

An aerial photograph of the Florida Keys coastline, showing the turquoise shallow waters of the Florida Current and the deep blue waters of the Gulf of Mexico. The text "FLORIDA KEYS WASTEWATER BONDS" is overlaid in white, bold, sans-serif font. The text is centered horizontally and vertically, with a slight reflection effect below it. The background shows the intricate patterns of the coral reefs and the greenish-brown landmasses of the keys.

# FLORIDA KEYS WASTEWATER BONDS



An aerial photograph of a coastline, likely Florida, showing a mix of green and blue water. The land is visible on the right side, with some buildings and vegetation. The water transitions from a light green near the shore to a darker blue further out. The text is overlaid on the left side of the image.

**Commissioner George Neugent**

**Partners**

**FKAA, WQPP Steering**

**Committee**

**EPA, FDEP, Sanctuary, County,**

**Cities**

PREPARED BY FCAA



Cudjoe Regional WWTP  
Data SIO, NOAA, U.S. Navy-NGA, GEBCO  
Image © 2012 TerraMetrics  
Image U.S. Geological Survey

Google earth



# Florida Keys National Marine Sanctuary



## Florida Keys National Marine Sanctuary and Protection Act 1990

- Uniqueness of the Florida Keys
- Threats- water pollution, oil drilling, ship groundings
- Economy directly tied to quality of the environment
- Create a Water Quality Protection Program
- “recommend priority corrective actions ... restore and maintain ... integrity of the sanctuary.”
- Steering Committee- Semi-annual meetings since 1990



# Assessment of Water Quality Problem

- Nutrients from Wastewater- 80% nitrogen, 55% phosphorus Storm water, Far-Fields Sources
- Public Health
- Canal Geometry
- 3,000 cesspits, 25,000 poorly functional septic systems, 250 package plants (no nutrient removal)

## Milestones

1996 Water Quality Protection Program Document – 93 action items to improve water quality, including improve wastewater treatment

1999 F. S. 99-395 AWT Mandate

2000 Monroe County Sanitary Wastewater Master Plan

2004 Little Venice Demonstration Project - Other wastewater projects completed and ongoing (Key West, Key Largo, Layton, Marathon)

2012 End in Sight!




## Success- Little Venice Demonstration Project

- 2001-2003 Pre remediation monitoring of canal water quality and seagrass
- 2004 Plant operational- AWT Plant
- 2005-2007 Post remediation monitoring of canal water quality and seagrass

### Findings

Water Quality - significantly fewer violations of dissolved oxygen and fecal coliform standard; significantly less concentrations of intestinal bacteria (*Enterococcus*)

Sea grass increased water clarity, fewer phytoplankton blooms, and reduced epiphyte load on sea grass leaves

An aerial photograph of a bridge under construction over a body of water. Large blue and white pipes are being laid across the bridge deck. A crane is visible on the left side of the bridge, and several workers in orange safety vests are on the bridge deck. A white pickup truck is driving on the bridge. The water is dark blue, and the sky is clear.

**Kirk Zuelch, Executive Director**  
**Florida Keys Aqueduct Authority**

Shovels in the ground/System Operation

Approx 75% of Water Quality Protection  
Program action items complete or underway

**Last two major wastewater  
projects**





## TWO PROJECTS:

**Cudjoe Regional (\$150 million) 8,800 EDU's**

**Islamorada (\$110 million) 9,900 EDU's**

EDU = Equivalent Dwelling Unit (equivalent to a single family home's wastewater flow)



# Islamorada, Village of Islands Implementation Plan



## System Program (est. \$110 million)

- Collection and Local Transmission System
- Transmission System to Key Largo WWTP for Treatment and Disposal

## Contract Schedule

- Inter-Local Agreement with Key Largo Wastewater Treatment District (District) approved by both the Village and the District on May 1, 2012
- Contract with design-build-operate firm expected June 2012
- Construction Completed December 2015

A satellite-style map of the state of Florida, showing the coastline, major cities, and the surrounding ocean. The map is oriented vertically, with the top of the state at the top of the image. The background of the slide is a dark blue gradient.

