

Lower St. Johns Technical Advisory Committee (TAC)
Meeting Summary
Host: University of North Florida
UNF University Center
27 June 2007

Attendees

Tiffany Busby, Wildwood Consulting
Khalid Al-Nahdy, FDEP
Melissa Long, FDEP
Vince Seibold, COJ
Alan Obaigbena, FDOT
Greg Strong, FDEP
Ray Bowman, UNF
Dana Morton, COJ
Lucy Sonnenberg, MWL-JU
Rebecca Huke, MWL-JU
David Roveche, MWL-JU
Rick Carper, City of Atlantic Beach
Justin Levine, COJ
Pat Welsh, UNF
Cindy Coper, FDEP
Jeff Martin, FDEP
Ed Cordova, JEA
Felicia Boyd, FMB & WAV
Dean Campbell, SJRWMD
J. David Lambert, UNF
Dean Dobberfuhl, SJRWMD
John Hendrickson, SJRWMD
John Higman, SJRWMD
Pamela Livingston, SJRWMD
Bob Fegan, COJ
Patrick Victor, CDM
Betsy Deurling, COJ
Mike Hollingsworth, USACE
Nam Huynh, COJ
Kraig McLane, SJRWMD
Lavell Greene, COJ
Rosa Morales, COJ
Mohammed Yusaf, PBS&J
Mike Thomas, PBS&J
Ying Ouyang, SJRWMD

Welcome and Introductions

The meeting began at 10:06 am.

Dana Morton welcomed everyone. He thanked Ray Bowman providing for the TAC such a nice facility. **Tiffany Busby** explained housekeeping items, including the sign in sheet. Participants introduced themselves.

Changes to the agenda were announced: Mark Middlebrook will not be present. Lucy Sonnenberg will present first as Bill Joyce was delayed.

Tiffany Busby asked if there were any comments from the previous meeting summary for 15 March 2007. Any comments should be emailed to Tiffany Busby.

“Legacy Chlorophenols in the Lower St. Johns River Basin”: presentation by Lucy Sonnenberg. Dr. Sonnenberg is a professor at Jacksonville University and director of the Millar Wilson Laboratory (MWL) at Jacksonville University (JU). MWL works with the City of Jacksonville (COJ) and is funded by the EPB. **Dr. Sonnenberg** gave a presentation on a study of the presence and amount of chlorophenols in the St. Johns River. A summary of the presentation follows:

Background- Chlorophenols (CPs) are a class of chlorinated organic compounds. They are widespread, and can be either persistent or bioaccumulative depending on conditions. They are used as chemical ingredients and pesticides, and are occasionally by-products of bleaches for pulp production and medical waste incineration. Screening was conducted in the LSJR basin in the 1990s by SJRWMD to determine if CPs are a potential problem in the basin. Results indicated that CPs were in high concentration, especially 2-CP.

Objectives- To verify the presence of CPs using GC/MS, to compare concentrations and identities, and to evaluate environmental significance. Another key objective is to evaluate important sources.

Methods- Find the worst case hot spots; the result was 13 different sampling sites including:

- two from the 1990s study;
- former areas where chemical aquatic weed control was used
- near a former medical waste incinerator;
- Superfund sites;
- municipal wastewater discharges; and
- and two reference sites.

Thirty CP compounds were studied; these are composed of four structure classes.

In laboratory analysis, researchers matched retention times and mass spectra of sample peaks to a user-defined library.

Results- No 2-CP was found at any site. Water quality overall was good; trace levels were found at only one site.

Sites did contain CPs at parts per billion (ppb) levels in sediments; one hot spot was near the Buckman WWTP outfall. Though nothing exceeds the apparent effects threshold, the reported levels are near that amount. There did not appear to be any gross violations of the current 5 SQGs, though CPs are likely detrimental to benthic health.

Comparison to worldwide levels can assist in assessing relative toxicity of CPs in the Lower St Johns River Basin (LSJRB). Duval County is higher than most other areas historically studied, including sites outside of the United States.

Important Sources- Pulp and paper mill signature was found in most sediments, including downstream of historical mainstem sources and up some tributaries. Chlorocatechols dominate this signature. There is a long history of discharges in this area, but sources are declining, and bleaching processes are improving. Other sources in LSJR are fairly minor.

