

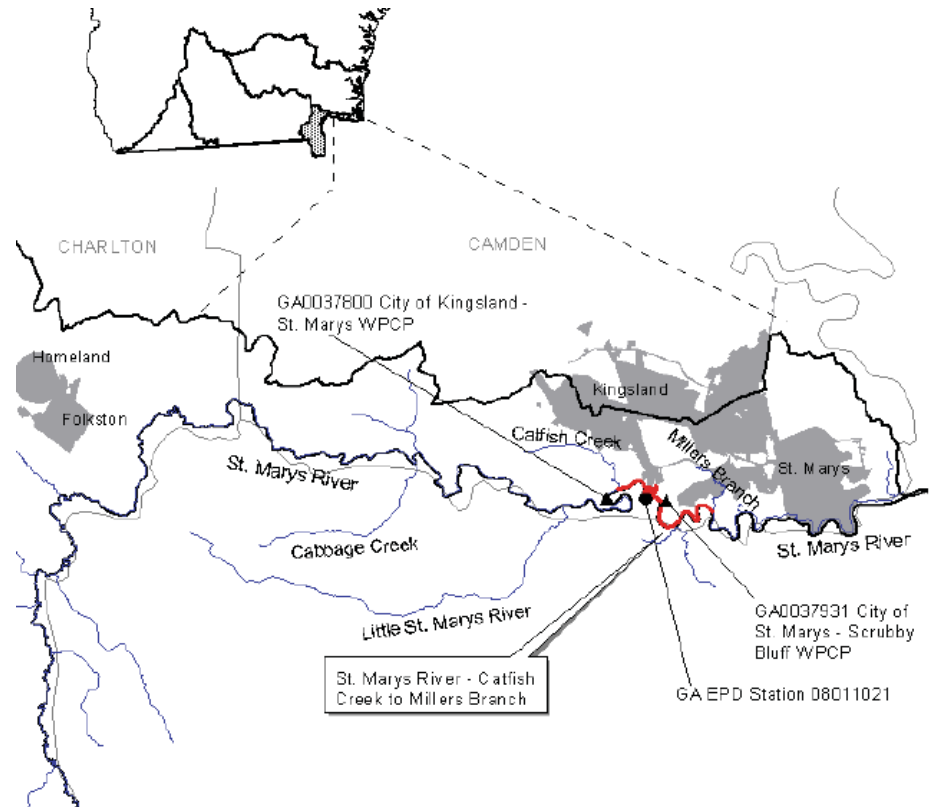
# ST. MARYS WATERSHED MANAGEMENT PLAN (CATFISH CREEK TO MILLER'S BRANCH)

St. Mary River Management Committee  
Presentation: May 5, 2014



# Background

- St. Marys River from Catfish Creek to Miller's Branch listed on the 2004 303(d) list for Non-Supporting for Dissolved Oxygen (DO)
- TMDL Issued January 2006
- GA EPD Rules Require: A daily average of 5.0 mg/L and no less than 4.0 mg/L



# Phase I Watershed Improvement Plan

- Coastal Resources Commission received 319 grant funding to develop Watershed Improvement Plans
- November 17, 2010 – Partnership Advisory Council (PAC) meets to identify stream segments for WIPs.
- February – June 2011 – PAC meet monthly to discuss St. Marys local monitoring and water quality issues
- March 28, 2011 – Visual Monitoring Survey

