

**Lower St Johns Technical Advisory Committee (TAC)
Meeting Summary
Jacksonville University, Davis College of Business
Jacksonville, FL
February 3, 2005**

Attendees

Tiffany Busby, Independent Consultant/St Johns River Alliance
Kraig McLane, SJRWMD
Lucy Sonnenberg, JU
Ivan Chou, ECT
Donna Kalusniak, City of Atlantic Beach
Rick Carper, City of Atlantic Beach
Pam Livingston-Way, SJRWMD
Kelly Smith, UNF
Gretchen Ehlinger, FWC
Amy Kalmbacher, DEP/CAMA
Noah Standridge, DEP/CAMA
Betsy Deuerling, City of Jax EQD
Dana Morton, COJ/RESD
Jeremy RiCharde, FDEP
Jim Maher, FDEP
Sharon Evans, FDEP
Amanda Sigman, FDEP
Jeremy Tyler, FDEP
Tom Kallemeyn, FDEP
Dan Legett, FMB
Sandra Marquez, FDEP
Mike Hartman, UNF/Fresh Ministries
Melissa Long, FDEP
Myra Carpenter, GP
Chuck Iley, Clay County Engineering
Daniel Littles, Jr., Clay County Engineering
Debbie Kristiansen, St Johns County Engineering
Michael Howle, Anderson and Howell
Eesa Ali, FDEP
John Higman, SJRWMD
Mike Hollingsworth, USACE
Bob Gamble, City of Green Cove Springs
Ying Ouang, SJRWMD
Felicia Boyd, SJRWMD/WAV
David Evans, Water and Air Research, Inc.
Kim Pearce, FDEP-NED IW

Welcome and Introductions

The meeting began at 10:06 am. Lucy Sonnenberg, Co-Chair, welcomed everyone to the new building of the Davis College of Business at Jacksonville University. Everyone introduced themselves.

Meeting summary from August 19, 2004

Tiffany Busby asked for comments or corrections on the meeting summary for August 19, 2004. There were none.

Presentation: “An Evaluation of Potential Impacts of Pulp and Paper Mill Effluents in the St John's River: The Utilization of Field and Laboratory Models for Assessing Effects and Mill Process Improvements.”

Lucy Sonnenberg introduced Tim Gross from the University of Florida/U.S. Geological Survey. Tim Gross gave a detailed PowerPoint presentation on reproductive anomalies of mosquito fish found in Rice Creek and near Green Cove Springs.

Ms. Sonnenberg asked Mr. Gross to define “effluent” for purposes of his study. Mr. Gross replied that it is treated (tertiary) effluent from the last retention pond at the Georgia-Pacific (GP) plant. It is the equivalent of water that would enter Rice Creek.

Phytosterols are indicated to cause elongated anal fins in female *Gambusia* (“mosquito fish”). A source for phytosterols is the raw materials (pine trees) used in the processes. The phytosterols are not affected by elemental chloride free (ECF) procedures recently adopted at the GP plant; they do not break down easily, although aerobic conditions do assist with breakdown. A measurement called the “gonadal somatic index (GSI)” was used to evaluate the *Gambusia*, which is the percentage of the total body weight that the gonad comprises. The study indicated that there are more active bio-breakdown processes in the treated effluent compared to the reference sites. No single product produced the elongated anal fins in *Gambusia* (not even androstenedione, as had been hypothesized).

The study results were unexpected—there were no anal fin elongation in the treatment tanks or in cages *in situ*. Kelly Smith asked about the age of the fish—maybe there needs to be exposure in the juvenile stage? Mr. Gross responded that there were all age ranges included in the cages. Mr. Gross was asked about population genetic studies on the fish in the Fen Holloway and Rice Creek. Mr. Gross responded that none have been done but one U.S. Geological Survey researcher is interested in looking at that. There could be a hybrid of two species of fish. It was noted that there are no data before 2002 and in the Fen Holloway and there were no improvements in the effluent during the study period.

Lunch Break

Presentation: “Sediment Contamination in the Lower St Johns River Basin with Special Emphasis on Cedar and Ortega Rivers”

Lucy Sonnenberg introduced John Higman from the St Johns River Water Management District.

