generates the revenue that is dedicated to meeting new and existing stormwater requirements and to improving Jacksonville's water system, including one of the city's greatest assets—the St. Johns River.

This entity is responsible for the assessment and collection of a stormwater fee applied to residential and non-residential properties based on the parcel's impervious area and administration of those funds to implement stormwater management projects.

The Utility represents the construction, operation and maintenance response to the Municipal Separate Storm Sewer System (MS4) Permit from the federal government and monitored by the Florida Department of Environmental Protection.

Accord Response #10
City of Jacksonville Erosion and Sediment
Control Enforcement



In 2011, the City employed two full-time technicians (vs. three previous year) in Duval County inspecting construction sites and responding to citizen complaints.



Courtesy of COJ EQD staff Barry Cotter.

Routine inspections are conducted to ensure compliance and preclude water quality violations. In the past twelve months, the Erosion and Sediment Control (ESC) inspection team has conducted 1584 routine inspections of construction site visits. There have been 6 enforcement cases during the same time period.

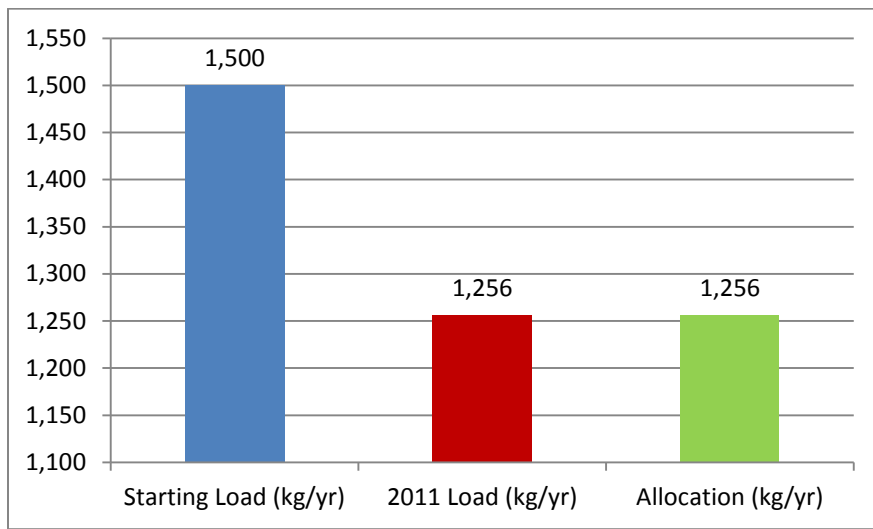
Contractors found to be outside of required control measures are:

- First, given a verbal warning with a time allowance to correct discrepancies;
- Second, a written Notice to Correct will be issued if the site continues to be in violation, and
- Third step is a citation, a document with legal framework to be used in a consent order or litigation and the subsequent court order.

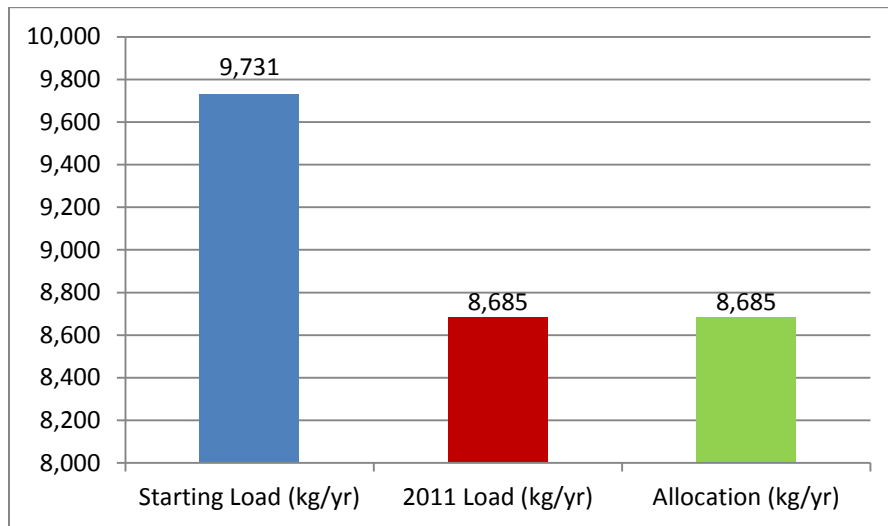
Municipal Separate Sewer System (MS4) Progress
Toward Meeting TMDLs



In 2011, two municipal separate storm sewer system (MS4) projects were completed in the marine section for a reduction of 18,505 kg/yr of TN. The total reductions in TN and TP have achieved the required reductions for the MS4s in the freshwater reach.