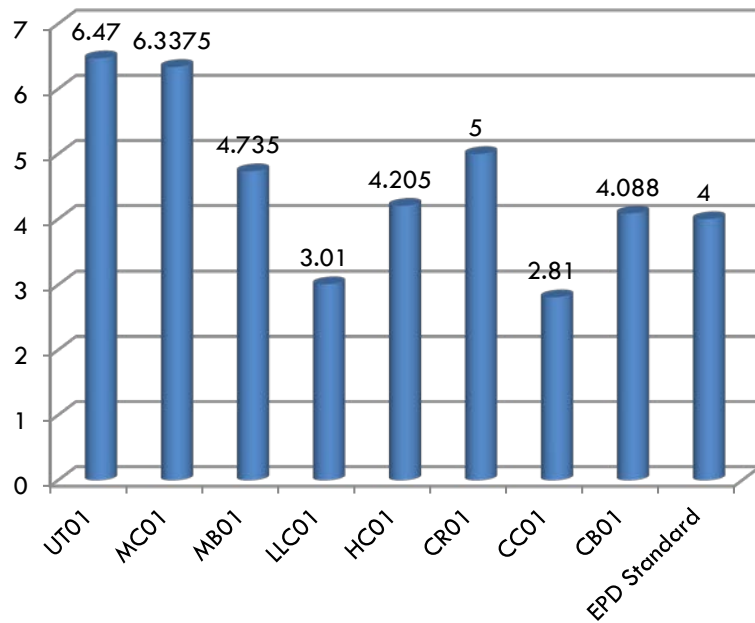
# Phase II - Watershed Management Plan

- Regroup PAC as new Watershed Advisory Committee (WAC) – March 2013
- Watershed Assessment/Existing WQ Data review
- Water Quality Monitoring
- Develop Best Management Practices (BMPs)
- Develop Long Term Monitoring Plan, Milestones, Schedule, and Outreach Plan
- Complete Watershed Management Plan

