

Lower St Johns Technical Advisory Committee (TAC)
Meeting Summary
Host: St Johns River Water Management District
St Johns County Agricultural Center
St Augustine, FL
May 17, 2005

Attendees

Pam Livingston-Way, SJRWMD
Cliff Gandy, SJRWMD
Jennifer Auger, FDEP
Alicia Steinmetz, SJRWMD
Joseph Stewart, SJRWMD
David Bolam, Clay County Utility Authority
Cheryl Abbott, SJRWMD/WAV
Felicia Boyd, SJRWMD/WAV
Eric Livingston, FDEP
Dana Morton, COJ
Russ Brodie, FWC
Larry Danek, ECT
Alex Ainza, CCUA
John Hendrickson, SJRWMD
Lori McCloud, SJRWMD
Peter Sucsy, SJRWMD
Tiffany Busby, Independent Consultant
Alan Obaigbena, FDOT
Gretchen Ehlinger, FWC
Kelly Smith, UNF
Bob Gamble, City of GCS
Rick Carper, City of Atlantic Beach
Steve Swann, ATM
Robert Yarborough, Seminole Electric
Dean Campbell, SJRWMD
Greg Kemelek, City of Jacksonville
Jean Tinsman, City of Jacksonville
Jayng Parker, City of Jacksonville
James Peters, City of Jacksonville
Tom Kallemeyn, FDEP
Betsy Deuerling, COJ/EQD
Amy Kalmbacher, DEP/CAMA
Pamela Chancy, DEP/CAMA
Cindy Cospers, DEP Watershed Monitoring
Jeremy RiCharde, FDEP-NED
Kraig McLane, SJRWMD
Dean Dobberfuhr, SJRWMD
Scott Turner, DCHD

Welcome and Introductions

The meeting began at 10:08 am. John Hendrickson, Co-Chair, welcomed everyone to the St Johns County Agricultural Center. Everyone introduced themselves.

Meeting summary from February 3, 2005

John Hendrickson asked for comments or corrections on the meeting summary for February 3, 2005. There were none.

Presentation: “Update on TMDL Legislation”

John Hendrickson introduced Eric Livingston, Director of the Bureau of Watershed Management for the Florida Department of Environmental Protection.

Eric Livingston gave an update on the recent passage of TMDL legislation. Mr. Livingston noted that the intent of the TMDL process is that no point source or nonpoint source is at an advantage or a disadvantage. The TMDL report to the Legislature is available on the web.

Some of the issues that prompted the legislation included the following:

1. Listing Issues: The State needs to revise water quality criteria for dissolved oxygen and nutrients.
2. TMDL Development Issues: The time restrictions legally imposed on the TMDL process meant that TMDLs will be proposed either by the State or by EPA whether they are “ready” or not.
3. TMDL Implementation Issues: The BMAP concept was not included in the Florida Watershed Restoration Act (FWRA) passed in 1999. There is time needed between adoption of the TMDL and the development of the BMAP. There were enforcement issues with the BMAP.
4. TMDL Resources: Resources are needed, especially for implementation.

The new legislation (FWRA Amendments of 2005) contains the following important components:

1. It clarifies that TMDLs are to reduce pollutant loads to achieve water quality standards, not full restoration of the water body.
2. The initial allocation can be to two general categories of point sources and nonpoint sources when the TMDL is adopted.
3. Detailed allocations to individual point sources and nonpoint source categories can be defined in the BMAP.
4. The state can consider allocation factors in both.

Adoption of TMDL Rules:

- TMDL rules are adopted by the Secretary.
- Phased TMDLs are authorized whether FDEP determines more data are needed (e.g. coliforms).

- DEP must explain in a “detailed statement of facts and circumstances” why the data are inadequate and justify a TMDL.

Basin Management Action Plans (BMAPs)

- FDEP may develop Basin Management Action Plans (BMAPs)—but they are not required.
- Adopted BMPs may serve as initial management strategies for nonpoint sources.
- Discharges that have already implemented reduction measures may receive credit for those reductions.
- The BMAP will identify how future sources of increased loading will be addressed.
- BMAPs will be developed in collaboration with stakeholders.
- BMAPs must include milestones for implementation and water quality improvement.
- Progress must be assessed every five years.
- BMAPs can be revised as needed and with the stakeholders.
- BMAPs and revisions to BMAPs are adopted by the Secretary.