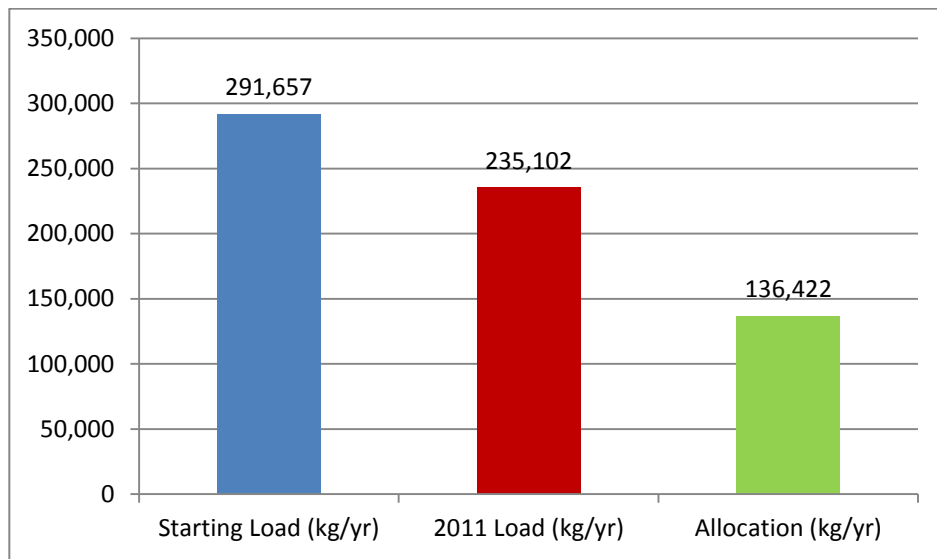


MS4 PROGRESS TOWARDS THE TP FRESHWATER TMDL



MS4 PROGRESS TOWARDS THE TN FRESHWATER TMDL

In the freshwater section, one non-MS4 project was completed this year yielding 194.7 kg/yr of TP and 1,417.5 kg/yr of TN reductions. There are still more remaining projects to be complete for MS4s and non-MS4s in order to reach the BMAP allocations for TN and TP.



MS4 PROGRESS TOWARDS THE TN MARINE TMDL

Land use assessments of the marine section showed that the dairy operations included in the TMDL loading have since been abandoned; therefore, it does not appear that additional regional treatment options are needed in the marine reach.

AOI #4 IMPROVING PUBLIC ACCESS

Past studies have shown that there are inadequate opportunities for residents to enjoy the river and its tributaries in Jacksonville.

To address these needs, The River Accord, along with its Preservation Project partners, is working to improve river access. Below is a map of public access areas with accomplishments described in the text which follows. More details are available at www.JaxParks.com



Mayor Alvin Brown (above)
New kayak launch at Riverview Park. (below)



Photos courtesy of COJ

Along with the previous 12, that brings the total to 22 new kayak launches designated in the past year.

With the increased access, Jacksonville now has a total of 50 public launch sites for motorized and/or non-motorized watercraft.

New Canoe/Kayak Launches

In December 2011, Mayor Alvin Brown announced 12 newly-designated kayak launch sites along the St. Johns River and its tributaries. These new launch sites are located at:

1. Mandarin Park
2. County Dock
3. Nathan Krestul Park
4. Stinson Park
5. St. Johns Marina
6. Metro Park Marina
7. Blue Cypress Park
8. Arlington Lions Club Park
9. Reddie Point Preserve
10. North Shore Park
11. Ribault River Preserve
12. Riverview Park

