Irrigation & Fertilizer

- Reduce nutrients
- Conserve water
- 30,000 handouts
- Partnering with Green Industry, Home Depot, HOAs, and Walmart
- 287 irrigation complaint responses
Tributary Fecal Coliform and DO

- 2,092 septic tank phaseouts
- SJ RWMD contract
- WSEA extend lines
- DCHD enforce septic tank compliance
- COJ enforce septic tank connection
- UTIP fund low-income connection
- PSA re environmental impacts and maintenance
Erosion and Sediment Control

- Complement to Stormwater Utility
- Focus on new construction and pond maintenance
- 2,566 inspections past 12 months
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

- 5 Drainage Improvement Projects completed this year
- 6 Drainage Improvement Projects started construction this year
- 7 Drainage Improvement Projects to start construction in next 6 months
- 5 New Drainage Improvement Projects started design
- 5 more New Drainage Improvement Projects will start later this year
- $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
Recently opened parks/boat ramps

- Cedar Point Preserve: boat ramp, parking area and trails
- Reddie Point Preserve: pier
- Huguenot Memorial Park Expansion: acquisition of 10 acres with waterfront access
- Palmetto Leaves Park: kayak launch
Projects in construction

- Metro Park Marina: electric hook-up for boaters
- Betz-Tiger Point Preserve: parking area, walking trail, boardwalk, interpretive signs and a canoe/kayak tie-up (ground breaking 10/25/09)
- Sister’s Creek Park: kayak launch
- Castaway Island Preserve: trail expansion and channel dredging
- Palms Fish Camp: boat trailer parking expansion

There are 11 additional projects currently in design and expected to move to construction in the next year.
### Cooperative Investments

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
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<tbody>
<tr>
<td>SJRWMD/State</td>
<td>$65,500,000</td>
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<tr>
<td>JEA</td>
<td>$27,664,978</td>
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<tr>
<td>CCUA</td>
<td>$9,961,733</td>
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<td>Palatka</td>
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<td>Jacksonville Beach</td>
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<tr>
<td>Atlantic Beach</td>
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<tr>
<td>Neptune Beach</td>
<td>$1,600,000</td>
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<tr>
<td>NAS Jax</td>
<td>$1,000,000</td>
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<tr>
<td>Orange Park</td>
<td>$6,873,000</td>
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<tr>
<td>WSEA</td>
<td>$3,000,000</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$155,514,211</strong></td>
</tr>
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</table>
Cooperative Projects Status

- **JEA Treatment and Reuse** — projects completed, under construction, and finalizing design
- **CCUA Reuse** — under construction
- **Orange Park Reuse connect** — complete
- **Orange Park Treatment** — under construction
- **Jacksonville Beach Treatment and Reuse** — under construction
Cooperative Projects Status

- Atlantic Beach Treatment and Reuse – under design
- Neptune Beach Treatment – under design
- Palatka Reuse – 80% complete (on way to zero discharge)
- NAS JAX (Navy) – design complete, match needed
- Jacksonville MSEA Septic Tank Conversion – under construction
Other SJRWMD LSJ Activities

• Updating Hydro and WQ Models
• Stormwater Cost Share – Palatka, Atlantic Beach, Green Cove Springs, Jax Beach
• Agricultural Nutrient Load Reduction – fertilizer and irrigation BMPs, regional treatment projects (SJRWMD, St. Johns and Putnam Counties)
• Updated SWIM Plan (2008) – expanded to include Lake George basin
• Algal Monitoring & Response Coordination
• Algal Initiative – Freshwater area and MSJ
Water Supply Impact Study

Purpose

- Evaluate potential environmental effects of proposed surface water withdrawals on the biological and water resources of the Ocklawaha and St. Johns rivers (2-yr/$2M)

Structure

- Seven working groups: hydrologic and hydrodynamic modeling; biogeochemistry; plankton; benthos; littoral zone; fish; wetlands and wetland-dependent species
Water Supply Impact Study

- Thirteen national/international experts
- National Academy of Sciences peer review in process
- Second Technical Symposium
  September 23-24 @ UF Hilton
  - Public Welcome
  - Register at sjrwmd.com
  - View Live Streaming Video
JEA Voluntary N Reduction Program Started in 2000

- 2006 River Accord is an extension of that initiative
- $200 MM Program
  - Phasing out older technology plants
  - Upgrading 5 Regional Plants
  - Increasing reclaimed water use
Phasing Out Older Plants

- Efficient way to upgrade treatment
- Two of six phased out
- Third plant in design and scheduled for phase-out in 2010.
Upgrading Regional Plants

- Two plants completed, Mandarin and Southwest
- Arlington East in construction (50 tpy)
- Buckman in design (100 tpy)
Increasing Reclaimed Water

- Multiple Benefits
- 18 miles of new pipe in 08/09
- Reuse capacity > 26mgd
- Reuse demand increasing 2-3 mgd even in slow growth period
River Results from Utility Investment

Nitrogen Discharge to the River from JEA Owned and Acquired Facilities

- Current stable period while improvements are under construction
- Reductions from completed projects at Buckman and Arlington East
- River Accord signed 7/06
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
Official Septic Tank Phase Out Lead

• Responsible for community outreach and program education

• Nutrient Study

• Removal of failing septic systems
  – There are 37 areas in Duval County that have been declared Septic Tank Failure Areas by the Duval County Health Department
  – Those failing areas include 30,000 septic systems
WSEA Accomplishments

• Voluntary Program
  – Approximately 320 connections to water and/or sewer

• Current Grant Funded Projects
  – Oakwood Villa Estates Phase 2
    • Removal of 515 septic systems
  – Lincoln Villa Phase 1 and 2
    • Removal of 93 septic systems and wells
Secured Funding to Date

• **2007/2008**
  - $2.8M in grants for the Lincoln Villa Phase 1, Septic Tank Phase Out (STPO) project
    - $2M ad valorem grant from St. John’s River Water Management District
    - $800K Community Block Issue Request (CBIR) grant
  - $11.2M CIBR grant for the Lower St. Johns River Basin Initiative (Oakwood Villa Estates STPO project)

• **2008/2009**
  - $300K CIBR for the Lincoln Villa Phase 2 STPO project
  - $759K STAG grant for Septic Tank Phase Out
Florida Department of Environmental Protection

Melissa Long, P.E.
Water Facilities Administrator

THE RIVER ACCORD
ANNUAL REPORT 2009
Total Maximum Daily Loads (TMDLs)

- Science based
- Water quality targets
- Based on Florida water quality standards

- TMDLs Established for:
  - SJR Main Stem
  - SJR Tributaries
St. Johns River Main Stem TMDLs

• Established nutrient limits
• Science based
  – Modeling
  – Source identification
  – Point & non-point
• Stakeholder participation
Basin Management Action Plan – Main Stem

- Adopted October 2008
- Commitments to reductions
- Annual reductions projected
  - 6.08 million lbs/yr total nitrogen (freshwater & marine)
  - 235,000 lbs/yr total phosphorous (freshwater)
- Enhanced monitoring & reporting
TMDLs– Tributaries

- Fecal coliform impairments
- Cycle 1 - 55 tributaries verified
- Cycle 2 (2009)– verified 20 more tributaries
Basin Management Action Plan – Tributaries

• 2009 - BMAP developed for 10 of the most impaired tributaries
  – Tributary Assessment Team
  – Wastewater management
  – Thermal imaging
  – Increased inspections
  – Illicit discharge removals

• 2009-10 – A second BMAP being developed for 15 impaired tributaries
Just the beginning........