



*Florida Department of  
Environmental Protection*

*Watershed Assessment  
2015 Strategic Monitoring in  
the Florida Keys*

**DEAR- Water Quality Assessment Program  
South Regional Operation Center (ROC)**



# *Watershed Management Approach*

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- **DEP implements TMDL Program as part of Watershed Management Approach**
  - Started in July, 2000
  - Assessment
  - TMDL Development
  - Implementation - BMAP
  - Watershed Restoration
- **Watershed Approach established five-phase cycle that rotates through all basins in the state over five-year period**
  - Divided state's basins into groups





## *303(d) Listing Requirements*

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- **Section 303(d) of the Federal CWA requires states to:**
  - **Submit lists of waters that do not meet applicable water quality standards, including designated uses**
    - “impaired waters”
  - **Identify pollutant causing or expected to cause impairment**
  - **Establish/implement TMDLs for these waters on a prioritized schedule**



# Basin Contacts

## Northeast District:

### Basin Coordinators:

Charles Gauthier (850) 245-8555  
 Suwannee -Terry Hansen (850) 245-8561

**STORET Coordinator:** Siteria Gregory (850) 245-8510

**WAS Team Lead:** Paul Kurisko (850) 245-8462

**District Contact:** Brad Hartshorn (850) 595-0591 Ext. 10591

## Central District:

### Basin Coordinators:

Indian River Lagoon - Mary Paulic (850) 245-8560

Middle St. Johns/Upper St. Johns -

Charles Gauthier (850) 245-8555

Ocklawaha - Mary Paulic (850) 245-8560

Kissimmee River - Katie Hallas (850) 245-8432

**STORET Coordinator:** Vilma Quant (850) 245-8544

**WAS Team Lead:** Jessica Rich-Zeisler (850) 245-8441

**District Contact:** Terry Riordan (407) 897-2959 Ext. 32959

## South District:

### Basin Coordinator:

Kim Dinkins (850) 245-8825

**STORET Coordinator:** Kyle Ferris (850) 245-8549

**WAS Team Lead:** David Tyler (850) 245-8458

**District Contact:** Erin Rasnake (813) 470-5767 Ext. 45767

## Southeast District:

### Basin Coordinators:

Katie Hallas (850) 245-8432

**STORET Coordinator:** Vilma Quant (850) 245-8544

**WAS Team Lead:** David Tyler (850) 245-8458

**District Contact:** Terry Riordan (407) 897-2959 Ext. 32959

## Northwest District:

### Basin Coordinator:

Stephen Ciochia (850) 245-8618

**STORET Coordinator:** Siteria Gregory (850) 245-8510

**WAS Team Lead:** Paul Kurisko (850) 245-8462

**District Contact:** Brad Hartshorn (850) 595-0591 Ext. 10591

## Southwest District:

### Basin Coordinator:

Terry Hansen (850) 245-8561

**STORET Coordinator:** Lisa Schwenning (850) 245-8509

**WAS Team Lead:** Jessica Rich-Zeisler (850) 245-8441

**District Contact:** Erin Rasnake (813) 470-5767 Ext. 45767

### Statewide STORET Coordinator:

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### GIS Team:

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## Basin Groups

**Group 1**

- Ochlocknee-St. Marks
- Suwannee
- Ocklawaha
- Lake Okeechobee
- Tampa Bay
- Everglades West Coast

**Group 2**

- Apalachicola-Chipola
- Lower St. Johns
- Middle St. Johns
- Tampa Bay Tributaries
- Charlotte Harbor
- St. Lucie-Loxahatchee

**Group 3**

- Choctawhatchee-St. Andrews
- Upper St. Johns
- Sarasota Bay-Peace Myakka
- Caloosahatchee
- Lake Worth Lagoon-Palm Beach Coast

**Group 4**

- Pensacola
- Nassau-St. Marys
- Withlachochee
- Kissimmee River
- Fisheating Creek
- Southeast Coast- Biscayne Bay

**Group 5**

- Perdido
- Upper East Coast
- Indian River Lagoon
- Springs Coast
- Everglades
- Florida Keys

