

# **Research Review & Advisory Committee Meeting**

**October 6, 2015**

Elke Ursin

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Onsite Sewage Programs

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Division of Disease Control and Health Protection  
Florida Department of Health

To protect, promote and improve the health of all people in Florida through integrated state, county, and community efforts.



# Agenda

1:30 – 1:35 Introductions and Housekeeping

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1:35 – 1:40 Old Business

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1:40 – 1:45 Review of minutes:

- July 28, 2015 meeting
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1:45 – 4:05 Discussion on Nitrogen Reduction Strategies Study:

- Current Status
  - Discussion on Task B Final Report
  - Discussion on Implementation Plan
  - Report Structure
  - Timeline
  - Next Steps
- 

4:05 – 4:10 Updates on Other Projects

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4:10 – 4:20 New Business

- Discussion on election of chair for next meeting
- 

4:20 – 4:25 Public Comment

# Introductions & Housekeeping

- Committee roll call
- Identification of audience
- How to view web conference
- Mute / unmute phone line = \*6
- Do not put phone on hold
- Download meeting material:

<http://www.floridahealth.gov/environmental-health/onsite-sewage/research/rrac.html>

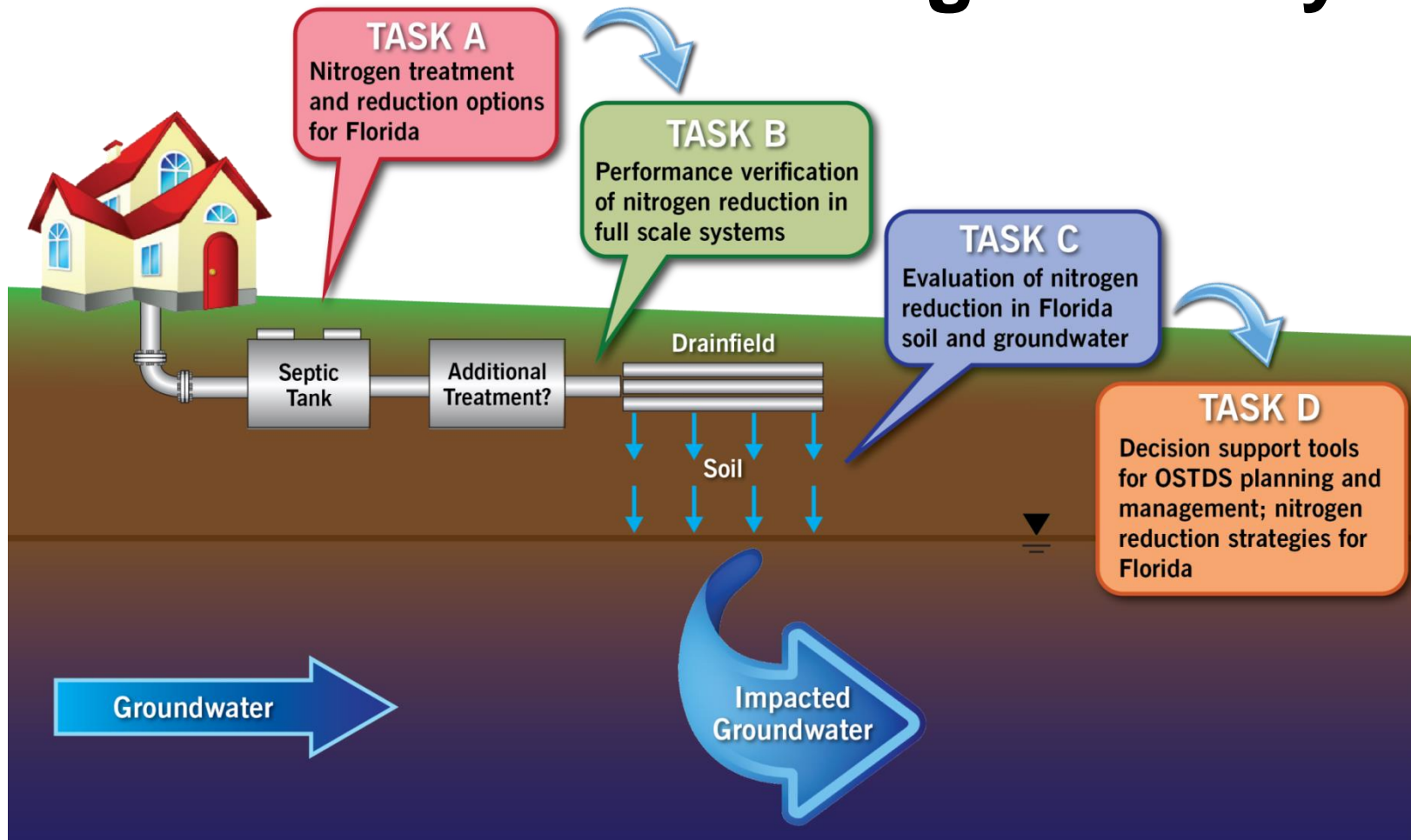
# Old Business

Update on RRAC composition

# Review of Meeting Minutes

- July 28, 2015

# Florida Onsite Sewage Nitrogen Reduction Strategies Study



# **Florida Onsite Sewage Nitrogen Reduction Strategies Study**

- Discussion on Task B Final Report
- Discussion on Implementation Plan
- Report Structure
- Timeline
- Next Steps

# Nitrogen Study – Current Status

- Legislature appropriated \$10,000 to conclude the study
- Final report from the Department due 12/31/2015 containing:
  1. Analysis of field monitoring of performance and cost of technologies at various sites
  2. Analysis of soil and groundwater sampling at various sites to determine how nitrogen moves
  3. Analysis of various models to show how nitrogen is affected by treatment in Florida-specific soils
  4. Final reporting on all tasks with recommendations for science-based nitrogen reduction options for OSTDS



# Nitrogen Study – Financial Status

- All invoices have been submitted and routed for payment
- Total contract spending: **\$4,729,865**

# **Florida Onsite Sewage Nitrogen Reduction Strategies Study**

## **Discussion on Nitrogen Reduction Strategies Study:**

- **Discussion on Task B Final Report**  
(switch to response to comment document)

# **Florida Onsite Sewage Nitrogen Reduction Strategies Study Implementation Plan:**

**Goal: Make tools available to reduce  
nitrogen contributions from septic  
systems**

