

THE RIVER ACCORD

ANNUAL REPORT 2009



In memory of Sen. Jim King,
a longtime friend of the
St. Johns River.

Dear Friends of the St. Johns River:

The St. Johns River embodies Jacksonville. It is our greatest treasure and through *The River Accord*, a group of vested agencies have gathered to clean, protect and preserve the health and beauty of this life-giving resource. This \$700 million initiative is in the third year of a 10-year mission to restore the Lower St. Johns River Basin.

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

- New stormwater projects in Lincoln Villas, the Melba/Green Area, Moncrief Creek and Pine Forest broke ground in 2009. The projects are paid, in part, by the dedicated funding that comes from the Stormwater Maintenance Fee and from legislative funds. These projects will ultimately improve the management of stormwater and contribute to the overall betterment of water quality.
- The implementation of the City of Jacksonville's Fertilizer Ordinance began in earnest in 2009. The ordinance was three years in the making and, in its first year, collaboration between city agencies and local businesses created a core of educated professionals dedicated to the reduction of nitrogen in our river and tributaries.
- Homeowners and businesses are adapting their landscaping plans to comply with the Irrigation Ordinance that allows irrigation on certain days and during designated time periods while making accommodations for new landscaping and irrigation installation. The St. Johns River Water Management District and JEA's water conservation awareness campaigns effectively demonstrate that using less water is not only good for the environment, it promotes stronger root systems and saves money for homeowners.
- JEA, in partnership with SJRWMD, is phasing out older, less effective wastewater treatment plants and routing that wastewater to regional plants that are being upgraded. The JEA completed upgrading an additional two regional treatment facilities and upgrades on a third facility are under construction.
- In October 2008, the Secretary of the Department of Environmental Protection (DEP) adopted the Lower St. Johns River Basin Management Action Plan, which has been developed in partnership with local industries, cities, counties, the District, environmental groups and many other stakeholders. The implementation of this plan will result in a net annual reduction of over 6.08 million pounds of total nitrogen in the fresh and marine portions of the river and more than 235,000 pounds of total phosphorous in the freshwater portion of the river. The actions in this plan represent a significant commitment to meet water quality standards.
- In addition, *The River Accord* goal of reducing septic tanks is well on its way. The Water Sewer Expansion Authority (WSEA) has provided approximately 350 sewer connections to properties on a voluntary basis. Current projects include funding sewer extensions to 515 septic systems in Oakwood Villa Estates Phase 2 and an additional 85 properties in Lincoln Villa Phase 1.

In just its third year, The River Accord is making a difference and momentum continues to build.

In the upcoming year, water conservation will continue to be a great priority for all of the partners. Education and enforcement of irrigation and fertilizer restrictions helps communicate our message that water conservation is important to future sustainability. In addition, an emphasis on sustainable landscaping that uses drought resistant plants and techniques will put less of a burden on our aquifer and further involve residents in our efforts to conserve.

With both the Irrigation and Fertilizer Ordinances in place, enforcement will become a greater priority this year. While the intent is not to become "water police," enforcement will help communicate our message that water conservation is important to our future sustainability as a community.

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.

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.

Back 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: a harmful algal bloom that was extensive, 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 the City of Jacksonville, the St. Johns River Water Management District (SJRWMD), JEA, the Water Sewer Expansion Authority (WSEA) and the Florida Department of Environmental Protection (FDEP).





July 27, 2006: Mayor John Peyton, Fred Odom (WSEA), Greg Strong (FDEP) and Kirby Green (SJRWMD) sign The River Accord.

Mayor John 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.

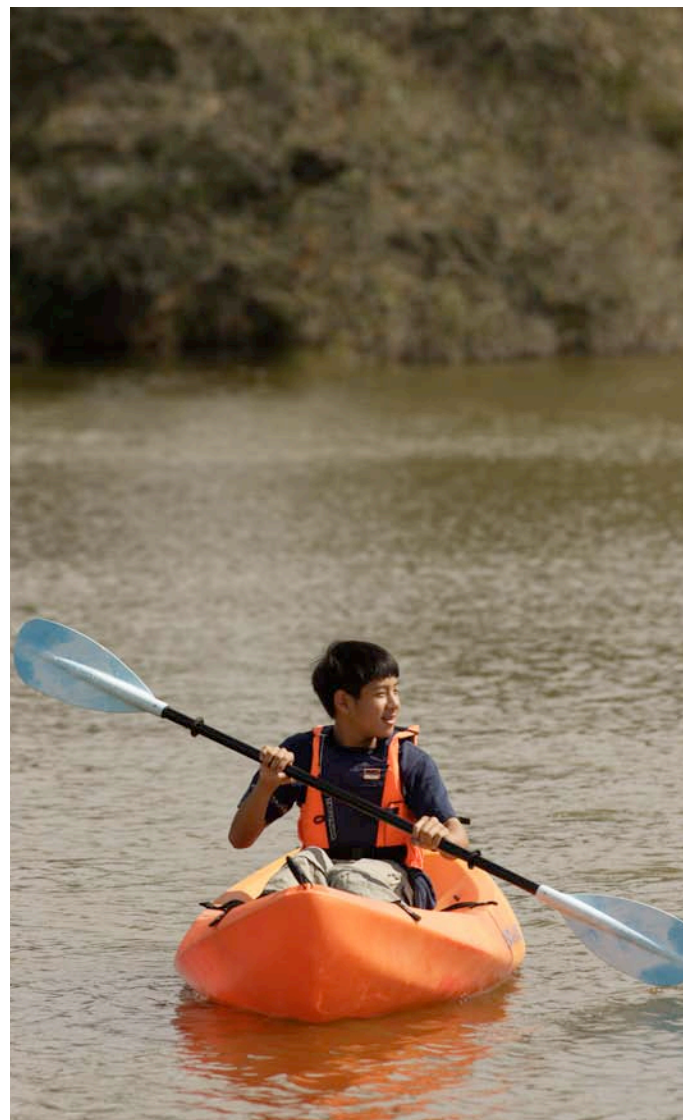
Based on decades of research in river restoration programs, the *Accord* committed to reduce the amount of nitrogen discharged into the river by:

- Phasing out older technology 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.

