

LOWER ST. JOHNS RIVER TECHNICAL ADVISORY COMMITTEE (TAC) MEETING
IFAS—Hastings Research Facility
595 E. St. Johns Ave., Hastings, FL 32145
March 30, 2011

Participants

Neil Armingeon, Riverkeeper	Danny Johns, Blue Sky Farms
Russ Brodie, FWC	Anne Lewellen, National Park Service
Robert Burks, SJRWMD	Pam Livingston Way, SJRWMD
Derek Busby, SJRWMD	Melissa Long, FDEP
Tiffany Busby, Wildwood Consulting	Tom Mallett, COJ
Amelia Demarie, Citizen	Dana Morton, COJ
Betsy Deuerling, COJ	Pat O'Connor, FDEP
John Hendrickson, SJRWMD	Marcy Policastro, Wildwood Consulting
John Higman, SJRWMD	Geoff Sample, SJRWMD
Chuck Jacoby, SJRWMD	Lucy Sonnenberg, JU

Welcome and Introductions

Tiffany Busby welcomed everyone to the meeting and thanked the Institute of Food and Agricultural Sciences (IFAS) for the use of their meeting room. John Hendrickson stated that the purpose of this meeting is to follow up on a discussion that Dean Campbell (SJRWMD) started about responding to environmental events. Every few years, the St. Johns River Water Management District (SJRWMD) looks at their ambient monitoring to ensure they are coordinating well with other agency efforts, fulfilling their mission, maximizing cost effectiveness, and getting information out to the public. This discussion will help to refine SJRWMD's efforts in addition to improving coordination among the agencies. The participants introduced themselves and the entity they represent.

Agency Response to Environmental Events

Introduction

Tiffany stated that it is close to the time of year when environmental events are encountered on the river. The stakeholders in the basin are accomplishing reductions but the full reductions needed have not yet been achieved. The purpose of this discussion is to help prepare for the upcoming season and to determine how to get information out to the public. Last year there was a lot of activity and coordination and the goal is to document and build on those efforts. During the last meeting, there was discussion about finding a way to keep those people out in the field informed and to send the results of any investigations to the appropriate people. This communication will help the entities to be efficient with their resources so that two different teams are not going out into the field at same time, unnecessarily. The meeting today includes short briefings by several organizations on what they are prepared to do in the case of an environmental event. This information should help the organizations understand the capabilities of the other entities and how they can build partnerships. The notes from the meeting could be used to enhance Dean's write up on the coordination in response to environmental events, and may provide details that can be used in an update of the Water Quality Atlas.

Riverkeeper

Neil Armingeon stated that the Riverkeeper is a citizen's group and they have a lot of contacts with the public. He received a photograph over the weekend showing an algae bloom in Doctor's Lake. In addition to people sending photographs, the Riverkeeper also has boat patrols that look for these types of events. Last year, the Riverkeeper was probably the first to report the fish kill at the end of May. When members of the public see an event happening, they call the Riverkeeper and then Neil usually passes that information along to Dean or John, or to Russ Brodie if it is related to a fish kill. It would be helpful to have a set process on how to interact with members of the TAC.

Neil stated that the more information that can be provided to the public, the better. The Riverkeeper can relay information but the main difficulty arises when something is happening and people cannot find any updated information. The process developed to respond to environmental events should involve a public component to tell people about what is going on, including how much time it will take to figure out more details. There were calls this weekend from people who are seeing foam on the river again, and there have been reports of a bloom in Lake Monroe and precursors to a bloom in Welaka. It is important the Riverkeeper knows how to get this information to the proper people for response. Melissa Long responded that the information the Riverkeeper provided last year helped the Florida Department of Environmental Protection (FDEP) to determine what areas they needed to go to. This helped to save time and effort and would be useful again this year. Russ Brodie stated that the emails and updates provided last year were very helpful in selecting areas to collect samples. Neil stated that some of the boaters have Global Positioning Systems (GPS) and this is probably the best way to send location information when it is available. After sending the photograph of the algal bloom in Doctor's Lake, Neil realized he could have provided more details on where the bloom was located.

Derek Busby asked what information the public would really like to know about these events. Neil responded that main questions are whether it is safe to swim in the river and whether it is safe to eat the fish. The Riverkeeper directs these questions to the Florida Department of Health (FDOH). Neil noted that he has been wondering if FDOH uses the results of blue-green algae tests to make a determination on safety, but he has not heard a definitive answer.

Dana Morton suggested that the Riverkeeper could include some basic information about blooms on their website along with links to the other agencies' sites, since it seems like the Riverkeeper's website is popular with the public. John stated that information is available in multiple locations, which makes it difficult to find out all the details. John suggested that a central clearinghouse be developed for all information related to environmental events. Derek stated that the question about whether it is safe to swim in the river is more of a common sense thing; if there is a bloom in the area or dead fish, then do not go into the water. It might be useful to provide a map showing where there have been issues during the course of a season. