

An aerial photograph of the Jacksonville skyline at sunset. The St. Johns River flows through the foreground, with several boats docked along the shore. The city's skyline is dominated by several skyscrapers, including the CSX building on the left, the Sun Life Tower in the center, and the Modis Tower on the right. The sky is a mix of orange and blue, and the water reflects the colors of the sunset.

# City of Jacksonville



Vincent A. Seibold, P.E., Chief  
Environmental Quality Division

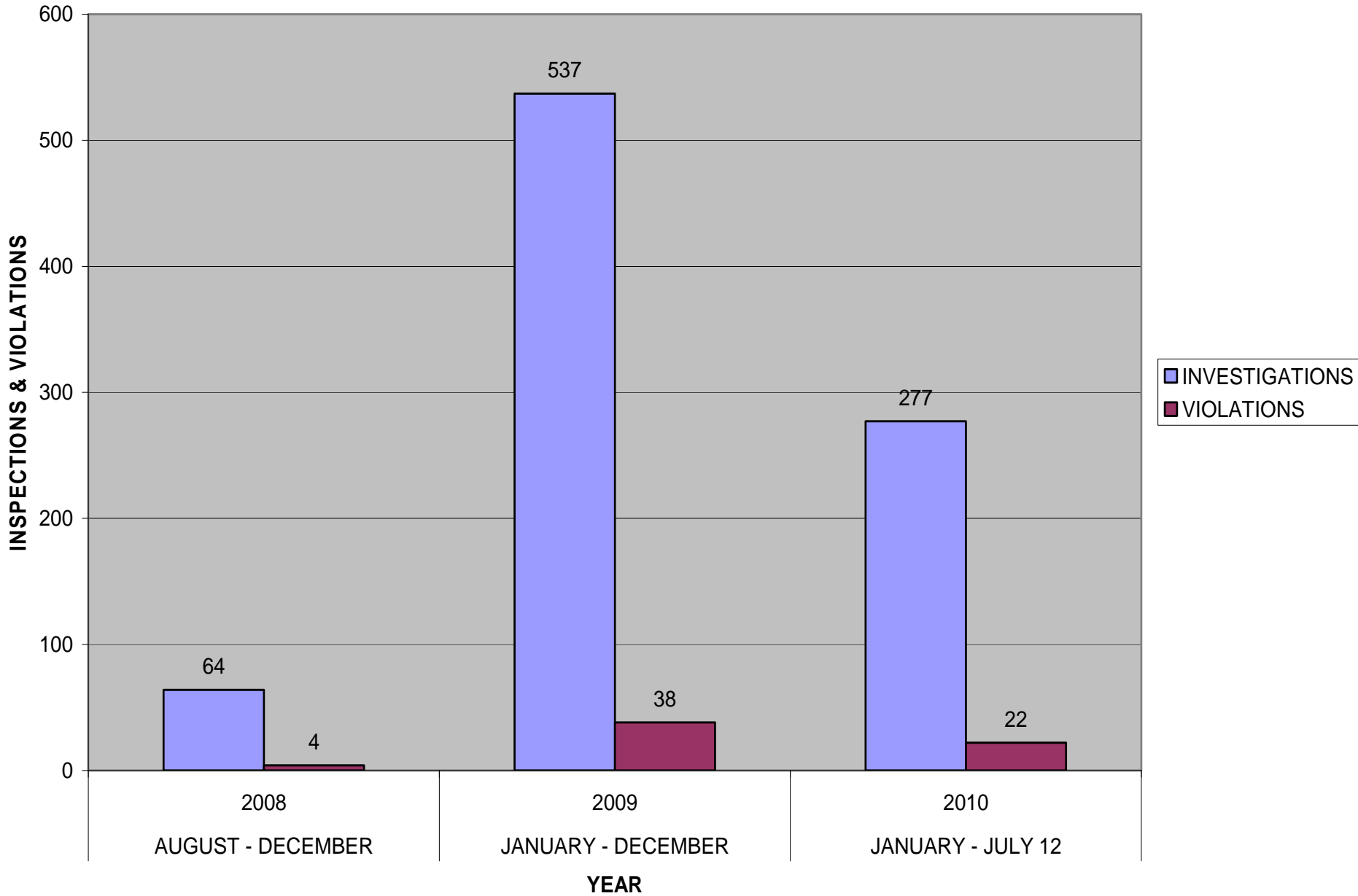
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# Irrigation & Fertilizer

- Reduce nutrients
- Conserve water
- 35,000 handouts
- Partnering with WMD/WAV, Green Industry, Home Depot, Walmart, CPAC, HOA, JEA
- Training on BMPs and COJ Staff

# ANNUAL IRRIGATION INSPECTIONS





# Stormwater Utility Purpose

- Support Jacksonville's stormwater infrastructure Operation & Maintenance needs.
- Support Jacksonville's stormwater Capital Improvement Program.
- Provide support, oversight and guidance on all of Jacksonville's stormwater management needs



# Operation & Maintenance:

- 840 sq miles
- 44,000 Catch Basins/Inlets
- 7,500 Manholes
- 1,000 miles of Pipe
- 134 Ponds
- 2,000 miles of Major Outfalls
- 4,000 miles of Roadside Ditches
- 8 Pump Stations
- \$15 million annual budget



# Capital Improvement Program

- 4 Drainage Improvement Projects under construction
- 12 Drainage Improvement Projects in design phase
- 8 Projects will start construction in FY 10/11
- \$6 million annual to DSR



# Stormwater Management:

- The new City-wide Master Stormwater Management Plan
  - More extensive/accurate data
  - More accurate modeling
  - More “user friendly” technology
- Updated and improved FEMA Flood Map Program
  - More accurate maps (better define risk)
  - Tool to better manage our flood plains



# Public Access to Our River

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## Recently opened/ improved parks/ boat ramps

- Reddie Point Preserve: pier, parking, trails and picnic tables
- Metro Park Marina: electric hook-up for boaters
- Jim King Park and Boat Ramp at Sister's Creek: kayak launch
- Castaway Island Preserve: trail expansion and channel dredging
- Palms Fish Camp: boat trailer parking expansion
- Cedar Point Preserve: boat ramp renovation and new restroom



# Future Projects

- **Jax Baldwin Rail Trail: restroom at Immeson Road trailhead**
- **Huguenot Memorial Park: design of a 178 space parking area**
- **Kathryn Abbey Hanna Park: campground electrical upgrades**
- **Betz-Tiger Point Preserve: parking area, walking trail, boardwalk, interpretive signs and a canoe/kayak tie-up**
- **Jim King Park and Boat Ramp at Sister's Creek: pump out/ dump station**
- **River taxi floating dock, boardwalk and shoreline stabilization at Alimacani Park.**
- **Thomas Creek Fish Camp: restroom, parking and picnic pavilion**
- **Harborview Boat Ramp: restrooms and floating docks**
- **Joe Carlucci Boat Ramp: increase available parking**
- **Mandarin Park Boat Ramp: increase available parking**
- **Michael Scanlon Boat Ramp: replace restroom**



# St Johns River Water Management District



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# St. Johns River Reuse and Treatment Initiative

## *Wastewater Facility Improvements*

- Requires a minimum 50% cost-share from recipient
- State/legislative funds for treatment (Recipient retains TMDL credits)
- District ad valorem funds for reuse (District reserves TMDL credit)
- 266,785 pounds per year of nitrogen and phosphorus will be removed by existing and pending reuse and treatment projects once complete 466,620 pounds per year at build-out

**(Figure does not include reductions from JEA)**



# St. Johns River Reuse and Treatment Initiative

- Exceeds the TMDL by 124,990 pounds per year when projects are completed and by 325,825 pounds per year at build-out
- Currently examining additional reuse projects with St. Johns County and Clay County Utility Authority



# St. Johns River Reuse and Treatment Initiative

St. Johns River Reuse and Treatment Initiative	Total Project Cost	State/District Contribution	Percent Complete	Estimated Completion Date	Estimated Load Reduction at Project Complete (Avg. Ann. Lbs/Yr)	Estimated Load Reduction at Build Out (Avg. Ann. Lbs/Yr)
JEA	JEA has aggregate permit with numerous facilities – providing separate update.					
CCUA	\$25,349,148	\$12,320,227	75%	2010	34,565	86,795
Jacksonville Beach	\$22,105,156	\$11,000,000	71%	2011	65,000	65,000
Neptune Beach	\$2,400,000	\$950,000	Starting 2010	2014	17,698	18,433
Atlantic Beach (Pending)	\$10,600,000	\$1,000,000	Starting 2011	2012	62,000	96,000
Orange Park (Pending)	\$10,290,256	\$627,286	70%	2012	37,292	45,792
Palatka (N)	\$7,710,000	\$3,743,500	80%	2010	43,450	136,450
Palatka (P)					5,780	18,150
				<b>TOTAL</b>	<b>265,785</b>	<b>466,620</b>

## Additional Efforts

- Nearly \$10 million has been spent on stormwater improvements in Palatka, Atlantic Beach, Green Cove Springs and Jacksonville Beach. City of Jacksonville also has expended significant amounts on stormwater improvements.
- 3,200+ acres of agricultural runoff is being treated via regional stormwater treatment facilities in the tri-county agricultural area (TCAA), and the District is examining additional, cost-effective means of addressing agricultural runoff throughout the TCAA.



# Additional Efforts

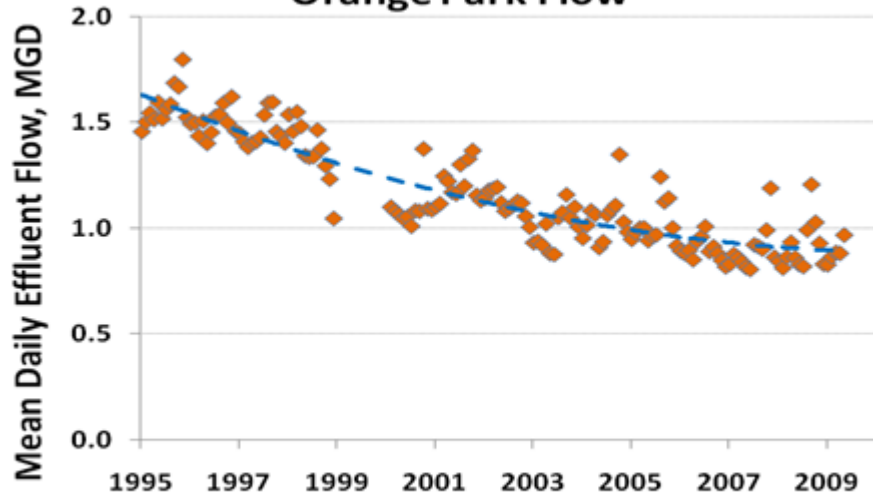
- The city of Jacksonville and other local governments are documenting failing septic tanks and connecting them to public sewer systems.
- The District and the Florida Department of Environmental Protection are examining ways to address upstream loads coming from Lake George and the middle basin.



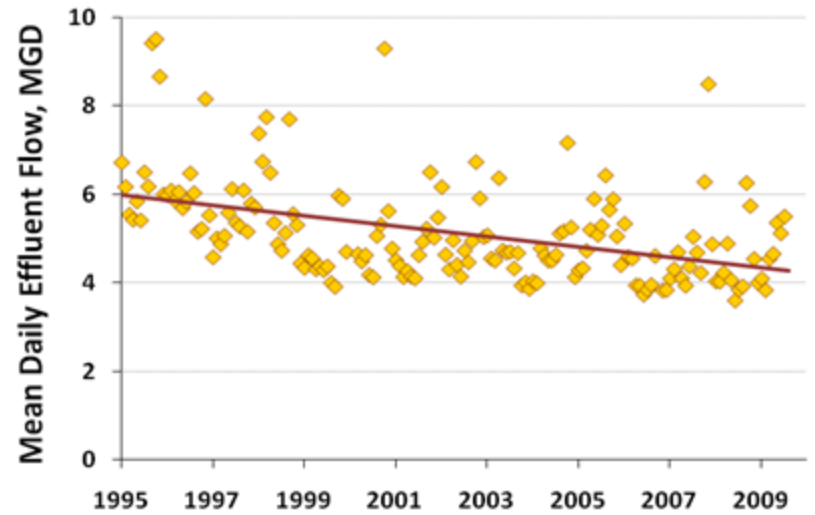


# Trends in Flow

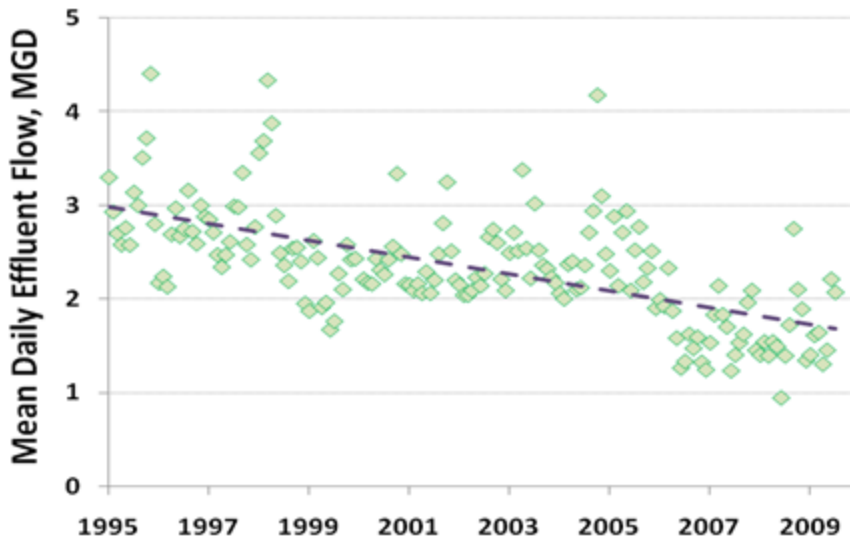
## Orange Park Flow



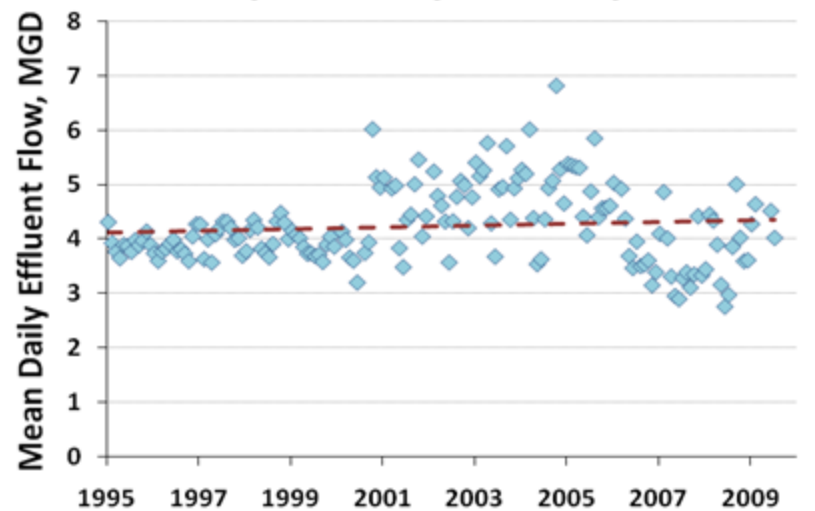
## Jacksonville, Neptune and Atlantic Beach