In addition to specific efforts to reduce nitrogen discharges into the river, *The River Accord* has four general areas of interest:

- Program accountability
- Improving water quality
- Tracking the river's sedimentation
- Improving access



2009: The River Accord Today

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 tracks the progress of specific items outlined in the 2007 *River Accord* Memorandum of Understanding.

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 FDEP and the governing boards of the JEA, SJRWMD and WSEA.

RIVER ACCORD ANNUAL STATUS REPORT

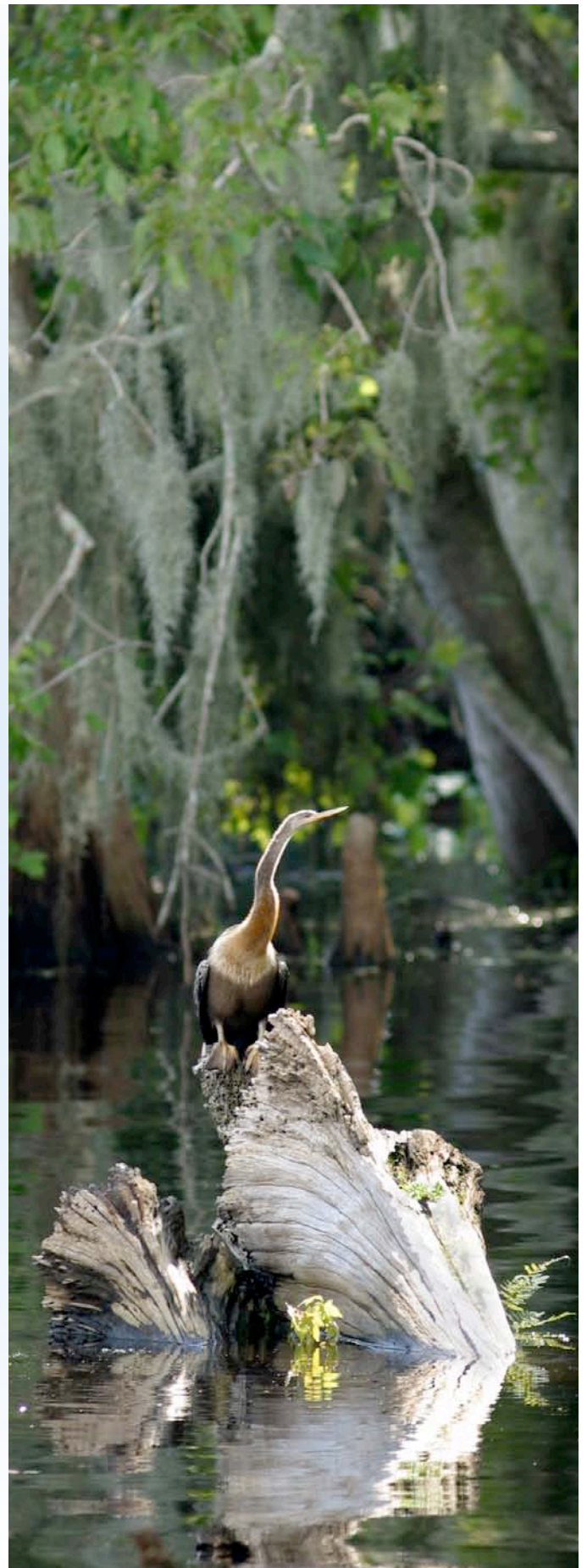
This 2009 annual *River Accord* report herein was created to address the accountability mandate for the past year.

STATE OF THE RIVER REPORT

A team of faculty members from the University of North Florida and Jacksonville University will publish 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 will be written for river stakeholders and an abbreviated version and Web site will be made available for the public.

The report will be released during the August 28, 2009 EPB/UNF Environmental Symposium at UNF.

After August 28, 2009, the full text may be viewed at www.sjrreport.com.



St. Johns River Improvement

Nitrogen Impact from Fertilizer

One factor that has led to the river's harmful algal blooms is the level of nutrients entering the river has simply surpassed the St. Johns' ability to naturally process them. While there are many sources of these nutrients, a major source comes directly from residential lawns – fertilizers.

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
- Mis-application of fertilizer during rainfall; and
- Over-irrigation resulting in runoff



IMPROVING WATER QUALITY: CITY OF JACKSONVILLE

Fertilizer Ordinance

Ordinance 2008-28-E requires homeowners to abide by the new City of Jacksonville fertilizer application code. In addition, it requires fertilizer applicators to be trained in the fertilizer application *best management practices* (BMPs). Bulk storage facility operators are also required to be trained in the fertilizer application BMPs.

In order to accomplish the intended goals and objectives of the ordinance, the Environmental Management Resources and Compliance Department (EMRCD) 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 and around commercial properties.

In the first year, the major purpose of the City of Jacksonville's outreach is public and business partnering. The City conducts irrigation and fertilizer educational outreach at town meetings, homeowner association meetings, businesses, civic organizations, and the Florida Pest Management Association meetings. To date, over 40,000 irrigation and fertilizer brochures have been printed and over 30,000 have been distributed at these events.

The City is partnering with the local "greenhouse" retailers to help communicate the importance of proper irrigation and fertilizer use to their customers. One of the larger local greenhouse retailers, The Home Depot Inc., is now displaying irrigation and fertilizer posters that emphasize irrigation and fertilizer best management practices in their stores. The Walmart stores have just completed the design of similar irrigation and fertilizer posters for their stores.

In the next year, the outreach will transition into enforcement.

Irrigation Ordinance

Data suggests that 50 percent of Northeast Florida's groundwater is being used for irrigation purposes. This over watering contributes to water waste and excess runoff of nutrients into the river, compromising 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.

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

Since ordinance enactment, there have been 287 issues reported to the City. There were 19 observed violations and 11 of those complaints were generated by inspector drive-by observations.

The fertilizer and irrigation public outreach includes comprehensive distribution of brochures.

For a copy of the brochure, please visit

www.coj.net and search for "fertilizer" or "irrigation".

IMPROVING WATER QUALITY: ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

Watering restrictions have been in place since 1991 in the 18 counties of the SJRWMD. In March 2009, the SJRWMD's amended landscape irrigation rule became effective. The new restrictions specify the days of the week for landscape irrigation across the 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 the District through consumptive use permits.