# Nitrogen Reduction Options for Septic Systems

## History

Nitrogen levels in springs are increasing, harming our environment and economy. Septic systems are one of several sources of nitrogen. We have conducted research looking at how much nitrogen comes from septic systems and ways to reduce that contribution. The results of our research provides options that can be used at the local level to address nitrogen from septic systems.



### #1 Collaborate locally



### #2 Decide locally



## #1 Collaborate locally



## #2 Decide locally



## #3 Act locally



**PLAN**



**TEACH**



**BUILD**



# PLAN



# TEACH



# BUILD



Inventory  
locations



Estimate  
loading



Determine  
costs



Public  
meetings



Education  
campaigns



Train  
installers &  
inspectors



Conventional  
systems



Lined  
drainfield



Nitrogen  
reduction  
systems

October 5, 2015

# DEP BMAP Activities

Three prong:

1. Projects
2. Research
3. Education

Advisory committee specific to OSTDS in each BMAP



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1

Baseline conventional OSTDS enhanced  
with nitrogen reduction

Requires rule change

Estimated timeframe: 12/31/2015



# 2

Incorporate nitrogen study systems as approved performance-based systems

Requires development of system specifications

Estimated timeframe: Immediate

# 3

New nitrogen reducing systems section in Chapter 64 E-6

Requires rule and possibly statute changes

Estimated timeframe: 9/1/2016

# 4

Public education and training on nitrogen reduction strategies

Requires training development and message standardization

Estimated timeframe: Immediate

# 5

Planning-level tools to assess nitrogen reducing strategies (inventory, model)

Requires coordination with local stakeholders

Estimated timeframe: Immediate



# 6

Determine funding solutions for nitrogen reduction efforts

Requires coordination DEP

Estimated timeframe: 7/1/2016

# Final Report Outline:

Executive Summary .....	3
Introduction .....	3
Goals of the Project .....	3
Legislative Direction .....	3
Legislative History and Budget .....	4
Field monitoring of performance and cost of technologies .....	4
Review of existing studies .....	4
Treatment train approach .....	4
Nitrogen leaving a septic tank .....	4
Stage 1: Nitrification .....	4
Stage 2: Denitrification in reactive media .....	4
Life cycle cost analysis summary .....	4
Discussion cost issues (cost per bedroom, cost per installed capacity, cost per pound removed TN) ..	4
Discussion prescriptive and variant design issues .....	4
Discussion operation and maintenance issues .....	4

# Final Report Outline:

Analysis of soil and groundwater sampling at various sites to determine how nitrogen moves .....	5
Monitoring approach .....	5
Task C sites .....	5
Task B 7 site .....	5
Task A/C mini-mounds.....	5
Discussion.....	5
Analysis of various models to show how nitrogen is affected by treatment in Florida-specific soils .....	5
Modeling approach for soils .....	5
Lookup-table based on two-dimensional model .....	5
Results of one-dimensional model .....	5
Comparison to estimates by Otis (2007) .....	5
Comparison to sampling data.....	5
Modeling approach for groundwater .....	5
STUMOD-FL-HPS .....	5
Arc-NLET.....	5
Comparison to sampling data.....	5