Conclusions- Short-term improvement (four- to five-year timeframe) has not been seen just yet. 2-CP is not a major pollutant; water quality in general is good relative to CPs. Sediments however, seem to contain much higher amounts than the water column. Overall, total CP load into the river is declining.

There is new information regarding comparison of total CPs in LSJRB and Rice Creek. During samples taken in 2006 and 2007, analysis revealed several values over 3000ug/kg, upstream and downstream of the Georgia-Pacific plant, over backgrounds of 100-200.

Questions- **Tiffany Busby** asked about the half-life of CPs. **Dr. Sonnenberg** explained that it is difficult to determine since CPs can break down into other chemicals. **Dana Morton** asked about the significance of the high Rice Creek amounts in the upstream side. **Dr. Sonnenberg** responded that though Rice Creek is tidal, there is likely more residence time in the upstream area. **Tiffany Busby** asked about the Buckman area and reuse water; what should we be thinking about as far as the risk of distributing CPs in reuse water? **Dr. Sonnenberg** responded that most utilities are moving away from chlorinated disinfecting, which is the primary source of CPs in that particular type of waste stream.

Dr. Sonnenberg mentioned that although paper mills, including Georgia-Pacific, have moved away from traditional bleaching methods, CPs are often indirectly created as chlorine dioxide breaks down.

Dr. Sonnenberg thanked the EPB, COJ, SJRWMD, and MWL researchers; **Tiffany Busby** thanked Dr. Sonnenberg for her presentation.

Dana Morton introduced Vince Seibold and Bill Joyce.

“City of Jacksonville Stormwater Master Plan Update”

Bill Joyce, City of Jacksonville

Mr. Joyce stated that the purpose of the presentation is to give a brief update and overview as the City of Jacksonville Stormwater Master Plan is a long-range project.

Background- Current status: FEMA information and the original COJ master stormwater plans are both outdated relative to current development. Two of the most important areas right now for updates are Cecil Field and Thomas Creek.

Water quantity- COJ is currently upgrading the old stormwater model and modernizing the FEMA maps. The goal is to marry the two together.

Data update- The update will include 2005 land use, 2007 LIDAR coverage for Duval County, roadway information, and updated soil survey info. 2007 LIDAR coverage will be available to the public on the internet sometime next year.

SWMM 5.0 is the new model update. It is EPA and FEMA approved, and is more user-friendly.

The remainder of the update was presented by Vince Seibold, Chief of the Environmental Quality Division, City of Jacksonville.

Water Quality-

-Perform nutrient load estimates to find hot spots. Event mean concentration (EMC) model uses 10 land use codes, for each Duval County LSJR sub basin. COJ will then use catchment EMCs for BMP removal calculations and account for tributary in-stream processes.

-Identify existing areas with stormwater BMPs

-Asses BMP suitability within basins

-Provide load reduction estimates

Capital Improvement Program-

-Develop, evaluate, and recommend BMPs for water quality and quantity

-Coordinate with SJRWMD

-Recommend development criteria

Outreach- includes FEMA outreach and MSMP technical coordination, including regular progress reports

Schedule- The final results are expected by October 2009. The final Final DFIRMs are expected to be adopted by September 2010.

Questions- **Cindy Cosper** asked if there is support to revegetate areas and to treat existing ponds. **Vince Seibold** replied that there are no plans to change current criteria unless there is a specific water quality issue. **Dana Morton** asked how the next city regional wastewater treatment facility location is chosen. **Vince Seibold** replied that it is

an individual evaluation process. There is no set way, just an overall look at the area using multiple appropriate criteria. **Dana Morton** asked if the next CIP will evaluate the TMDL load reduction. **Vince Seibold** replied that it will. **Ed Cordova** pointed out that the TMDL will not let us wait as long as 2010 to implement. **John Hendrickson** asked about the updated soil survey data to be used in the development of the model update. **Vince Seibold** replied that COJ will be using current soil survey data.

Pat Welsh asked what COJ is using as a risk estimate for hurricanes. **Vince Seibold** replied that the current storm surge model will address that; the stormwater model and hurricane model are two different items.