[Details are available at](http://www.sjrwmd.com/wateringrestrictions/)

www.sjrwmd.com/wateringrestrictions/

Nitrogen Impact via Reduction in Wastewater Treatment and Increased Reuse

JEA has voluntarily reduced the amount of nitrogen they discharge into the St. Johns River via treated wastewater by nearly 50 percent since 2000 and treatment facility projects are expected to continue. Additional reductions are slated under collaborative agreements between the SJRWMD and a number of regional wastewater utilities in conjunction with JEA.

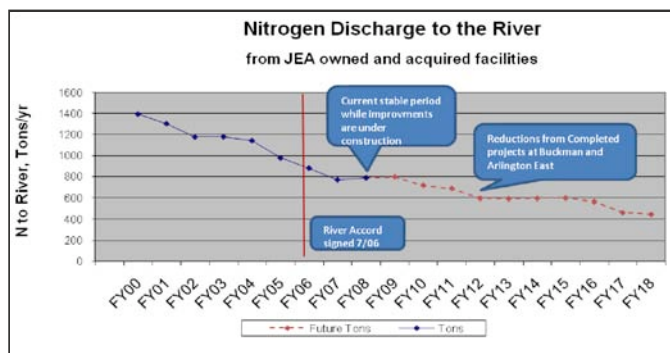
That initiative has reduced the discharge of nitrogen from 1,400 tons per year to 900 tons per year in 2006.

The River Accord agreement signed in 2006 is an extension of that initiative and is further reducing nitrogen discharged into the River.

Since the start of *The River Accord*, nitrogen discharged to the River has been reduced from 900 tons per year to less than 800 tons per year. A number of improvement projects are currently in the design and construction phase.

When these projects are completed, JEA estimates they will result in a further reduction of 200 tons of

nitrogen per year by 2013 as shown below. These projects are described below.



JEA's commitment to achieving the goals of *The River Accord* will be accomplished through three major efforts:

- Upgrading five regional treatment plants to advanced nutrient removal;
- Phasing out older technology treatment plants; and
- Increasing reclaimed water use.

The following is a brief update on these three efforts:

Upgrading JEA's five regional treatment plants to advanced nutrient removal:

Improvement projects have already been completed at two regional treatment facilities, Mandarin and Southwest. In the last 12 months, JEA has moved from design to construction on a \$26 million improvement project at a third regional treatment facility, Arlington East.

The Arlington East improvements are scheduled to be completed by January 2011, and will result in a reduction of over 50 tons per year of nitrogen.

Design is currently under way for an upgrade project for a fourth regional treatment facility, Buckman, which when completed in 2012 will result in a reduction of almost 100 tons per year.

Phasing out six older technology plants:

Two older technology plants have already been phased out. Design is complete and construction is ongoing for the phase out of a third plant, Beacon Hills, which should be completed by the end of 2010.

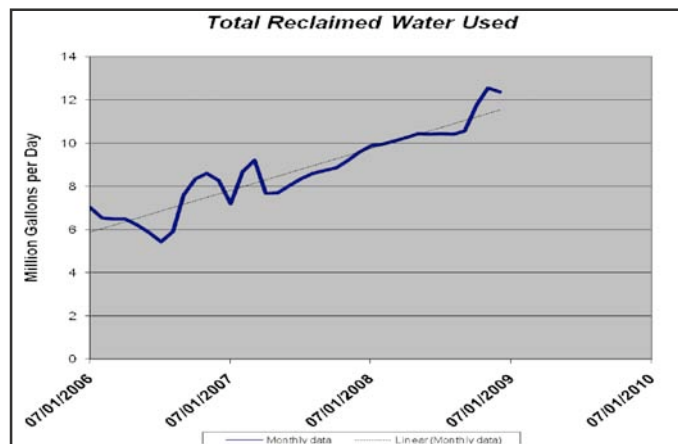
Increasing reclaimed water use:

In the last year, JEA has installed approximately 18 miles of reclaimed water lines.

In addition, included in this construction is a critical

segment that connects the Arlington East and Mandarin reclaimed water grids. This interconnection allows these two facilities to satisfy the growing reuse needs of developments in southern Duval and northern St. Johns Counties such as Nocatee.

The graphic below shows the increase in reclaimed water use since the signing of *The River Accord*. JEA and its *River Accord* partners remain committed to the expansion of the reclaimed water system.



PROJECT FUNDING STATUS

The SJRWMD and the State of Florida (FDEP) have currently approved up to \$53.8 million in cost-share funding to upgrade wastewater and reclaimed water treatment systems and extend reclaimed water delivery systems.

Cost-share agreements (where the SJRWMD and state typically provide up to 50% of total project funds) have been executed with Clay County Utility Authority, JEA, Jacksonville Beach and the City of Palatka.

A 100% cost-share agreement with the City of Jacksonville has also been executed to remove septic systems in areas where failing septic tanks threaten water quality of the St. Johns River and its tributaries.

Additional reuse and treatment projects are being pursued between the SJRWMD and Atlantic Beach, Neptune Beach, Naval Air Station Jacksonville and the town of Orange Park.

By 2014 all projects are estimated to create enough treatment and reuse capacity to reduce nitrogen entering the river by up to 2.2 million pounds per year and increase the use of reclaimed water by up to 33.2 mgd.

The long-range plan is to divert at least an additional 51.5 mgd of wastewater to beneficial reuse (82.5 mgd

total representing 64% of projected flow in 2025) through multi-party, regional projects employing the balance of the SJRWMD's cost-share *ad valorem funds* and/or state funds, as available.

TRIBUTARY IMPROVEMENT

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 waterbodies that do not meet their designated uses based on Florida water quality standards. During Cycle 1 of the FDEP watershed management cycle to assess water quality impairments in the Lower St. Johns River Basin, FDEP 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 a total of 75 fecal coliform impaired tributaries in the basin.