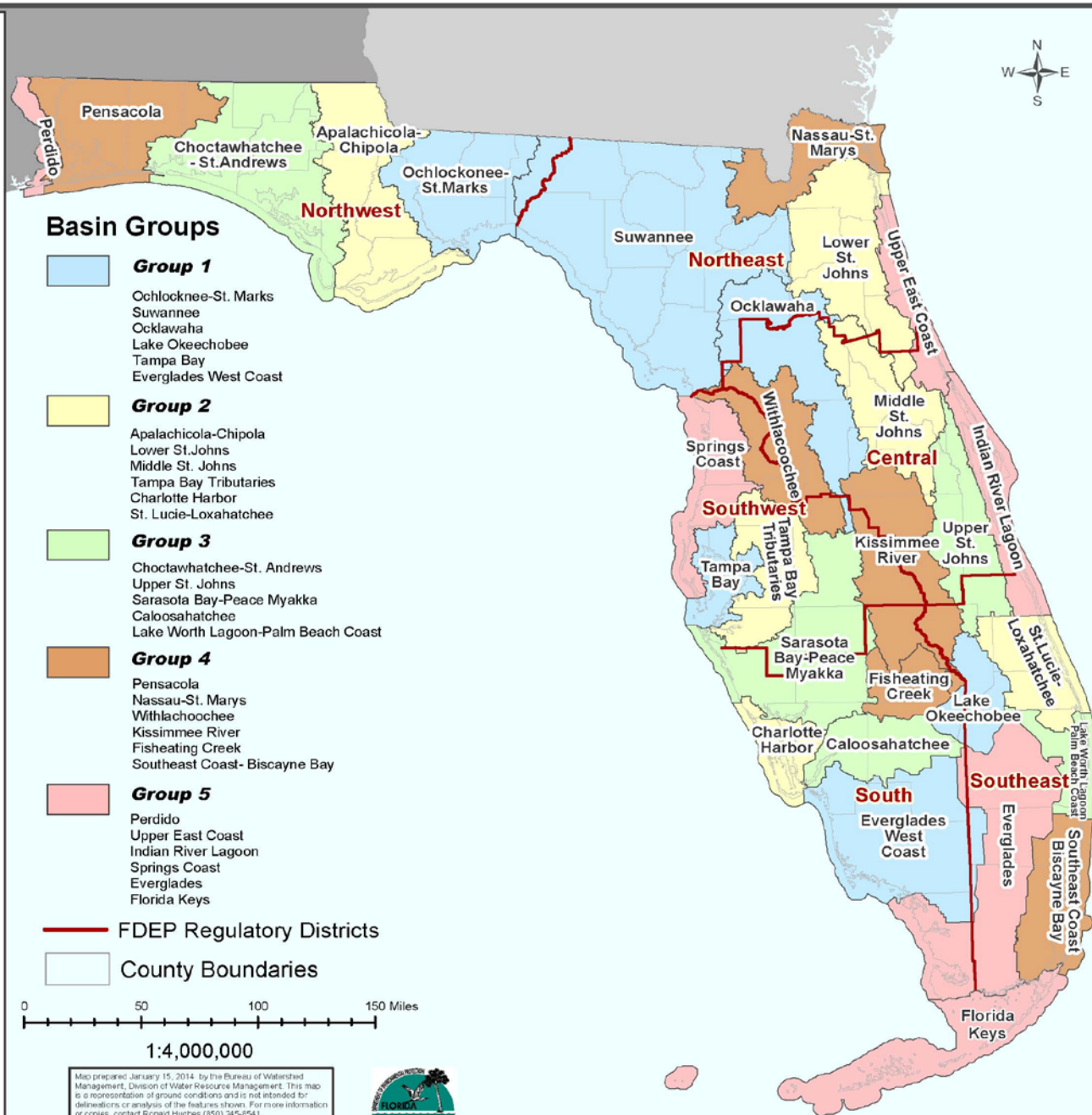
**— FDEP Regulatory Districts**

**□ County Boundaries**

0 50 100 150 Miles

1:4,000,000

Map prepared January 15, 2014, by the Bureau of Watershed Management, Division of Water Resource Management. This map is a representation of ground conditions and is not intended for delineations or analysis of the features shown. For more information or copies, contact Ronald Hughes (850) 245-8541