Alan Obaigbena asked about a synopsis of the SWMM model. **Vince Seibold** offered to explain it in more detail at a later time if desired. He went further to say that when basins are identified that the most loads are coming from, a separate model will be implemented for each basin. **Nam Huynh** asked if ponds permitted prior to 1984 are taken into account. Vince said that yes, depending on the type of pond and BMP developed. **Nam Huynh** asked if ponds will be sampled. **Vince Seibold** replied that a literature review and general BMPs will be applied to ponds.

Lunch Break- 11:35 – 12:10

“Highlights of the 2007 Student Trip Down the St. Johns River”: presentation by Ray Bowman, Professor, University of North Florida

The event is also referred to as a Multidisciplinary Transformational Learning Opportunity (MTLO) and was funded by the Cummer Foundation, the UNF Environmental Center and MTLO.

Students and faculty spent a week over spring break traveling north from Lake Monroe to the Outback Crab Shack in St. Johns County. The contingent traveled on two house boats, using two smaller support boats.

Sites visited included DeBary Mansion, Silver Glen Spring, and Hontoon Island. The group did some water quality sampling along the way. Ray Bowman showed the TAC group a student-produced DVD of the trip. **Ray Bowman** said that they hope to do this annually, and eventually semi-annually.

Dr. Sonnenberg asked how the students are selected. **Ray Bowman** replied that students were recruited; this time around 10 applied and there were 10 spots. **Dana Morton** asked if the students had to pay for the trip. **Ray Bowman** said that originally it would have been \$700 per student for the week, but after several grants, it ended up free to the students. **Dean Campbell** asked if students received any academic credit. **Ray Bowman** replied that only Chemistry students got credit this time (1 credit each) but that will likely change in the future.

Website: www.jhargis.com/mtloup.htm.

Dana Morton thanked Ray Bowman for his presentation.

TAC Input on Lower St. Johns SWIM Document Sections

Introduction-

Tiffany Busby handed out copies of the current draft. **Tiffany Busby** thanked Kim Fitzgibbons of PBS&J, and Kraig McLane and Dean Campbell of SJRWMD for helping to supervise the outline of the document. There are still some items that need to be added, especially the information for Lake George. The current draft is to show what information is compiled so far. The SWIM document is supposed to be a basin-wide project, not just a SJRWMD product. All input is desired and necessary. Tiffany Busby and Kim Fitzgibbons interviewed those knowledgeable about the basin regarding projects that have been done since 1993. The findings will be included in the plan update. Help is needed to identify what should be included in the SWIM plan in the next five years. If a particular project is included in this plan, EPA may consider this in their funding; in fact, projects must be in the SWIM to be considered for funding. The full SWIM Plan Update will be available on an ftp site soon; Tiffany will email that information to the group when it becomes available.

Plan Overview-

Chapter 1

Page 1: Information such as a table of contents will be added to the preamble once more projects are included. Page 1-2: The outline of the current update is based on the Indian River SWIM plan. The current document is not going to repeat information that was included in 1993 which has not significantly changed such as soils and hydrology. This document is an update but Kraig McLane has the full plan available that includes 1993 info. The purpose of the section beginning on page 1-5 is to cross-walk the reader from the previous 1993 goals to the current goals. Page 1-11 includes goals on erosion and sediment management. Input on this is appreciated as well.

Tiffany Busby then summarized Betsy Deurling's draft goal pertaining to sedimentation of streams and wetlands. This was handed out to the group. **Mike Hollingsworth** pointed out that there are economic benefits to reducing sedimentation by reducing the cost and frequency of maintenance dredging. It was suggested that this be included in the language of the goal. **Tiffany Busby** asked if there were any questions or objections; none were raised. **Tiffany Busby** suggested a working group to develop final language for each strategy. Melissa Long, Dave Lambert, Mike Hollingsworth, and Betsy Deurling will participate. Also suggested were Matt Kershner of FDEP Northeast District, and Dale Lovell of SJRWMD, Jacksonville Service Office. Page 1-12 begins a section which explains the SWIM plan's relationship with other plans in the area. It addresses work with the National Park Service, but it still needs work on state and local programs. The section regarding accomplishments on Page 1-14 needs input from the group. Members are encouraged to include past projects and perhaps use some of the TACs past priorities for technical projects.