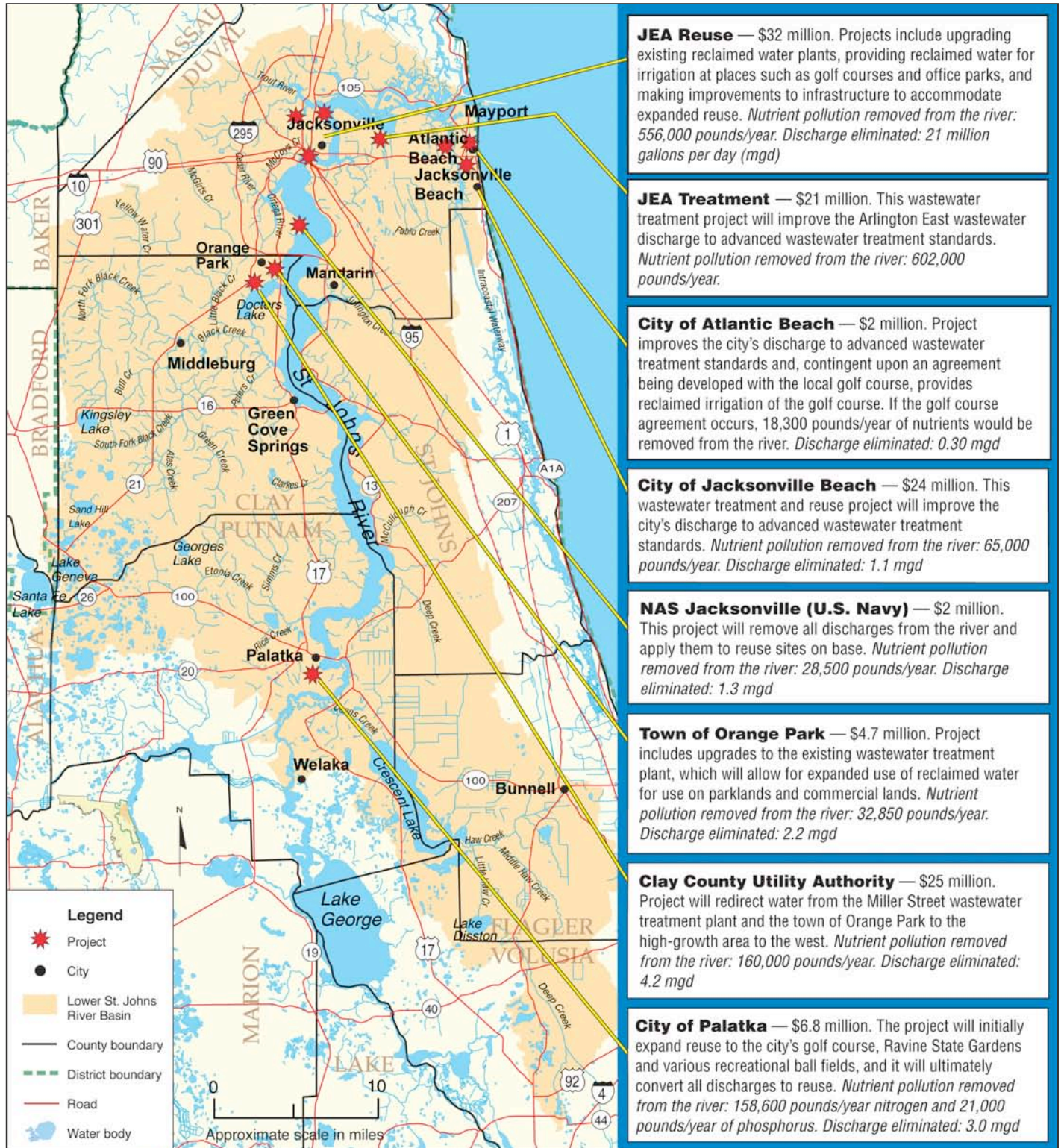
From 2006 through 2009, FDEP adopted TMDLs for the following waterbodies:

- Miramar Creek
- Butcher Pen Creek
- Hogan Creek
- Goodbys Creek
- Miller Creek
- Big Fishweir Creek
- Newcastle Creek
- Deer Creek
- Terrapin Creek
- Open Creek
- Big Davis Creek
- Moncrief Creek
- Wills Branch
- Williamson Creek
- Cedar River
- Ribault River
- McCoy Creek
- Durbin Creek
- Deep Bottom Creek
- Blockhouse Creek
- Trout River



Lower St. Johns River Basin reclaimed water and wastewater treatment cooperative projects

Roughly 24 reclaimed water and wastewater treatment projects have been proposed for the next five years. When these projects are implemented, they will remove 1.6 million pounds of nitrogen per year and remove 32 million gallons per day (mgd) of discharge by implementing beneficial reuse.



Details are available at www.sjrwm.com/programs/lowerstjohnsriver.html

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

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 waterbody identification (WBID) numbers, based on a ranking method establishing the severity of bacterial contamination. These tributaries are:

- Newcastle Creek
- Hogan Creek
- Butcher Pen Creek
- Miller Creek
- Miramar Creek
- Big Fishweir Creek
- Deer Creek
- Terrapin Creek
- Goodbys Creek
- Open Creek

The projects and activities outlined in the BMAP are sufficient to address all of the identified sources and, with full implementation of the BMAP, the 10 WBIDs are expected to meet the TMDL requirements. Additional assessment efforts and studies are planned and will help to identify and address any additional sources that occur in these tributaries.

Details are available at

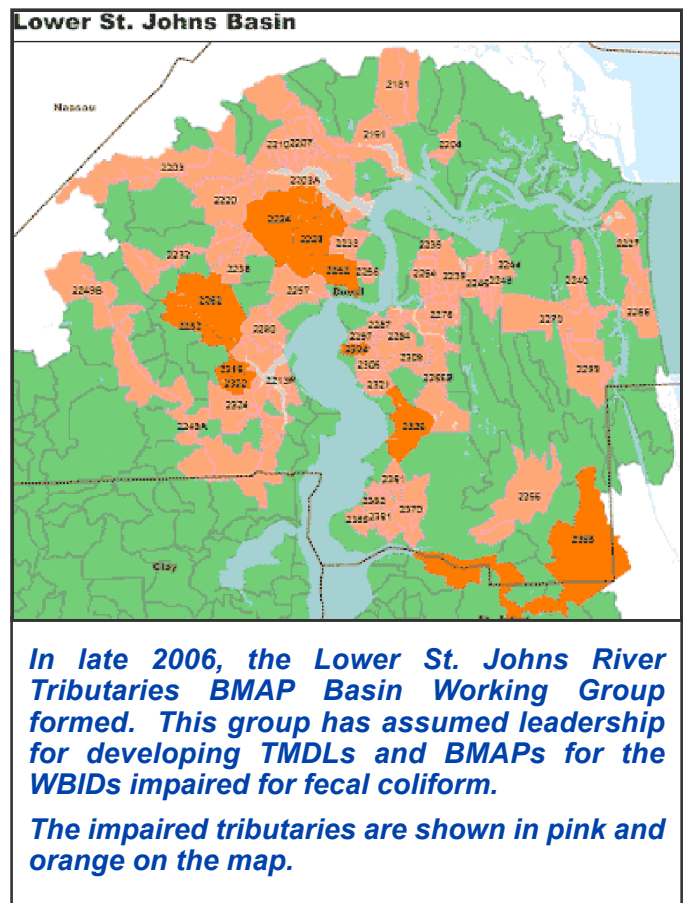
www.dep.state.fl.us/water/watersheds/docs/bmap/lstj-tribs-bmap-draft-r.pdf