# FKAA/Monroe County Cudjoe Regional System Implementation Plan

System Program (est. \$150 million)

- Collection and Transmission Pipes
- Treatment Plant
  - Prequalification of Contractors – May 15, 2012
  - Advertise for Bids – September 10, 2012
  - Open Bids – December 3, 2012
  - Contract to Board in December 2012
  - Project Completion – December 2015





# Roman Gastesi, Monroe County Administrator

- **Economics**
  - Leverage State \$50 million (\$4.8 million line item) to start \$260 million in construction projects
  - **Jobs creation:**
    - 1,100 construction over 3 years
    - 60 permanent
- 

# Roman Gastesi, Monroe County Administrator

- Environmental benefits
- Eliminates 28,000 cesspit/septic systems
- Creates 12 central systems
- Improves water quality in an economy based on water

**THE ENVIRONMENT IS THE ECONOMY**

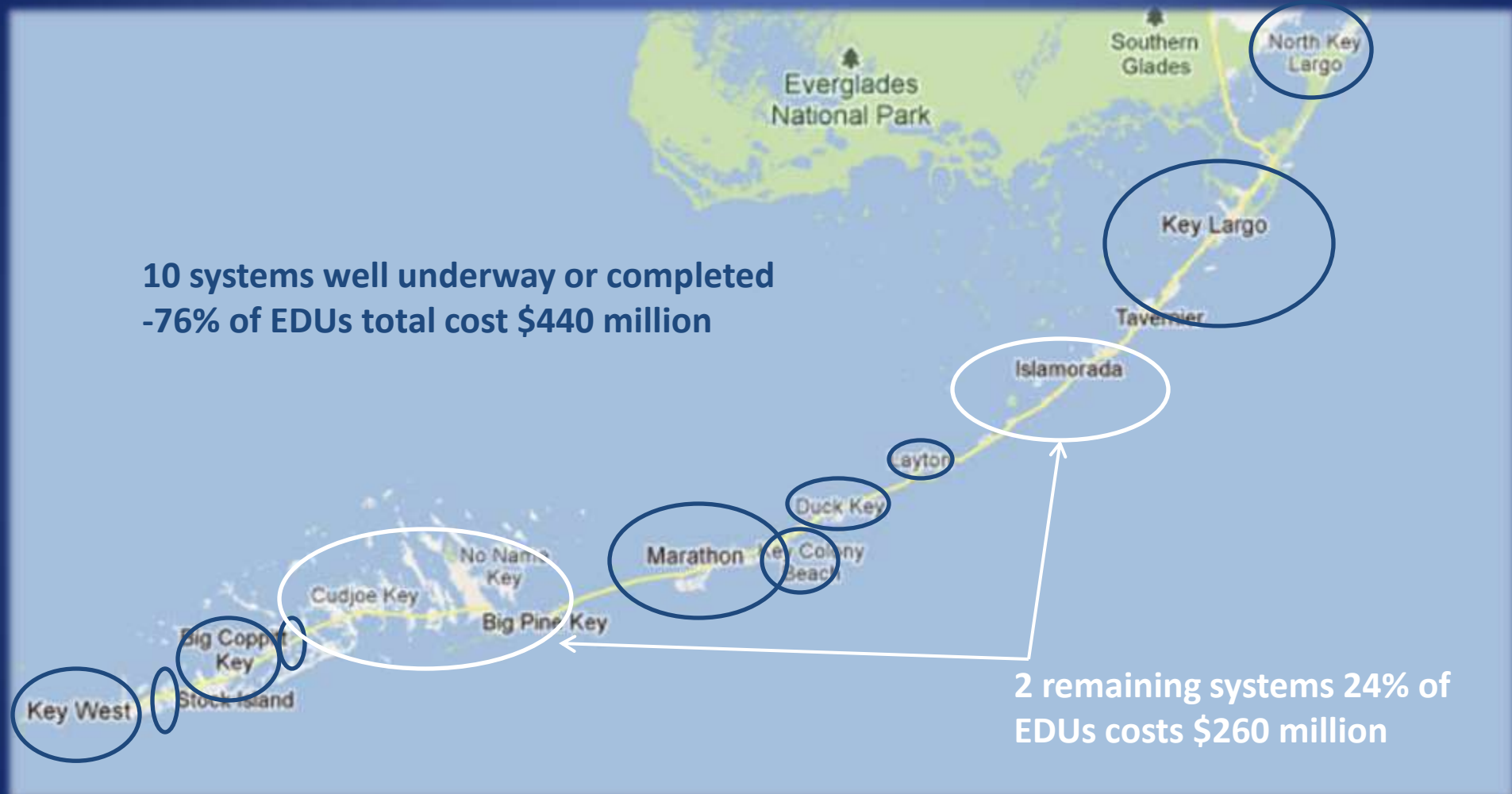
Thank You





10 systems well underway or completed  
-76% of EDUs total cost \$440 million

2 remaining systems 24% of  
EDUs costs \$260 million



EDU = Equivalent Dwelling Unit (equivalent to a single family home's wastewater flow)