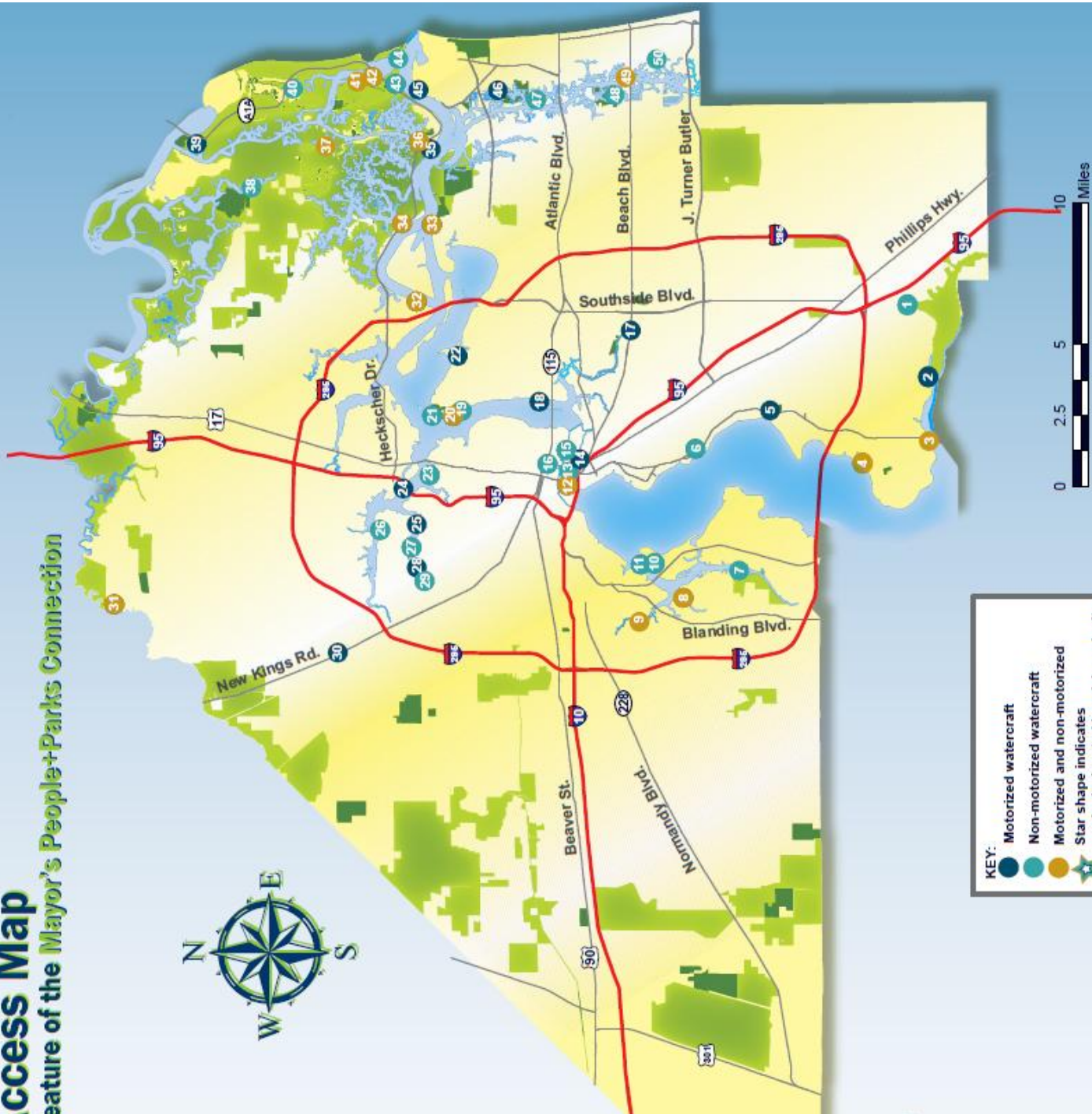
In June 2012, ten additional kayak launches were designated:

13. Curtis Lee Johnson Marina Park
14. Seminole Park
15. Bee Street Park
16. Catherine Street north end
17. Charles Reese Memorial Park
18. Thomas Creek Preserve
19. New Berlin @ Frederick St.
20. Fulton Road Landing
21. Haulover Creek
22. Intracoastal Waterway @ 2nd Ave N