TMDL Implementation

- BMAP strategies and reductions, including effluent limits, shall be put into NPDES permits in a timely manner.
- For MS4 permittees, TMDL implementation will be achieved via BMPs to MEP.
- BMAP implementation schedule may be greater than 5 years.
- BMAP requirements put into NPDES permits may not be challenged.
- Nonpoint Source dischargers in a BMAP shall implement BMPS or perform water quality monitoring.
- FDEP and the Water Management Districts may enforce against a nonpoint source dischargers in a BMAP if BMPs are not implemented. (Florida is the first state in the U.S. to have this authority.)
- “Safe Harbor” means that the agencies cannot require more than BMP implementation.

Growth Management Bill

A new trust fund was established with \$100 Million annually for 403.890 purposes. There is 60 percent set aside for alternative water supply development. Twenty percent goes to TMDL BMP implementation and research with fifteen percent of that funding going to the Florida Department of Agriculture and Consumer Affairs and 85 percent going to FDEP for nonagricultural nonpoint source implementation. SWIM also receives ten percent of the overall funding and ten percent goes to disadvantaged small community grants.

This fiscal year (which starts July 1, 2005) has the following funds that must be encumbered by July 1, 2007:

- \$100 million for alternative water supply;
- \$25 million for SWIM;

- \$25 million for small disadvantaged community grants.

“In the bank” are the following funds available to fund restoration projects:

- \$9.2 million for FY05 Florida Forever (50:50 match [in-kind match is OK])
- \$17.5 million for FY 06 WPSP trust fund
- \$8 million for FY 06 §319 grants (60:40 match)

These funds are for stormwater treatment projects to reduce loads to waters with a TMDL or for stormwater BMP research.

Look on the FDEP website for instructions on applying for funds. The websites are:

<http://www.dep.state.fl.us/water/watersheds/forever.htm>

<http://www.dep.state.fl.us/water/nonpoint/319h.htm>

Mr. Livingston then gave a power point presentation called “The Evolving Art of Stormwater Best Management Practices (BMPs)”

The following points were noted:

- A review of the stormwater problem and its history.
- BMPs can be structural or nonstructural.
 - With nonstructural BMPs, education is very important.
- Structural BMPs include:
 - Swales
 - Detention Systems
 - Pervious Pavement
 - Wet Detention
 - Wetlands
- Less Effective BMPs include:
 - Dry Detention Systems
 - Filer Systems
- BMPs don’t have to be big muddy ponds
- Infiltration Practices: Practices where stormwater is infiltrated rather than discharged
 - Swales
 - Underground exfiltration
 - Pervious concrete—there are some challenges to pervious concrete installation. It is very different than regular concrete. There is a good instruction guidebook available on installation.
 - Bioretention with landscaping and vegetation.
- Detention Practices (where filtration is not possible)
 - Much less pollution reduction is achieved from this type of system, especially dry detention.
 - Wet detention is much more effective.
 - Thirty percent should be a planted littoral zone with aquatic or littoral macrophytes. Otherwise, more algae can be created. Treatment with copper compounds can create copper pollution issues.
- Possible Retrofitting Actions