The area addressed by this lower St. Johns River Tributaries BMAP comprises the following four planning units, which include several smaller lakes and canals:

The Trout River Planning Unit covers approximately 94 square miles. The watershed is heavily influenced by tidal fluctuations (Bergman, 1992). A portion of Hogan Creek is located in the planning unit.

The Ortega River Planning Unit covers approximately 99 square miles. Cedar River, the largest tributary of the Ortega River, flows predominately southeast (Bergman, 1992). Tributaries of the Cedar River include Butcher Pen Creek and most of Big Fishweir Creek.

The North Mainstem Planning Unit lies almost entirely in Duval County and includes the main stem of the St. Johns River from the mouth to Piney Point. It also includes many of the urbanized streams in downtown Jacksonville, such as Hogan Creek, Deer





PROGRESS 2009

WSEA Accomplishments:

The WSEA has provided approximately 350 sewer connections to properties on a voluntary basis. Current projects consist of funding sewer extensions to 515 septic systems located in the Oakwood Villa Estates Phase 2, and an additional 85 properties in Lincoln Villa Phase 1.

Oakwood Villa Estates sewer construction is 80% complete and is on target for completion by December 2009. The engineering design of Lincoln Villa Phase 1 is 100% complete and ground was broken August 2009. Targeted completion date is August 2010. Lincoln Villa Phase 2 design work is scheduled to begin November 2009.

SECURED FUNDING TO DATE:

2007/2008

- \$2.8 million in grants for the Lincoln Villa Phase I, Septic Tank Phase Out (STPO) project. A \$2 million *ad valorem* grant from SJRWMD and a \$800,000 Community Issue Budget Request (CIBR) grant.
- \$11.2 million CIBR grant for the Lower St. Johns River Basin Initiative (Oakwood Villa Estates STPO project).

2008/2009

- \$300,000 CIBR for the Lincoln Villa Phase II STPO project.
- \$759,000 Grant for Septic Tank Phase Out.

To date, 2,092 septic tanks have been phased out in the City of Jacksonville.

SEPTIC TANK ENFORCEMENT PROGRAM

The Duval County Health Department Septic Tank Enforcement Program assures that:

- All new and repaired onsite sewage treatment and disposal systems (OSTDS) adequately handle residential and commercial building plumbing wastewater;
- This wastewater does not create sanitary nuisance conditions; and
- No potential exists for the degradation of surface water or groundwater quality.

This program focuses specifically on OSTDS (better known as septic systems) that are currently or could potentially have an impact on the St. Johns River and

its tributaries. Failure areas are shown in green in the map below.

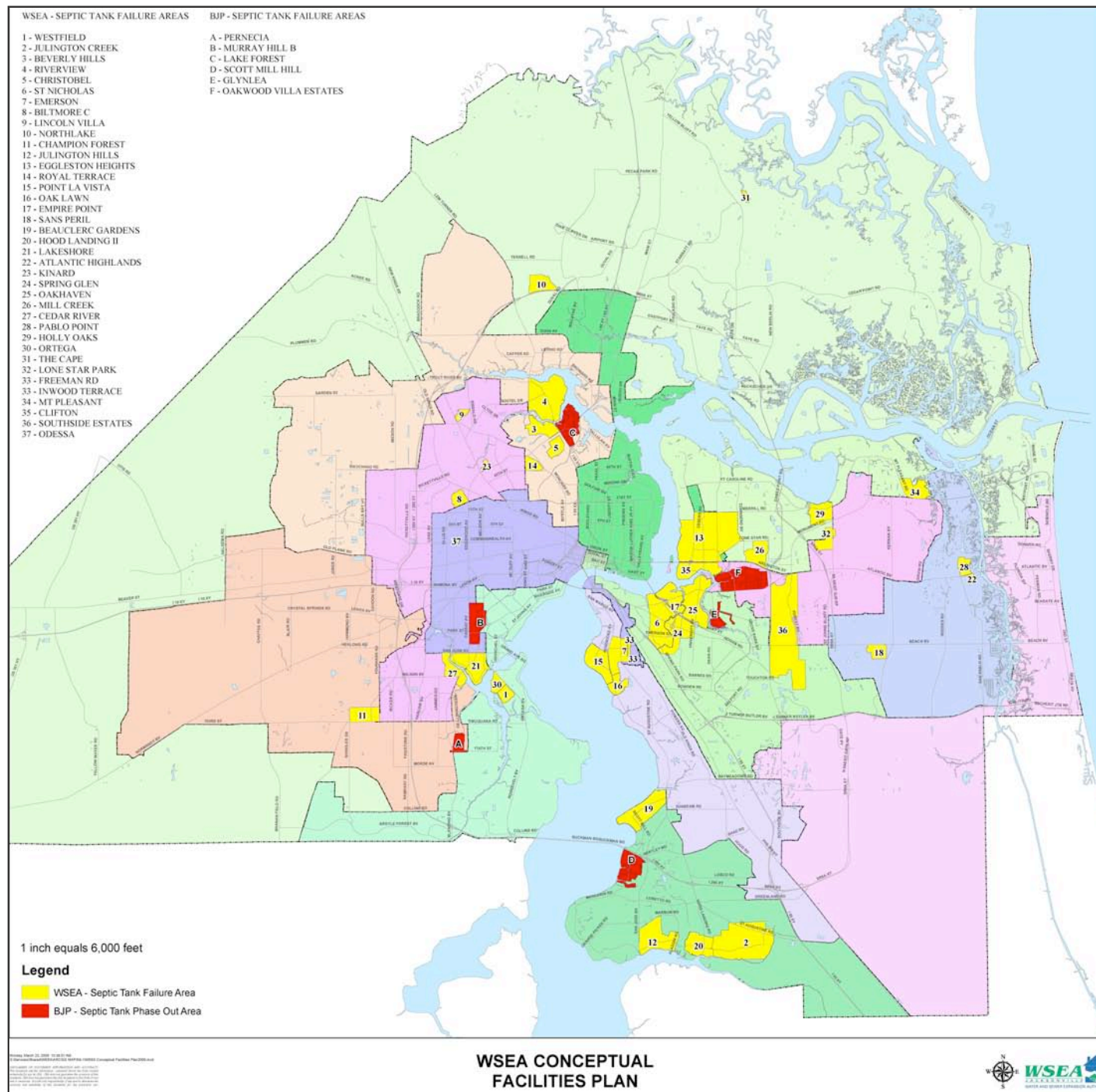
The Septic Tank Enforcement Program implements the Florida Statutes 381 and 386 and Chapter 64E-6 Florida Administrative Code, which governs regulation of OSTDS in Duval County/Jacksonville, Florida.