## *South District Basins*

- **Fisheating Creek**
- **Charlotte Harbor**
- **Sarasota-Peace-Myakka**
- **Caloosahatchee**
- **Everglades West Coast**
- **Florida Keys**





# *Uses Addressed by Assessment Methods*

- **Aquatic Life**
  - Metals, Turbidity, Pesticides, Biological assessment
- **Primary Contact and Recreation**
  - Bacteria, Beach advisories
- **Fish and Shellfish Consumption**
  - Pathogenic bacteria, Mercury, Shellfish Classification
- **Drinking Water**
  - Metals, Pesticides, Bacteria

**Water Quality Standards 62-302 F.A.C.  
Impaired Waters Rule 62-303 F.A.C**





# *Watershed Management Cycle*

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## **Phase 1 - Preliminary Assessment**

- Produce Planning List, Study List

## **Phase 2 - Targeted Monitoring and Listing**

- Monitor, Verify impairment, and Adopt Verified List by Secretarial Order

## **Phase 3 - Develop and Adopt TMDLs**

## **Phase 4 - Implement TMDLs**

- Basin Management Action Plan or
- Other Implementation Option

## **Phase 5 - TMDL/BMAP Implementation**





# Watershed Management Cycle

- Each basin group is assessed every 5 years
  - Cycle 1 = 2002 for Group 1 w/ revisions adopted in 2003
  - Cycle 2 = 2009
  - Cycle 3 = 2013

Cycle Rotation	Basin Group	Planning Period	Verified Period
1	1	1989 - 1998	1/1/1995 - 6/30/2002
1	2	1991 - 2000	1/1/1996 - 6/30/2003
1	3	1992 - 2001	1/1/1997 - 6/30/2004
1	4	1993 - 2002	1/1/1998 - 6/30/2005
1	5	1994 - 2003	1/1/1999 - 6/30/2006
2	1	1995 - 2004	1/1/2000 - 6/30/2007
2	2	1996 - 2005	1/1/2001 - 6/30/2008
2	3	1997 - 2006	1/1/2002 - 6/30/2009
2	4	1998 - 2007	1/1/2003 - 6/30/2010
2	5	1999 - 2008	1/1/2004 - 6/30/2011
3	1	2000 - 2009	1/1/2005 - 6/30/2012
3	2	2002 - 2011	1/1/2007 - 6/30/2014
3	3	2003 - 2012	1/1/2008 - 6/30/2015
3	4	2004 - 2013	1/1/2009 - 6/30/2016
3	5	2005 - 2014	1/1/2010 - 6/30/2017







## *Assessment Units aka WBIDs*

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- **WBID = Waterbody Identification**
- **WBID boundaries change based on local stakeholders who are most knowledgeable about their local watersheds**
- **Other reasons for WBID changes include delineation of freshwater & salt water and control structures, delineation of nutrient criteria boundaries**
- **We may reassign stations to other WBIDs if the Lat/Long is incorrect or the station is not representative of the WBID**





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# *Strategic Monitoring Plan Development*



# *Strategic Monitoring Plan Development*

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- **Coordination with other data providers**
  - **WBID-parameters needing additional data to allow assessment for attainment of the numeric nutrient criteria**
  - **Any areas we can remove sampling duplication, collaborate**
  - **Areas we shouldn't be monitoring; Areas we should**





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# *Monitoring and Assessment Considerations*



## *Representative Stations*

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- **Data are collected for a variety of reasons**
  - Ambient monitoring
  - Effects studies
- **Waterbodies can be inappropriately classified (gradients between wetlands, lakes, streams, tidal creeks and estuary)**
- **Evaluate site information**