- More inspections
- Inspector training
- Local OM permits
- Ideas:
 - Charging a fee to pay for inspectors
 - Provide a credit on stormwater bills for maintenance
- Problems
 - Cattail monocultures
 - Algae
- Regional Systems Work
- Swales are Effective
- Proprietary Stormwater BMPs
 - Be cautious
 - Most effective at trash control
 - May not be effective at nutrient control—FDEP has a research project underway to test nutrient control.
- Baffle Boxes
 - Screens can be added to capture organic debris and the nutrients leach out, but only if the debris is kept dry or nutrient reduction do not occur.
- Chemical Treatment Regional Systems
 - Alum injection (40% reduction of nutrients)
 - Alum treatment trains—using a wetland after alum treatment can achieve 90 percent removal of every pollutant except nitrogen.
 - Can be cost-effective.
- Advanced Stormwater Treatment
 - Ultraviolet light
 - Ozone treatment
- Stormwater Reuse
 - Selling the water is possible.
 - Set up a stormwater utility—there are currently five in the State.
- Research
 - UCF Stormwater Academy (and a website)
 - FDEP-funded Stormwater Projects
 - Florida Urban BMP database
 - Green Roofs
- Innovative Solutions
 - Relationship of imperviousness to biological health
 - In highly urbanized areas, expect only a five percent improvement. But with forested cover and riparian areas (100-foot buffer) and maintaining wetlands, large improvements are possible.
- Unified Stormwater Rule Needs
 - Post is less than pre development
 - Increase use of stormwater controls
 - Landscaping ordinances/Florida Yards & Neighborhoods

Following Mr. Livingston's presentation there was a question and answer session with the participants. Mr. Hendrickson thanked Mr. Livingston for his presentation and information about funding sources.

Presentation: "Hydrodynamic Circulation Patterns in Lake George"

John Hendrickson introduced Joe Stewart with the St Johns River Water Management District. Mr. Stewart gave a presentation entitled "Hydrodynamic Circulation Patterns in Lake George."

The following points were noted in Mr. Stewart's presentation:

- The average depth in Lake George is 3 meters (0-16 meter range);
- Lake George has lots of spring flows—they are performing an analysis of the spring discharge but there are limited data available.
- Turnover/Mixing Analysis
 - The average turnover rate is 84 days.
 - When it is dry, springs are a very important water source that increases the photic zone and increases algal production
 - They are applying the hydrodynamic model to analyze salinity patterns
 - They have a good fit with the model and observed data from Buffalo Bluff.
 - More data on the Ocklawaha Delta storage may improve the results more.
 - Results indicate partial mixing-
 - Residence time varies in the lake, depending upon the location.
 - There are similar circulation patterns regardless of flow conditions.
- Future Work on Lake George
 - Drift particle analysis
 - Refine salinity understanding
 - Develop a water quality model

Following Mr. Stewart's presentation, a question and answer session followed. There was discussion about looking further into spring flows. It is unknown how long the water quality model development will take. There is a good water quality database available. Wind transport can be a big issue. Mr. Hendrickson thanked Mr. Stewart for his presentation.

Special Legislative Funding for the Lower Basin: Discussion of Goals, Priorities, and the Lower Basin Initiative for Fiscal Year 2007

Kraig McLane, Lower Basin Program Manager with the St Johns River Water Management District outlined the TAC's existing goals and technical priorities. Mr. McLane explained that in preparation for prioritization of the projects submitted for Special Legislative Funding, the TAC should consider whether their goals and priorities need to be updated. There were no suggestions on revising the goals or priorities. Tiffany Busby, TAC Facilitator, explained that these goals and priorities would be used at the August meeting as part of the basis for ranking projects. Ms. Busby also notified the Committee that a form would be e-mailed to the TAC list if anyone wanted to nominate a new project for funding consideration. Forms will be due in late July and projects will be presented at the August TAC meeting.

Technical Updates and Announcements

Update on the FY06 Legislative Request—Kraig McLane, SJRWMD, reported on the funding received from the Legislature. The Lower Basin funding for fiscal year 2006 totaled \$3 million. The top three projects off last year's priority list were funded as well as approximately \$760,000 of research monitoring and assessment projects. The three capital projects include: 1) Jacksonville Master Stormwater Management Plan Implementation; 2) Septic Tank Enforcement (Duval County Public Health Unit funded through FDEP); and 3) Clay County Reuse Retrofit (funding through FDEP).

TMDL Value Assessment--Mr. McLane also noted that the Water Management District was contemplating conducting an assessment of all the domestic wastewater point sources in the Lower Basin and assessing the costs to upgrade to advanced wastewater treatment or reuse. Mr. McLane asked the TAC for feedback in undertaking such a project. The comments were as follows:

- It's a good way to get over the hump of allocation.
- It would allow putting the public funding toward specific projects to reduce the quantity of reductions needed by everyone else.
- It would help us do better than we have to do to meet the TMDL.
- Do we have to meet the TMDL before we get better?
- If we focus on bang for the buck, it would help everyone.
- Would these types of improvements change the allocations?
- The District is looking at the study as a way to prioritize the actions and to free up more allocation.
- If public money is used to decrease loads, any pollution credit should be public property.