# Final Report Outline:

Recommendations for science-based nitrogen reduction options for onsite sewage treatment and disposal systems .....	5
Input and loading assumptions .....	5
Aspirational designs, proven designs, and designs in between.....	5
Preliminary design guidance for.....	5
Stacked underground drainfield modifications, .....	5
Recirculating media filters .....	5
Reactive media filters .....	5
Reclassification of existing performance-based treatment systems .....	5
Nitrogen reducing aerobic treatment units .....	5
Permitting and product approval issues .....	5
Operation and maintenance.....	5
Funding mechanisms .....	6
Implementation of strategies .....	6
Process overview: .....	6
Product approval.....	6
Rule proposals .....	6
Planning level tools .....	6
Education and outreach .....	6
Funding .....	6

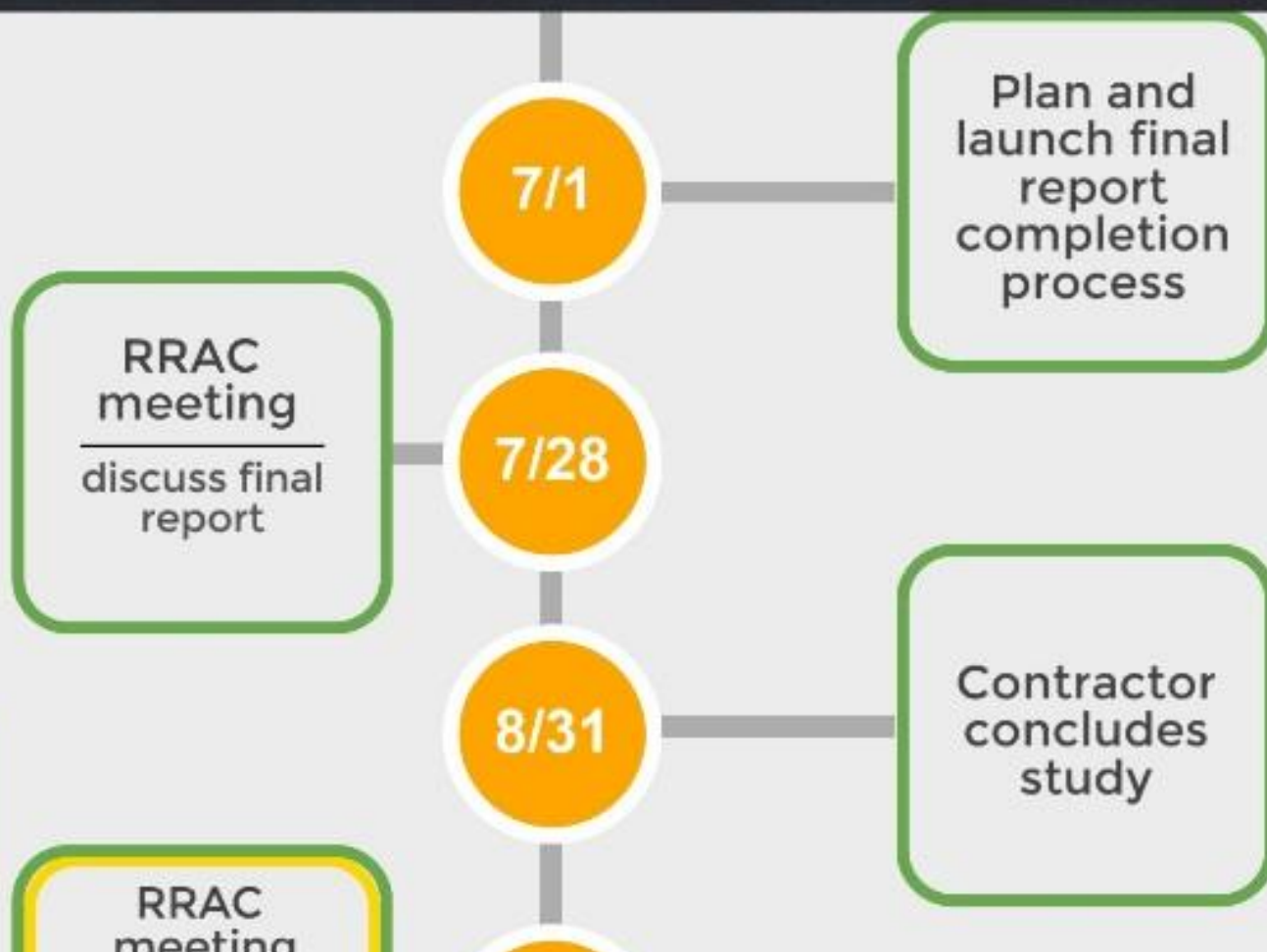




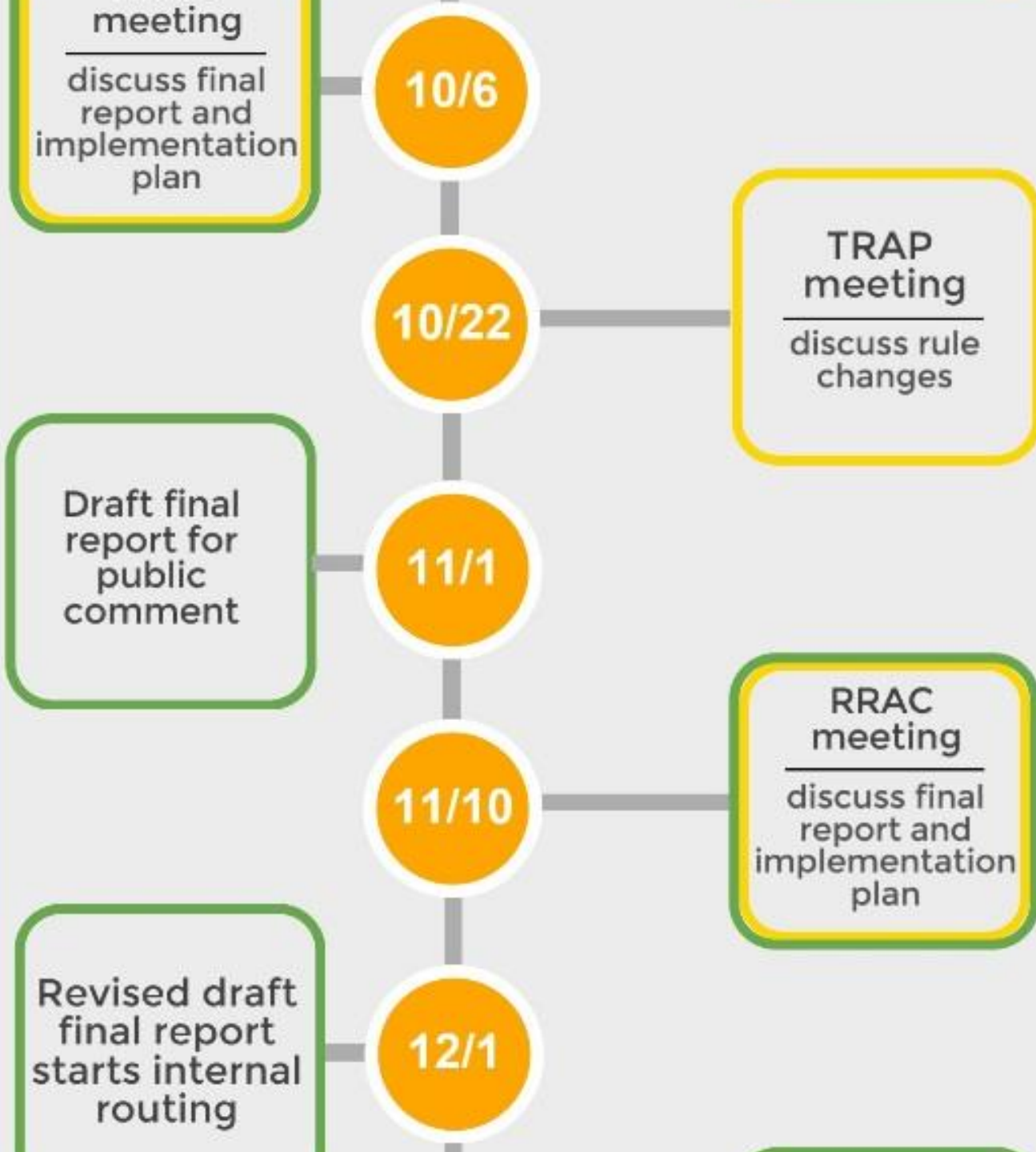
# NITROGEN STUDY FINAL REPORT & IMPLEMENTATION TIMELINE

October 5, 2015

FINAL REPORT



IMPLEMENTATION



routing

12/31

Final report  
due to  
Governor/  
Legislature

1/12

2016  
Legislative  
session starts

3/11

2016  
Legislative  
session ends

...

Implementation  
continues...