## *Spatial Considerations*

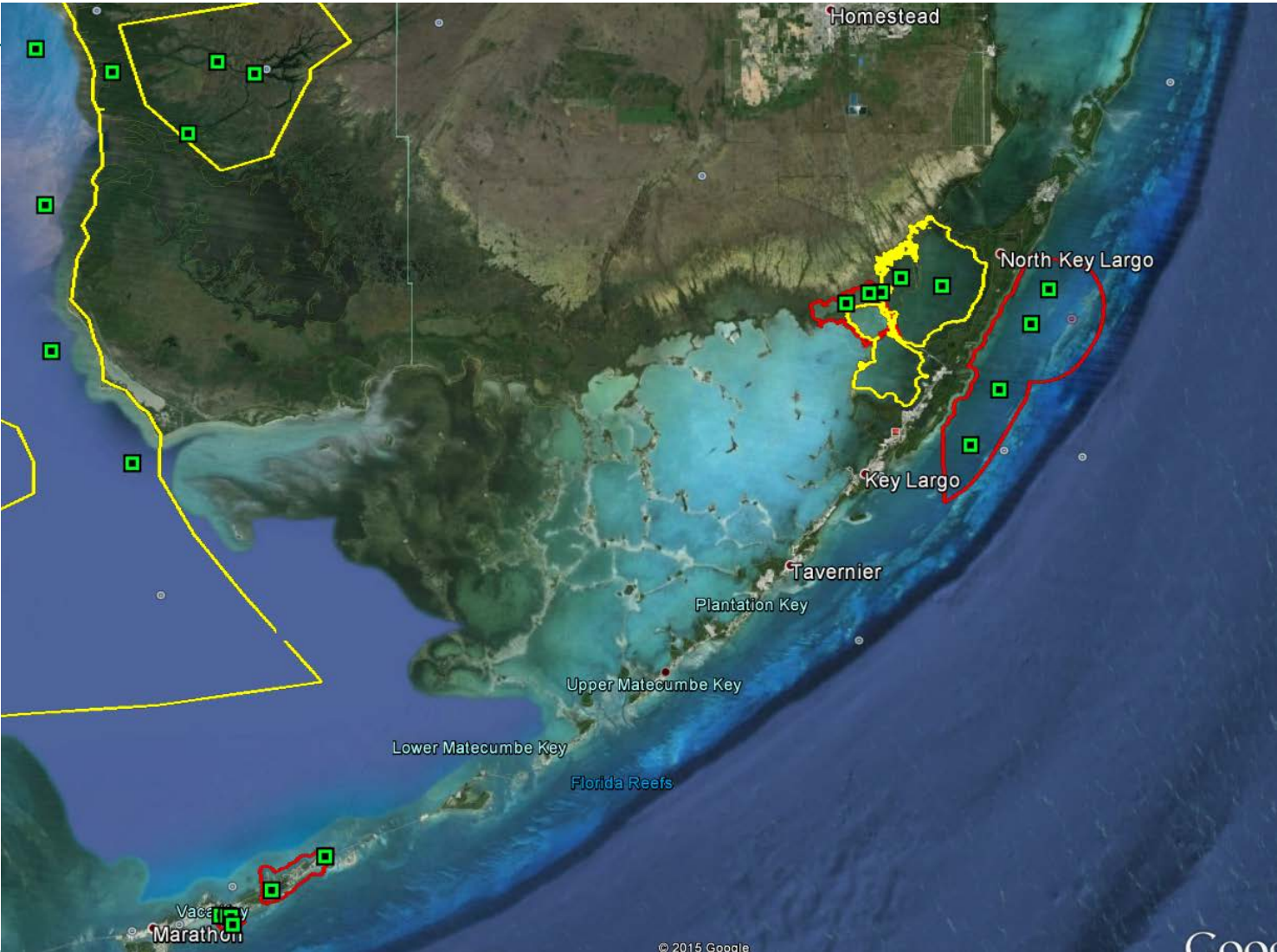
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- **Sampling site location is critical in determining what the water quality data actually represent**
  - Proper system type (wetland vs. stream, etc.)
- **Channelization, obstructions (improperly placed culvert, bridges), canopy cover, etc. can influence water quality results**
- **Focus on pollutant loading**