- The program monitors, reviews, tracks, records and enforces the compliance of state statutes, rules, regulations and local ordinances pertaining to OSTDS in residential and commercial areas directly or indirectly connected to the St. Johns River and its tributaries.

- The program involves site evaluations, inspections, review of engineering plan design, and construction reviews of septic tank/drain field systems, including repairs to existing and abandoned systems. Information related to monitoring, surveillance, management and enforcement activities are updated and recorded on a daily basis.

PROGRAM ACCOMPLISHMENTS TO DATE

- Developed and 8-point criteria and point system for prioritization of 37 septic tank failure areas in Duval County.



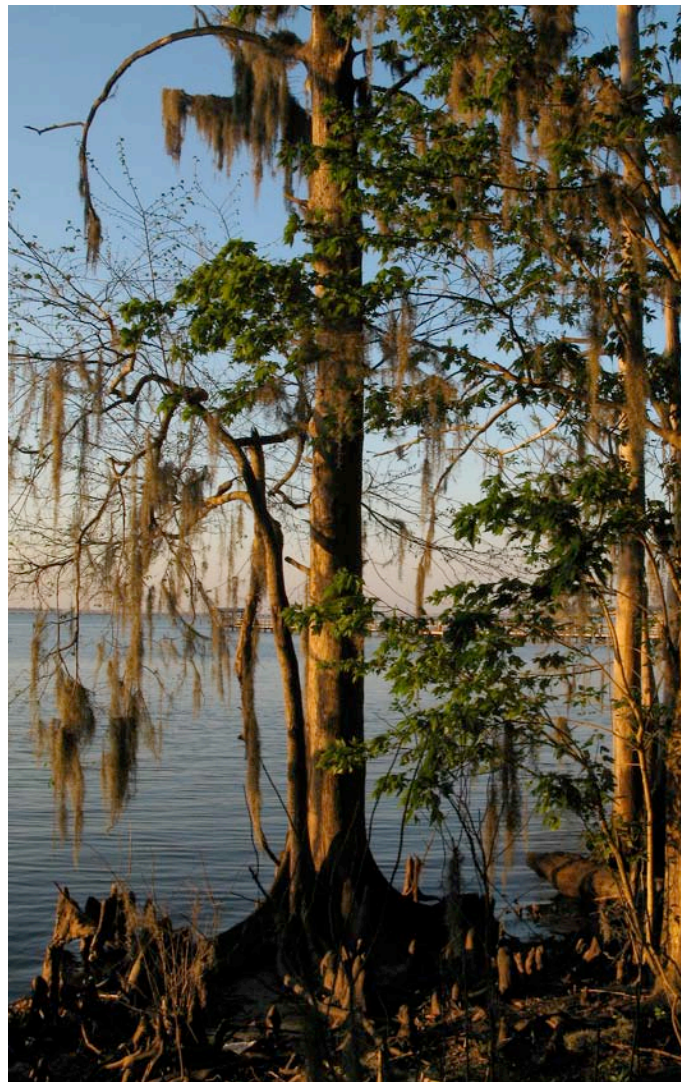
- Designated six neighborhoods as creating a sanitary nuisance which required all septic systems in each designated area to be phased out and replaced with central sewer services by JEA.
- Performed over 13,000 site investigations and documented areas with suspected failing septic tank and drainfield systems directly or indirectly connected to the St. Johns River and its tributaries.
- Participated in workshops for the development of procedures, priorities, and itineraries to investigate suspected areas with failed septic tank and drainfield systems.
- Prepared over 2,300 administrative and/or legal actions involving OSTDS in violation with Chapter 381 and 386, Florida Statutes and Chapter 64E-6 Florida Administrative Code associated with polluting the St. Johns River and its tributaries.
- Investigated over 2,400 OSTDS related complaints involving malfunctioning OSTDS and the pollution of direct or indirect sewage discharge into the St. Johns River or its tributaries.
- Conducted door-to-door rapid block surveys to identify failed septic tank areas on a routine basis with the potential for direct or indirect discharge into the St. Johns River or its tributaries.
- Issued over 2,300 repair permits and inspected all repair work performed on OSTDS within designated septic tank failure areas to ensure compliance with all Florida Statutes and Florida Administrative Codes.
- Provided educational material and services to homeowners to ensure proper operation and maintenance of septic systems.

Water Quality Monitoring System

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.

TRIBUTARY ASSESSMENT

In the Lower St. Johns River, 55 tributaries of the St. Johns River 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. As of the 2009 assessment,



FDEP has verified a total of 75 tributaries of the Lower St. Johns River as impaired for fecal coliform bacteria 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 FDEP, will form the basis for the development of individual TMDLs and BMAPs to restore and protect water quality in the impaired waterbodies.

One tool for assessing water quality is thermal imaging. Thermal imaging is infrared aerial photography capable of surveying large areas in a short time.