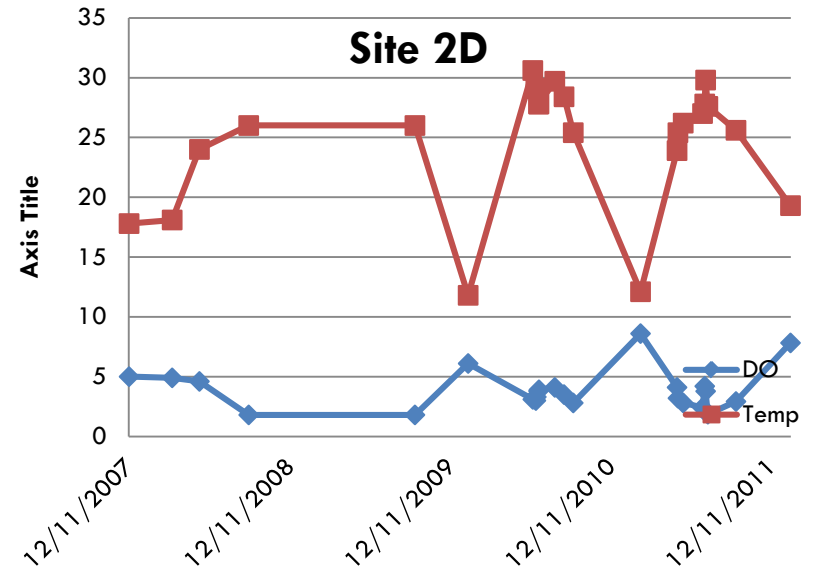
# Existing Data Review

## City of Kingsland Watershed Assessment

Average DO in March 2007



## St. Marys Watershed Assessment

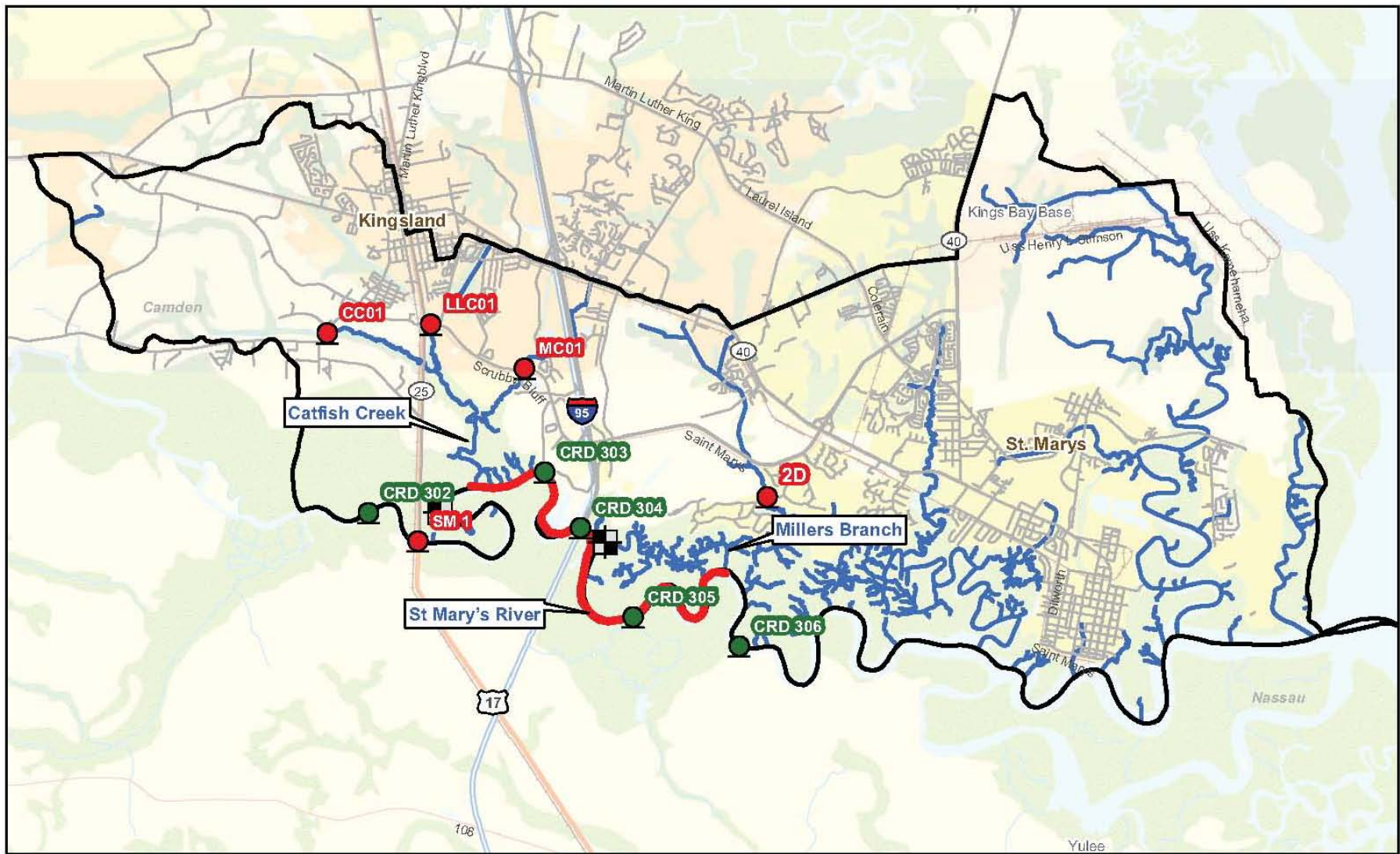





# Visual Survey





- Monitored 16 locations
- DO ranged from 5.74 – 7.40 (on two monitors)
- Potential Sources Identified:
  - ▣ Mariner's Landing Subdivision Impoundment of Miller's Creek
  - ▣ Walmart
  - ▣ Cement Plant
  - ▣ Lowes
  - ▣ Meadow's Subdivision
  - ▣ Scrubby Branch and Kingsland WPCP discharges









-  CRD Sampling Locations
-  WPP Sampling Locations
-  WPCP

## Watershed Management Plan

### *St. Marys River from Catfish Creek to Millers Branch*

**Legend**

-  Roads
-  Impaired Segment
-  Streams & Waterways
-  Huc12 Watershed



# Monitoring Summary

- EPG monitoring
  - ▣ 8 events, May and September 2013
  - ▣ 5 sites – Millers Branch and Catfish Creek
  - ▣ Catfish Creek at Clarks Bluff Road had low DO
- CRD monitoring
  - ▣ 15 sampling events 2010- 2012
  - ▣ 5 sites - St. Marys River. EPD site 08011021
  - ▣ All sampling events had DO > 4.0 Mg/L except those taken during Aug/Sep 2012



# Water Quality Assessment



- Inverse relationship between DO and Temp
- Non-point sources of Biological Oxygen Demand (BOD)
- Other potential causes of low DO
  - ▣ Mechanical disturbance of sediment
  - ▣ Physical mixing of river water with runoff or ground water with low DO
  - ▣ Decrease in photosynthesis during cloudy weather or at night

# Sources of BOD

- Organic matter
  - ▣ Fringing tidal marshes & wetlands
  - ▣ Silviculture
  - ▣ Discharge from septic tanks
- Drainage of hydrocarbons from large areas of pavement.
- Excess plant production due to fertilizers on lawns, gardens, and golf courses.