LEGISLATIVE SESSION

# **Florida Onsite Sewage Nitrogen Reduction Strategies Study**

## **Next steps:**

1. TRAP meeting end October
2. Draft report for review begin November

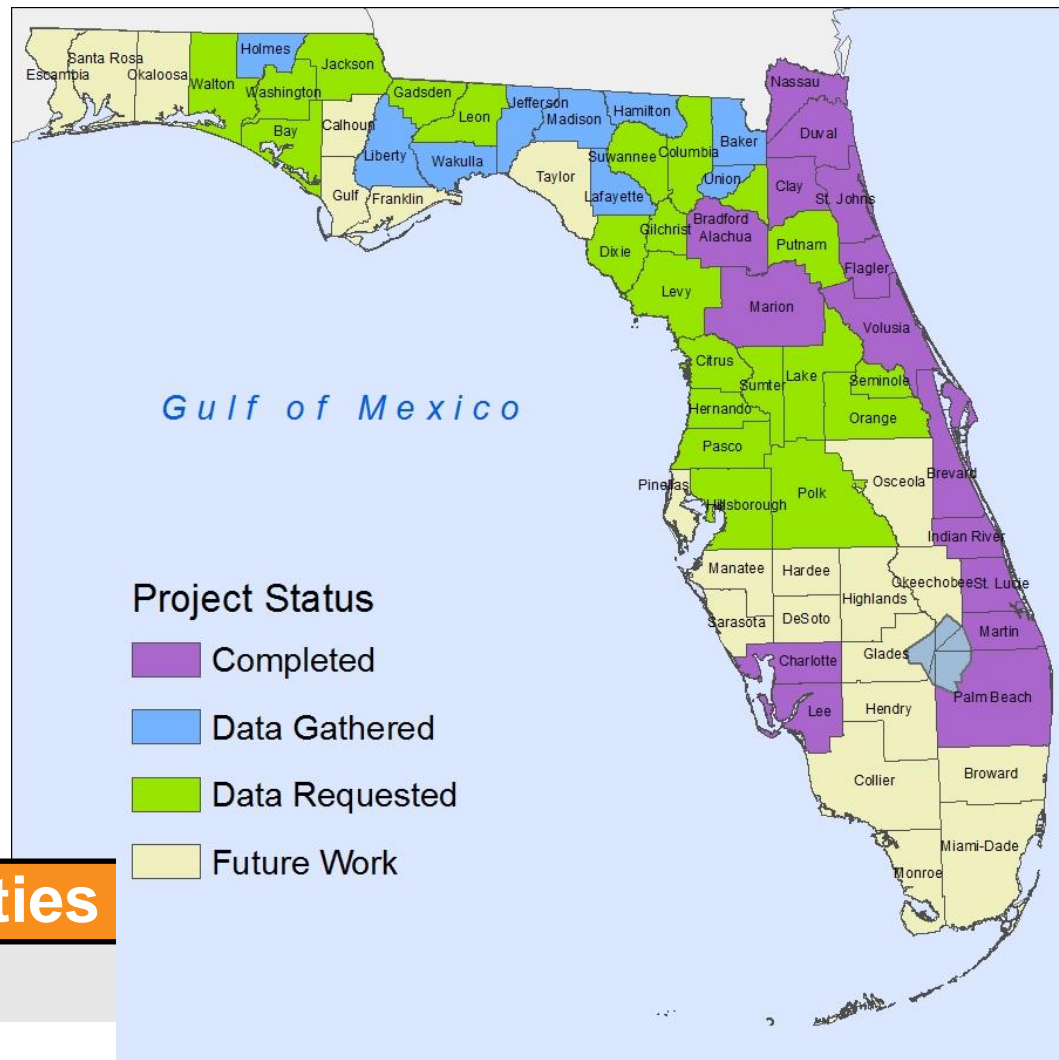
**Public comment on nitrogen study**

# Updates on Other Projects

# Florida Water Management Inventory

Grant Funding:  
\$390,800

Match commitment:  
\$260,100



Status	# Counties
Completed	13
Data Gathered	11
Data Requested	22
Future Work	21

Need confirmation from RRAC that this funding plan is acceptable

[floridahealth.gov/FLWM](http://floridahealth.gov/FLWM)





# Other Business

# Public Comment



# New Business

Need election at next meeting for chair and vice-chair for committee.

Send nominations to Elke Ursin  
([elke.ursin@flhealth.gov](mailto:elke.ursin@flhealth.gov)).

# Next Meeting Discussion

Meeting in November 2015 to go over draft Final Report and elect chair and vice chair.

Looking into having this meeting in the Orlando area.

# Closing Comments and Adjournment

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