## Palatka



## Clay Co. Utility Authority





JEA



Paul K. Steinbrecher P.E.  
Director, Enviro Svcs Permitting & Assessments

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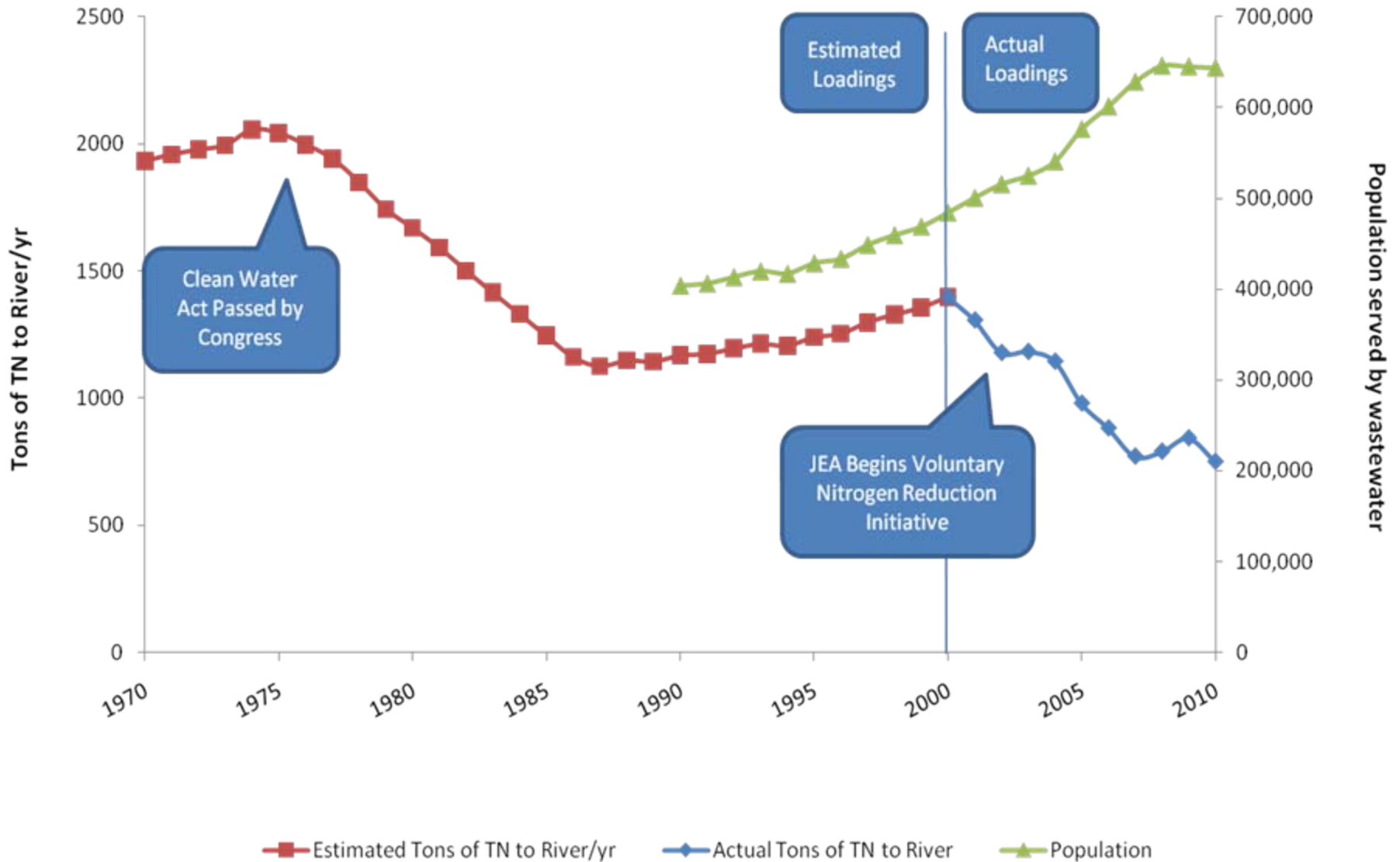


# JEA River Accord 2010 Update

## 3 Components of JEA commitment to River Accord:

- 1) Upgrading Regional Treatment Plants: Two Completed. Construction on a third, Arlington East WRF, was completed last month. A fourth, Buckman WRF, is currently in design.
- 2) Phase Out Older Plants: Two of six older plants phased out in previous years. A third, Beacon Hills, will be offline by October.
- 3) Expand Reclaimed Water Use: Progress in 2010 impeded by real estate slowdown. JEA concentrating on serving customers close to existing infrastructure.

