

# Refuge Enhanced Monitoring Program: Project Implementation Update

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Update to TOC, November 30, 2004



**U.S. Fish & Wildlife Service**

**Arthur R. Marshall**

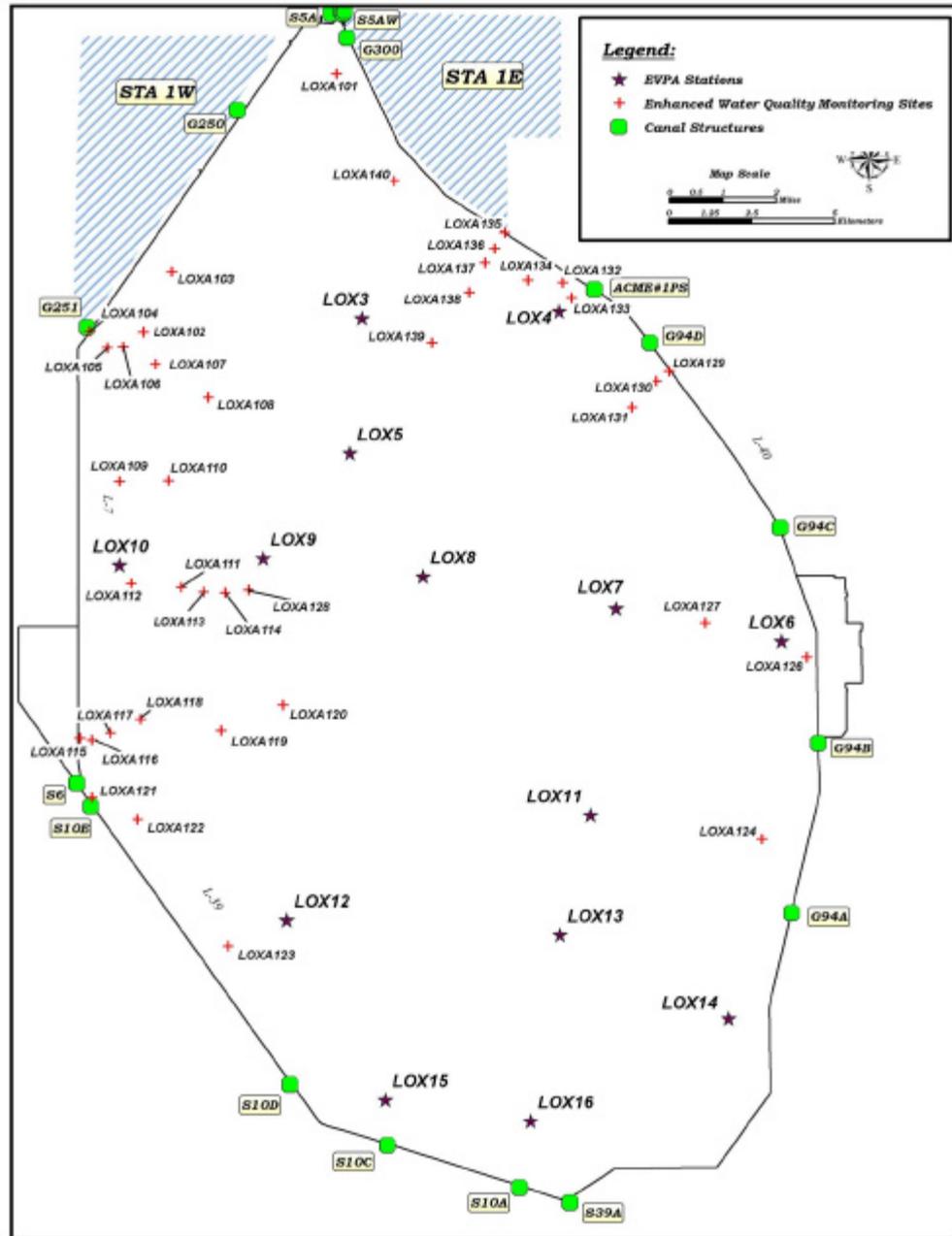
**Loxahatchee National Wildlife Refuge**

# Update since August 26, 2004 TOC

- Purpose:
  - Quarterly update on project implementation
- Monthly sampling in Sept., Oct., Nov.
  - Water levels rose; all stations sampled this quarter
  - Transects instrumented
    - 14 sondes currently in place along 4 transects
  - Final data posted on DBHYDRO (Project Code: LOXA)
- Modeling update
- Canal monitoring update
- Hurricanes in Refuge
- Implementation “Next Steps”