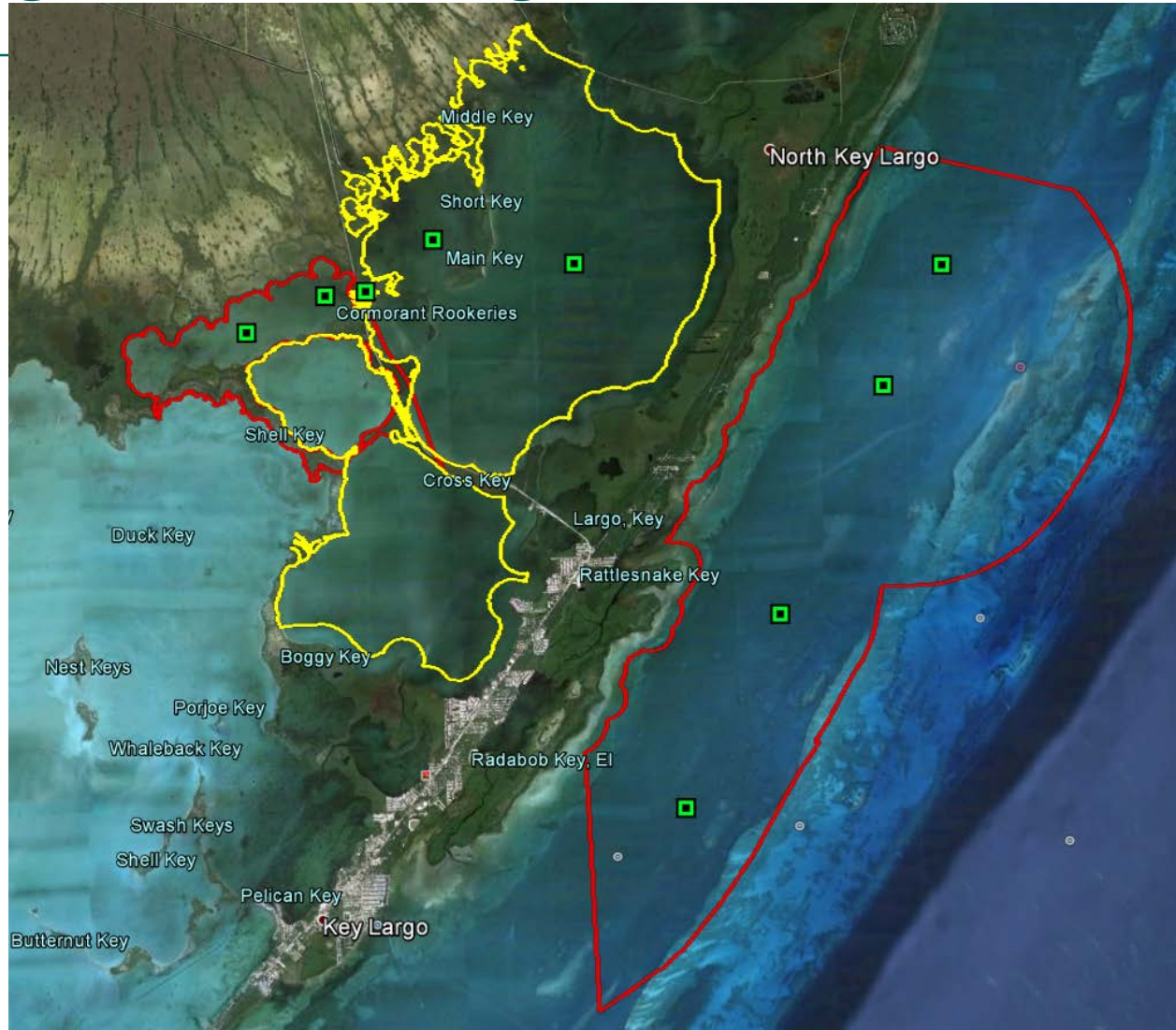


# 2015 Strategic Monitoring Plans: Florida Keys





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# Contacts

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## **FDEP Websites:**

WAS Program: <http://www.dep.state.fl.us/water/watersheds/assessment/index.htm>

Basins 411: <http://www.dep.state.fl.us/water/basin411/default.htm>

FTP site: <http://publicfiles.dep.state.fl.us/DEAR>



**March, 11, 2015/ 18**