# Recommended BMPs

## Local Governments

- Erosion & Sedimentation Program
- Adopt Coastal Stormwater Supplement
- Observe Protected River Corridor
- Regulate septic systems
- Implement Watershed Protection Plans including monitoring

## State, Federal & Regional Agencies

- Revise DO standards for black water streams
- Forestry BMP assessment & compliance
- Prioritize funding for identified projects
- Continue monitoring of the St. Marys River

# Other Programs addressing DO

- UGA Septic System Demonstration Project
- UGA MAREX, SGRC, and Coastal Health District Septic System GIS Inventory & Inspection Project
- Green Growth Guidelines
- New Septic System Inspection & Maintenance Policy





# Future Monitoring Program

- DO, Temp, Salinity, BOD
- St. Marys & Kingsland WPP Monitoring
- CRD Monitoring of St. Marys River
- Recommend funding additional monitoring as recommended in Data Gaps



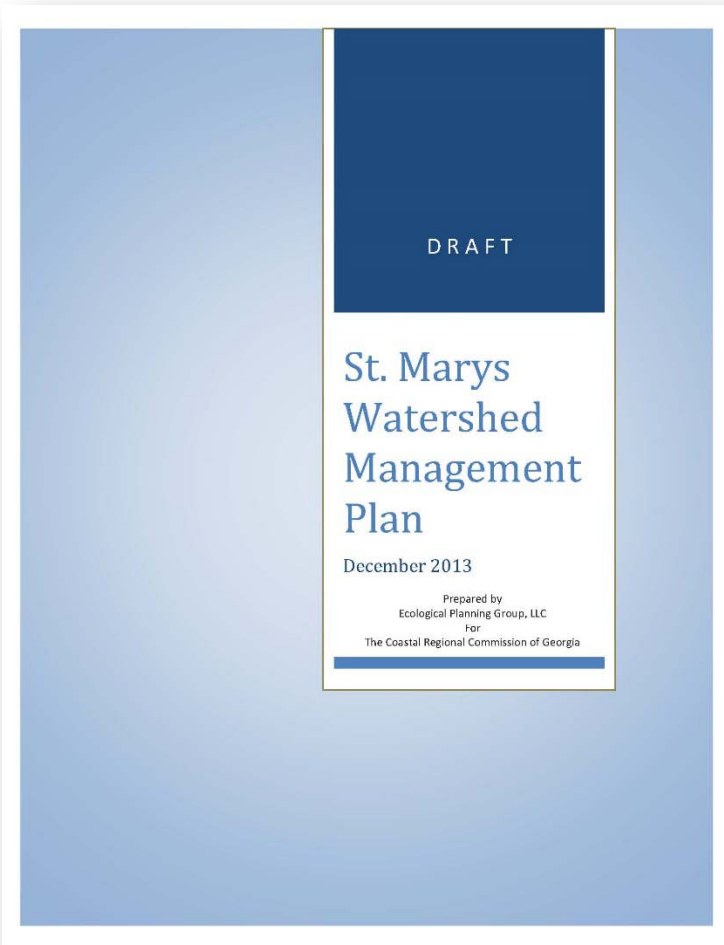
# Public Education

- Presentations of WMP recommendations
  - ▣ St. Marys, Kingsland, St Marys River Management Committee
- Existing Public Education efforts
  - ▣ St. Marys River Management Committee
    - Website
    - Outreach materials
  - ▣ Camden County Health Department
    - Septic Tank Maintenance DVD
    - Door Hangers



# Public Presentations

- Public Presentations – February - March 2014
- Next WAC meeting – March 25, 2014
- Submit Final WMP/319 Grant Project Complete – March 31, 2014
- Implement WMP - Ongoing
  - ▣ Review implementation every five years



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