Mr. Higman discussed the polycyclic aromatic hydrocarbons (PAH) problem areas in the St Johns River near downtown Jacksonville and in Rice Creek. Sources of PAH include petroleum and its derivatives such as combustible residues. Gasoline does not have good correlation with PAH contamination; combustion-derived sources have much better comparisons with PAH. Some combustion-derived sources include: Autos; pavement leaching; waste incinerators; electric utility combustion; and forest fires. Hot spots for a variety of contaminants include: Cedar River, Rice Creek, Trout River (all but PAH); Ribault Creek; and Goodby Creek (PCBs). The Water Management District has worked on characterizing the Cedar River intensively.

There was discussion about normalized values for total organic Carbon (TOC).

There are different distribution patterns of sediment contamination observed—PCBs increase upstream in the Cedar; Chlordane increase in Fish Weir Creek. The concentrations are, in general, above exceedence levels that effect organisms. There is a tool called the “computed hazard index” that is used to evaluate the contamination levels.

There was a question and answer session with Mr. Higman after his presentation.

Presentation: “Shallow Groundwater Quality: Spatial Trends in Nutrient Concentration”

Lucy Sonnenberg introduced Ying Ouang from the St Johns River Water Management District.

Mr. Ouang outlined the sources of groundwater nutrients such as: Fertilizer; atmospheric deposition; dairy operations; wastewater; and septic tanks. Their study worked on relating groundwater quality to land uses. Land use categories included (but not limited to): Forested; agriculture; wastewater land application; and septic tank areas.

Overall 42 wells were monitored—each site had three wells. The groundwater was tested for 26 water quality parameters. Mr. Ouang presented the results of the spatial trends.

Technical Updates and Announcements

Water Education Festival/Inspector Training

Felicia Boyd, SJRWMD/WAV program, announced that the Water Education Festival at MOSH was scheduled for February 12, 2004. Free admission is available to everyone. There are interactive displays geared to kids to celebrate the vital importance of water and Florida’s environment. Ms. Boyd also announced that a “train the trainers” session had been scheduled. Please contact Ms. Boyd for more details.

St Johns River Alliance

mindy matthews, Executive Director, St Johns River Alliance, was unable to attend the meeting but asked Tiffany Busby to give her update on the Alliance’s activities. Ms. Busby noted that Ms. matthews was thrilled to be on board and had begun work as the Executive Director in January. The Alliance’s theme for 2005 will be “Connect the

Dots” in the St Johns Basin. The Board has formed a fund raising and grant raising committee. The next Alliance Board of Directors meeting will be held on March 18, 2005 at Jacksonville City Hall; a tour of the JEA Buckman wastewater plant will follow the meeting. A list of federal funding needs is being compiled by Brad Thoburn (City of Jacksonville) and Anne Keller (U.S. EPA). The list will be fairly brief for 2005 funding needs but will be expanded for 2006. A trails/preservation/blueways committee has been formed—Herb Hiller is the chair. TAC members can contact Ms. Busby for Mr. Hiller’s e-mail address if they are interested in participating on the committee. Ms. Matthews is also in the process of working with the Trust for Public Lands and pursuing a stronger working relationship with them. [Editor’s note: “Mindy Matthews” does not capitalize the first letters in her name.]

Lower St Johns Total Maximum Daily Load (TMDL)

Jim Maher gave a Lower Basin TMDL update. The TMDL Executive Committee will begin meeting again this month—the next meeting will be a joint Executive/Stakeholders meeting on February 24th. The development of the basin management action plan (BMAP) and the allocations for reductions need to be complete by April 2006. The existing issues regarding allocations will be outlined in a point paper and distributed in advance of the Feb. 24th meeting.

Next Meeting and Adjournment

The next meeting will be held in May 2005; the date and location will be announced via e-mail. The Water Management District will be the next host. Tiffany Busby thanked Lucy Sonnenberg for hosting and chairing the meeting. Lucy Sonnenberg thanked everyone for coming and visiting the JU campus. Ms. Sonnenberg also offered a tour of her laboratory to anyone interested.

The meeting adjourned at approximately 2:15 pm.

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