# TN Loading to St. Johns River from JEA Duval Co. Service Area





# Water and Sewer Expansion Authority

  
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# WSEA Background

- The Water and Sewer Expansion Authority (WSEA), established in 2003 as an independent authority by the City of Jacksonville
- Originally created to provide property owners with an opportunity to finance water and/or sewer infrastructure in their existing developed neighborhoods on a voluntary basis





# WSEA

## Accomplishments

- Oakwood Villa Estates sewer construction completed
- Lincoln Villas Phase 1 sewer construction 90% complete and water construction 97% complete
- Design work for Lincoln Villas Phase 2 to begin in October 2010

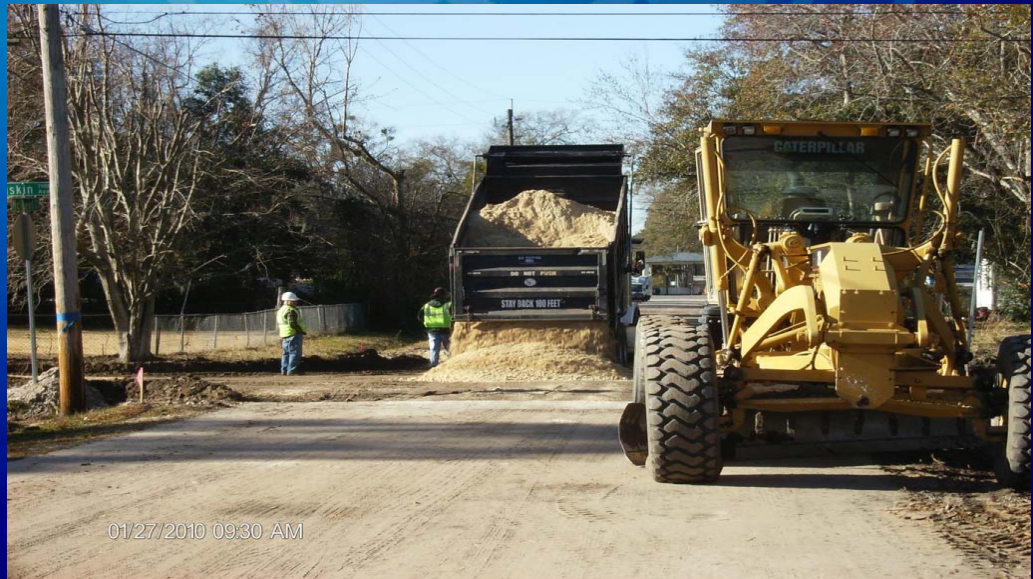


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# WSEA Accomplishments

- Secured over \$14 million in grants
- Establishing ongoing funding sources
- 2,480 septic systems removed



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# Florida Department of Environmental Protection

  
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# Total Maximum Daily Loads (TMDLs)

- Science based
- Water quality targets
- Based on Florida water quality standards
- TMDLs Established for:
  - SJR Main Stem
  - SJR Tributaries

# Main Stem Nutrient Reductions

- Basin Management Action Plan (BMAP) projects completed by stakeholders through October 2009 resulted in a reduction of approximately:
  - 134,288 kilograms/year (kg/yr) of total nitrogen (TN)
  - 37,403 kg/yr of total phosphorus (TP) in the freshwater section of the river,
  - 545,798 kg/yr of TN in the marine section.





# St. Johns River Tributaries

- December 2009 - DEP adopted Tributaries BMAP
- Implementation will reduce fecal coliform bacteria in 10 tributaries to the river.
- A second BMAP for an additional 15 waterbodies is scheduled to be adopted in fall 2010.



# National Recognition

- The Tributary Assessment Team was recognized in November 2009 with a national Coastal America Spirit Award for their efforts to create a collaborative approach to improving water quality in the Lower St. Johns River Basin.





*Much has been done and much more to do.....*

  
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