Chapter 2

This is just a shell right now as the current plan is not repeating unchanged information from the 1993 SWIM plan.

Chapter 3

This is the heart of the plan. It is broken up by initiatives, and includes a status update and strategies/projects, both in recent years (1993-2007), and future years (2008-2012). Sections include reduction of non-point source pollution in urban and agricultural settings, and sections on evaluation of biological health, fisheries, toxic contaminants, education, and intergovernmental coordination efforts.

Chapter 4

This will need much revision. Since the last LSJR TAC meeting, there were discussions at SJRWMD as to whether Lake George will be included in the SWIM plan. It was decided that it will be included in the current document as a stand alone chapter as it wasn't included in the 1993 plan, so will need to include all information (including information that was not going to be repeated in the other components on the plan).

Dr. Sonnenberg expressed her appreciation to the group for their efforts in getting this accomplished.

Technical Updates and Announcements

Kraig McLane explained the allocation of legislative money. Of the current \$10 million, \$4 million is going to JEA for upgrades to the JEA Arlington East treatment plant. The new appropriation is \$12 million. Much of this will go to COJ septic tank projects for reducing nitrogen and implementing bacteria TMDLs. Another target will be for Atlantic and Neptune beaches for WWTF improvements and to promote reuse.

Kraig McLane indicated that he will need more projects to be included such as stormwater projects. Point source projects will likely get funded first. If a project is in a SWIM plan, it is more likely to get funding. Kraig McLane will send out a request for updates; the deadline is July 20, 2007. In a project submittal, enough information should be included to put into the Legislative Initiative Document.

Tiffany Busby apologized on behalf of Mark Middlebrook for not being present. The St. Johns River Alliance is meeting at UNF the next day. Several items are on the agenda, including annual work plans and strategies. Though Mark Middlebrook is the primary point of contact, LSJR TAC members may contact Tiffany Busby or Mark Middlebrook if they would like an item added to the next meeting's agenda.

Dana Morton gave a brief update on COJ's fecal coliform activities. EQD has done intensive sampling of Miramar Creek in the last three weeks. The City should be operational very soon with the Col-alert sampling.

Cindy Cospers explained that the Ocklawaha report included in the handouts is a sample of what will be done for the LSJR basin.

The next LSJR Main Stem TMDL meeting to work on components of the BMAP is scheduled for August 15-16 at FDEP NE District Office. Darryl Joyner will likely soon hold public workshops on the proposed TMDL.

John Hendrickson gave a brief update on algal toxin monitoring activities. Since 2005, the SJRWMD has sampled for microcystin. They have not found anything alarming yet this year. Results have mostly been in the 10-30 ppb range; 40 ppb is the threshold for concern.

Melissa Long explained that **Jeff Martin** is now performing industrial wastewater permitting plus some additional duties. Tom **Kallemeyn** is now the Wastewater Compliance manager.

Dana Morton described a recent fish kill on the St. Johns River that was attributed to high salinity. The kill was located predominately between the Fuller Warren Bridge and the Buckman Bridge. Northeasters, tides, and low rainfall were likely major contributors to this event. Salinity levels have come back to normal now that rain has returned.

Tiffany Busby will be opening an office for Wildwood Consulting in St. Augustine and bringing **Derek Busby** on board.

FIM and SJRWMD have a project to look at low dissolved oxygen events throughout the year and its effect on local keystone fish. The project will be done out of UNF.

Vince Seibold announced that EPB and COJ will hold another annual fall regulatory workshop. The title is "Vision for Jacksonville's Future" and will be held on September 21, 2007 at UNF.

Dana Morton announced that the Septic Tank Workshop hosted by Scott Turner will take place the next day (28 June 2007) at the Deerwood FCCJ campus.

Next Meeting Date and Adjournment

Next meeting date: Late August, early September; **Tiffany Busby** will send out the date once it is established.

The meeting was adjourned at 1:51 pm.

Meeting summary prepared by Mike Thomas, PBS&J and Tiffany Busby, Wildwood Consulting. Please send comments and corrections to busbytl@bellsouth.net.