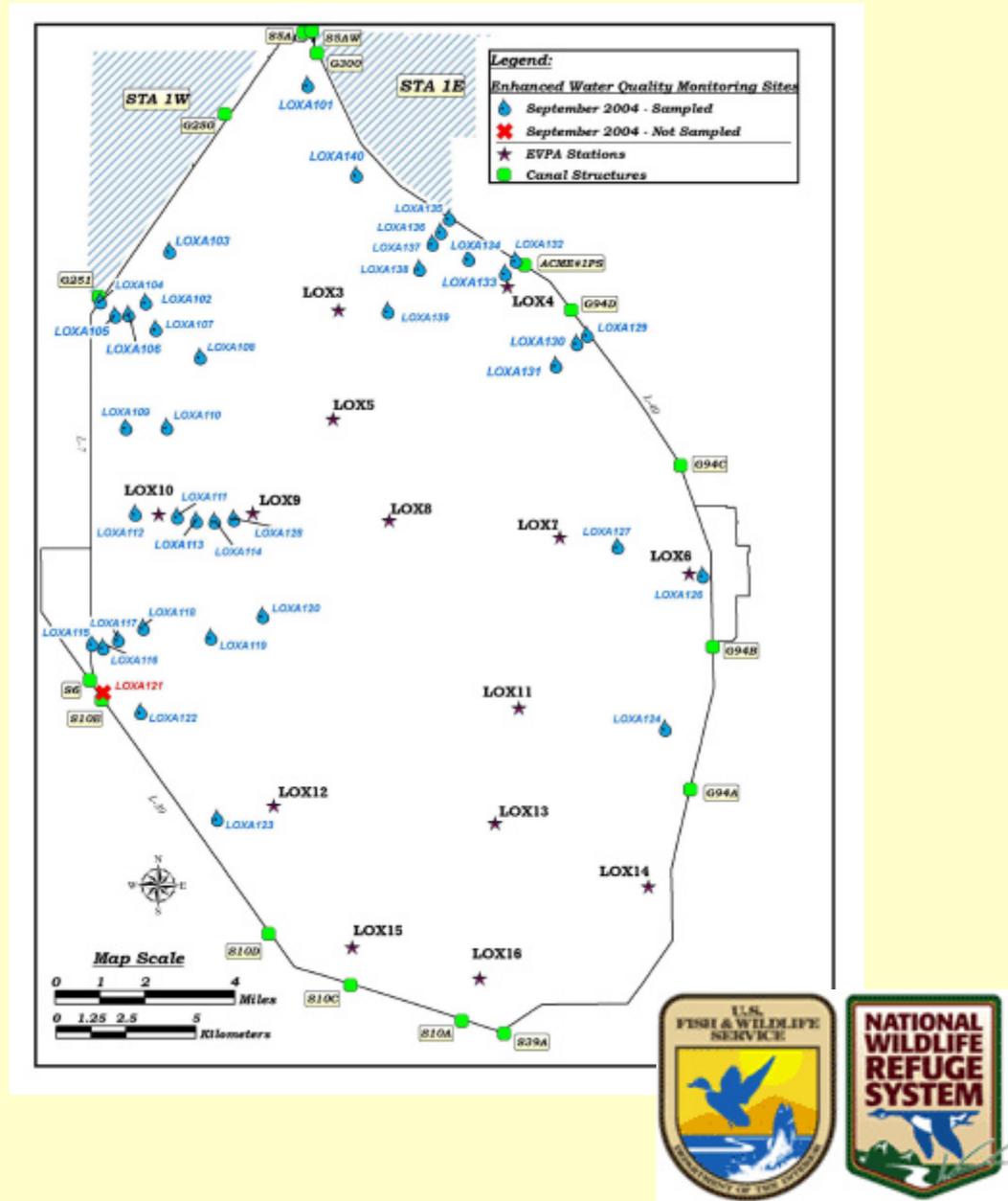
# Refuge Sampling Site Map



# Enhanced Monitoring Network:

Stations sampled  
in Sept 2004

33 marsh sites  
5 canal sites

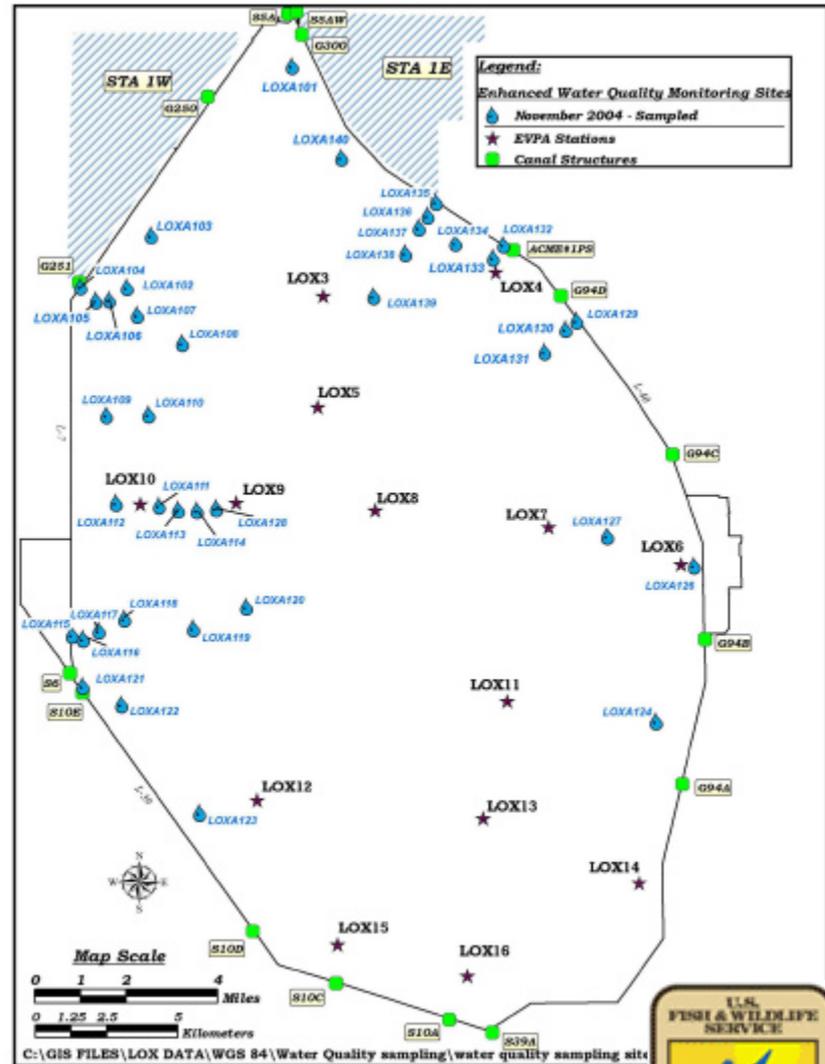




# Enhanced Monitoring Network:

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# Modeling Update

## Development of hydrodynamic and water quality modeling

- Modeling contract – Dr. Ehab Meselhe
  - Conclusion of preliminary model selection phase targeted for January 2005
- Model selection review panel – Dr. Vince Neary
  - Panelists identified
  - Model selection review panel targeted for January 2005



# Canal Monitoring Update

## Canal monitoring update

- Monitoring contract in place – Dr. Samira Daroub
- Canal hydrographic surveys and canal sediment characterization over time
  - distribution, abundance, water quality characteristics
- Survey protocols and plans are currently being developed.
  - The sediment survey component will begin by end of CY 04.
  - The canal water quality survey component will begin in early CY 05.



# Water Quality Monitoring – Hurricanes

## Timeline:

September 4	Hurricane Frances
September 6-12	G-300 bypass
September 14-16	Enhanced sampling
September 20-21	remnants of Ivan
September 21, 23	EVPA sampling
Sept. 21 – Oct. 7	G-300 bypass
September 25	Hurricane Jeanne
Sept. 26 – Oct. 4	STA-1E discharge (16,612 acre feet)



# Project Implementation – Next Steps

- Complete Personnel actions – upcoming hires:
  - Water quality technician
  - Water quality ecologist
- Continued coordination with USGS researchers for work along two transects
- Complete acquisition and deployment of conductivity data sondes
- Develop database management for project data
- Refine information presentation approaches
- Ongoing data analysis



# Questions?