Field verification of the thermal anomalies, comparing the thermal image with infrastructure maps, and then conducting intensive ground verification of the areas to determine whether they actually are illicit discharges, is continuing by agencies and contractors.

So far, many of the thermal anomalies have been determined to be groundwater seeps, stormwater discharge pipes and other non-illicit discharges.

FDEP managed a contract for the services of thermal imaging of four local tributaries: Big Fishweir Creek, Miramar Creek, McCoy Creek and Craig Creek. The thermal imaging and associated sampling were conducted in February 2009.

A contractor for FDEP utilizing funds previously designated to the City, performed aerial sensing of potential illicit discharges during February 2009. The findings are listed in the table below.

Table 1. Overview of identified thermal imaging anomalies in each of the four designated tributaries.

WBID	Stream Miles	Number of Identified Anomalies	Number of Pre-Post-Flight Sampling Stations
Big Fishweir Creek	5.80	52	8
McCoy Creek	7.85	27	9
Craig Creek	2.13	15	11
Miramar Creek	1.95	9	6

Subsequent to the imaging, agencies and contractors performed ground verification of the areas to determine whether they actually were illicit discharges.

MAIN STEM 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.

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 population of algae in an aquatic system. 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.

SJRWMD scientists regularly monitor algal growth in the river and routinely collect water and algae samples, particularly during periods when conditions are right for algal proliferation. When an algal bloom is observed and samples are collected, additional tests are conducted to determine if algal toxins are present. SJRWMD staff provide results to other agencies, including the Florida Department of Health (which is responsible for sharing the information with county health units) and FDEP. These agencies coordinate their efforts in response to algal blooms on the lower St. Johns River.



Tracking Sedimentation & Stormwater Management

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

PROJECT	DRAINAGE BASIN	STATUS	TREATMENT
Air Liquide Pond Retrofit	McCoy Creek	Beginning Design	Wet Detention
Country Creek Area Drainage Improvements		Beginning Design	Wet Detention
Hamilton Jersey Outfall	Big Fishweir Creek	Beginning Design	
Hugh Edwards Road Drainage	Cedar River	Under Construction	Erosion Control
McCoys Creek Pond C	McCoys Creek	Beginning Design	Wet Detention
Melba/Green Street	McCoys Creek	Under Construction	Wet Detention
Mireulo Circle	New Rose Creek	Beginning Design	
Newtown Drainage main trunk-line improvement (Myrtle & Beaver)	McCoys Creek	Design	Flood Control Only
Pine Forest/Larsen Acres	New Rose Creek	Under Construction	Wet Detention
Pinedale Area	Cedar River	Design	Wet Detention
Putnum/Hudnall Area Drainage	Little Pottsburg Creek	Complete	Wet Detention
Riverview Area Drainage (South)	Ribault River	Completed	Flood Control Only
Smith Broward Pond	McCoy Creek	Bidding	Wet Detention
Venetia Terrace Drainage	Ortega River	Preparing to Bid	Continuous Deflective Separation Unit
Woodland Acres/Oakwood Villa Area Drainage Phase I	Strawberry Creek	Under Construction	Wet Detention
Sandalwood Canal	Hogpen Creek	Complete	Erosion Control & Wet Detention
I03rd St Regional Stormwater Facility	McGirts Creek	Complete	Wet Detention

There are currently three full time technicians in Duval County inspecting construction sites and responding to citizen complaints. Contractors found to be outside of required control measures are:

- First, given a verbal warning with a time allowance to correct discrepancies;
- A written Notice to Correct will be issued if the site continues to be in violation.
- The third step is a citation.

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 2,566 routine inspections of construction sites. There have been 16 enforcement cases during the same time period.

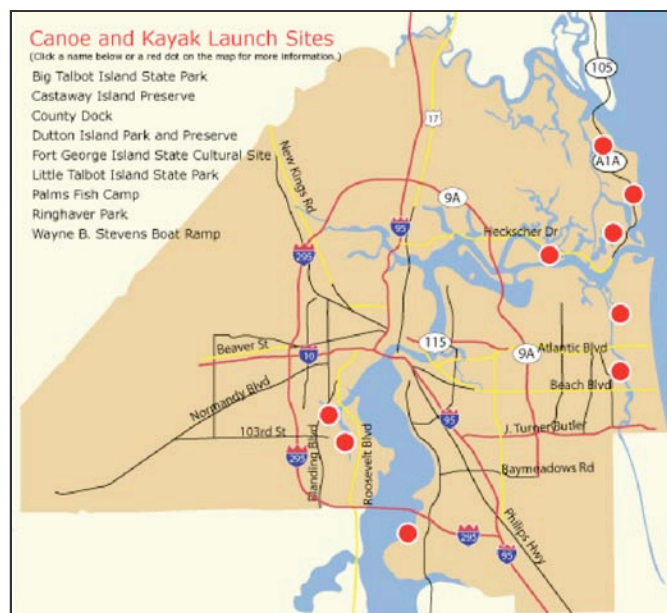
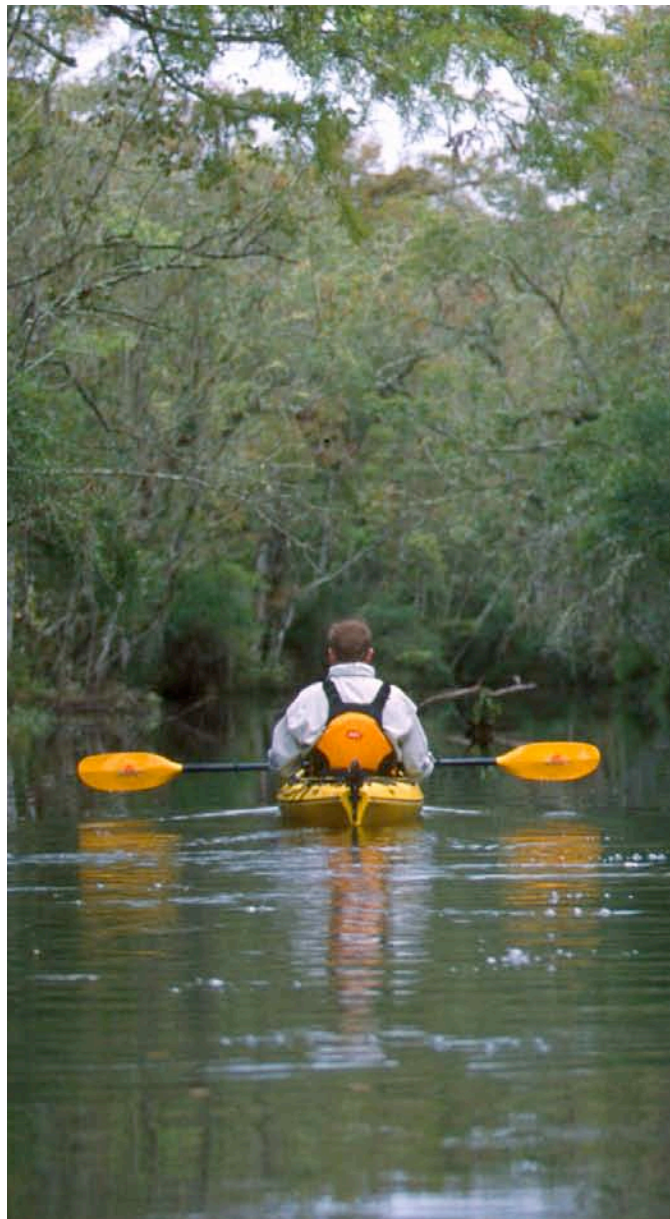
If a water quality violation is discovered in the stream, a citation is immediately issued.