JaxParks Water Access Map

A Feature of the Mayor's People+Parks Connection

- 1 Palmetto Leaves Park, 13799 Old St. Augustine Road
- 2 Hood Landing, 12804 Hood Landing Road
- 3 Mandarin Park, 14780 Mandarin Road
- 4 County Dock, 2403 County Dock Road
- 5 Goodby's Lake, 9021 San Jose Blvd.
- 6 Nathan Krestul Park, 2001 LaVaca Road
- 7 Ringhaver Park, 5198 118th St.
- 8 Wayne B. Stevens, 4555 Ortega Farms Blvd.
- 9 Curtis Lee Johnson Marina Park, 5434 San Juan Ave.★
- 10 Seminole Park, 4170 McGirts Blvd.★
- 11 Stinson Park, 4050 San Juan Ave.
- 12 St. John's Marina, 901 Museum Circle
- 13 Southbank Riverwalk, Water taxi dock near Chart House
- 14 Bee Street Park, Bee St. and Utah Ave.★
- 15 Metro Park Marina, 4110 Gator Bowl Drive
- 16 Catherine Street, north end of Catherine St.★
- 17 Pottsbury Creek/Beach Boulevard, 8540 Beach Blvd.
- 18 Arlington Road, 5103 Arlington Road
- 19 Blue Cypress Park, 4012 University Blvd. N.
- 20 Arlington Lions Club Park, 4322 Richard D. Gatlin Road
- 21 Reddick Point Preserve, 4499 Yachtsman Way
- 22 Lonnie Wurn, 4131 Ferber Road
- 23 North Shore Park, 7901 Pearl St.
- 24 Bert Maxwell, 680 Broward Road
- 25 T.K. Stokes, 2120 Riverview Ave.
- 26 Riverview Park, 9620 E. Water St.
- 27 Ribault River Preserve, 2617 Ribault Scenic Drive
- 28 Harborview, 4100 Harbor View Drive
- 29 Charles Reese Memorial Park, 1200 Ken Knight Drive★
- 30 Dinsmore, 11001 New Kings Road
- 31 Thomas Creek Preserve, 17198 Ethel Road★
- 32 New Berlin, 9002 Frederick St.★
- 33 Fulton Road Landing, 5099 Fulton Road★
- 34 Palms Fish Camp, 6359 Heckscher Drive
- 35 Joe Carlucci, 8414 Heritage River Road
- 36 Sister's Creek Marina/Jim King Park, 8203 Heckscher Drive
- 37 Cedar Point Preserve, 9023 Cedar Point Road
- 38 Pumpkin Hill Creek Preserve, 13990 Pumpkin Hill Road
- 39 Big Talbot Island State Park, 15500 Heckscher Drive
- 40 Kayak Amelia, 13030 Heckscher Drive
- 41 Fort George Island (Ribault Club), 11241 Fort George Road
- 42 Alimacani, 11080 Heckscher Drive
- 43 Haulover Creek, 10980 Heckscher Drive★
- 44 Huguenot Memorial Park, 10980 Heckscher Drive
- 45 Mayport (Michael B. Scanlon), 4870 Ocean St.
- 46 Oak Harbor, 2428 Seaway St.
- 47 Dutton Island Preserve, end of Dutton Island Drive
- 48 Castaway Island Preserve, 2921 San Pablo Road S.
- 49 Intracoastal Waterway, 2510 2nd Ave. N.★
- 50 Cradle Creek Preserve, 15th St. South & Fairway Lane



KEY:

- Motorized watercraft
- Non-motorized watercraft
- Motorized and non-motorized
- Star shape indicates newly-designated kayak launch site

Other access and amenity improvements include:

Mandarin Park

Boat trailer parking lot expansion was completed in the Spring of 2011.

Jim King Park and Boat Ramp at Sisters Creek

Pump-out station and associated floating dock was completed in July 2011.

Alimacani

Construction of the floating dock and boardwalk was completed in October 2011.



New floating dock at Alimacani. Photo courtesy of COJ

Joe Carlucci Boat Ramp

Improvements to the parking lot were completed in December 2011.

Thomas Creek Boat Ramp Phase II

Construction of restrooms and the parking lot were completed in December 2011. A large picnic pavilion will be added in 2012.



New boat trailer parking lot and restroom at Thomas Creek Preserve. Photo courtesy of COJ

Harborview Boat Ramp

Construction of the restroom and parking lot improvements was completed in June, 2012.

Trout River Fishing Pier

The design work for the fishing pier improvements is complete but funding is needed for construction.

Open Uses of St. Johns River

Not all uses of the river are at parks, canoe ramps, or such. Commercial fishing, sailboat regattas, jet skiing, and recreational fishing occur throughout the local basin. This report does not describe those in detail, but restoration of the river affects them all.



Mug Race Photo <http://s673.photobucket.com/profile/markh1f>



Shrimp



Green Cove Springs Fishing Pier



Blue Crab Photo courtesy of SJRWMD



Crayfish Photo courtesy of SJRWMD



The St. Johns River is a gift.

Through the efforts of The River Accord, it is a gift that future generations will be able to enjoy.

*Thank You,
River Accord Partners*

Throughout this report we have provided links to sites with more details. Feel free to contact any of the contributing partners via those links.

If you have comments or suggestions on improving the report overall, feel free to send those to EQDworkshop@coj.net.