St Johns River Alliance Update—Tiffany Busby gave the Alliance update on behalf of Executive Director mindy matthews. Ms. Busby reported that Ms. Matthews was attending the national River Rally conference. She reported that the Heritage Trails Committee continued to be active and was meeting regularly. Anyone interested in participating on that committee should contact Ms. Matthews or ask Kraig McLane for more information. The St Johns River video funded by the partners in the Alliance is complete and will be shown shortly. Ms. Matthews is working with the Public Broadcasting Service (PBS) to try to arrange an airing of the video. The Alliance has also asked each TAC in the St Johns Basin to select a project for special Alliance support. More information about the selection process and the type of support available for such projects will be provided at the next TAC meeting. The Middle Basin has selected its project for the upcoming year.

Russ Brodie, Florida Fish and Wildlife Conservation Commission, reported that the annual fish report is expected to be complete next month. The results are a possibility for a future TAC presentation. Mr. Brodie also reported that he and John Hendrickson, SJRWMD, had received a State wildlife grant to perform fisheries sampling for low dissolved oxygen conditions. They applied for \$160K for 3 years. The first sampling

event occurs in July. They are also expanding their fisheries monthly monitoring sites further north up the river to Palatka.

Dana Morton and Betsy Deuerling, City of Jacksonville-Environmental Quality Division, reported that they are enhancing their erosion control program. There is now an increased inspection program of construction sites and the program has expanded from two people to 14 people with 8 inspectors.

Scott Turner, Duval County Department of Health, noted that with JEA money they are conducting a supplemental environmental project. As a follow up to the effort to prepare a reasonable assurance plan for fecal coliform bacteria issues in the tributaries, a tributary pollution assessment project has begun and a kick-off meeting will be held in July. The company PBS&J has been contracted to support the projects. A committee called the tributary assessment team will meet monthly; the core team includes the reasonable assurance plan partners.

David Bolam, Clay County Utility Authority, reported that their service area population is exploding. The demand for reclaimed water exceeds their supply and there is a need for water sources. They have started their fourth reclaimed water system.

Rick Carper, City of Atlantic Beach, asked if anyone has information on the water quality status of the Intracoastal Waterway (ICW) or has any water quality data in the ICW. Kraig McLane offered to check with the Northern Coastal Basin Program Manger Paul Haydt.

Dean Campbell, St Johns River Water Management District, noted that some programs that had been cut may be added back with additional legislative dollars. They have an aggressive monitoring and assessment program scheduled including: TMDL support; using models; Tri County Ag area and fertilizer work; Work with the Institute for Food and Agricultural Sciences (IFAS); and completing their regional stormwater treatment systems. They had scaled back some toxic contaminant studies and they may be able to expand those studies with additional funding.

Cindy Cospers, FDEP Water Quality Monitoring Group, reported that they are sampling the Lower Basin and Middle Basin this year (not in the salt or marine waters). They are monitoring lakes and sediment quality as well as conducting the biological stream index.

Jeremy RiCharde, FDEP-Northeast District, noted that Jim Seibold would be starting soon as the new Water Resources Program Administrator. He also commented that EPA was wavering in their support of the adopted Lower Basin TMDL but after further review of the technical basis for the TMDL, they were supporting it.

Next Meeting/Adjournment

Tiffany Busby noted that the next meeting would be held in late August or early September which would meet the prioritization schedule for the special legislative appropriations. Dana Morton at the City of Jacksonville will be the host for this meeting

and once a meeting date and site are confirmed, a notice will be sent out via e-mail. John Hendrickson thanked everyone for attending. The meeting adjourned at approximately 2:11 pm.

Meeting summary prepared by Tiffany Busby. Please send comments to busbytl@bellsouth.net or call 904-797-2721.