Improving 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 updates in the text which follows.

More details are available at www.JaxParks.com



NATURE PARKS

- | | |
|------------------------------------|--|
| 1. Arlington Lions Club Park | 10. Lonnie Miller Regional Park |
| 2. Bethesda Park | 11. Mandarin Park |
| 3. Blue Cypress Park | 12. Pope Duval Park & Urban Fishing Pond |
| 4. Camp Tomahawk | 13. Ortega Stream Valley at Ringhaver Park |
| 5. Castaway Island Preserve | 14. Treaty Oak |
| 6. Crystal Springs Road Park | 15. Tree Hill Nature Center |
| 7. Kathryn Abbey Hanna Park | 16. Tillie K. Fowler Regional Park |
| 8. Huguenot Memorial Park | |
| 9. Jacksonville-Baldwin Rail Trail | |



HUGUENOT MEMORIAL PARK

- Closed acquisition of 10.9 acres on October 28, 2008. Currently working on making improvements for recreation access, public safety, resource protection improvements, and implementation of management plan, including the following:

- Signage and bollards to protect the sensitive cove area; established a 15' dune buffer area; established pet friendly/pet restricted areas;
- Established a protected area for nesting and fledging shorebird species.
- Public safety measures implemented include the establishment of Atlantic Ocean driving/ parking/ recreation corridor. Recreation access measures include site plan for overflow/off beach parking area; currently working with SJRWMD and Army Corps of Engineers to discuss permit needs.

CEDAR POINT PRESERVE

- Newly renovated boat ramp, and trails with an interpretive kiosk and parking.
- Boat ramp is scheduled to have a ribbon cutting ceremony on August 25, 2009 coordinated by the National Park Service.

- Trailhead open since December 5, 2008.
- Archeological research funded by a Division of Historical Research grant is set to begin this fall.

METROPOLITAN PARK MARINA

- Proposal: Installation of power pedestal service stations that will allow boaters to hook-up to electricity and water to all 76 marina slips under construction; estimate completion by January 1, 2009.

REDDIE POINT PRESERVE IN ARLINGTON

- Pier construction was completed on September 30, 2008.
- Upland development of a park drive, signage and parking under design

BETZ TIGER POINT PRESERVE

(adjacent to Pumpkin Hill Creek).

- Proposal: Phase one amenities to include entrance signage, parking area, walking trail, boardwalk, interpretive signs and a canoe/kayak tie-up.
- Status: 100% design plans under review; construction to be bid this summer.
- Anticipate a ground breaking on October 24, 2009 to begin construction.

TIMUCUAN MULTI-USE TRAIL

- Create a 15 mile multi-use/multi-partnership trail linking Hanna, Huguenot, Kingsley, and the Talbot Islands State Parks all the way up to Amelia Island.
- Status: Phase I (Little Talbot segment) completed in 2005; second phase (Big Talbot segment) design is complete and should go to construction contract bid in Fall 2009.

SISTER'S CREEK

Kayak/Canoe Launch and Dump Station

- Boardwalk with a canoe/kayak launch floating dock to be completed by December, 2009.
- Design of pump-out station is at 90%; expect to have construction contract out to bid by Fall, 2009.

CASTAWAY ISLAND PRESERVE

- Dredge channel to existing canoe/kayak launch will be complete by late fall.
- Construction of the trail expansion completion by December, 2009.

RIVER TAXI

- River taxi from Fort Caroline to Sisters Creek Mariana to Kingsley to Alimacani Park: Currently at 100% design; permits submitted; to be constructed by December 30, 2009.
- From Kingsley to Fort Caroline. City of Jacksonville and the National Park Service (NPS) agreement has been executed. NPS received a grant to develop the scope of services of the concession; currently conducting a four-month Alternative Transportation Study.

THOMAS CREEK BOAT RAMP Phase II

- Restroom, parking and pavilion design is at 100%; plans have been sent for review. Construction to be bid in summer 2009.

ALIMACANI BOAT RAMP Shoreline Stabilization

- 100% design complete;
- Expect Florida Inland Navigation District (FIND) grant award notification in September 2009.

HARBORVIEW BOAT RAMP

- Proposal: Build restrooms and floating docks.
- Status: Currently at 90% design; estimate contract will be out to bid by September 2009.



JOE CARLUCCI BOAT RAMP

- Proposal: Increase the available parking.
- Status: Currently at 90% design; funding for construction has been applied for a FIND grant and award notification will be September 2009.

MANDARIN BOAT RAMP

- Proposal: Increase available parking.
- Status: Currently at 100% design; funding for construction has been applied for a FIND grant and award notification will be September 2009.

MICHAEL SCANLON BOAT RAMP (Mayport)

- Proposal: Replace restroom.
- Status: Currently at 60% design.

SAL TAYLOR CREEK PRESERVE

- Proposal: Construct pavilion, restrooms, parking and trails.
- Status: Currently at 60% design.

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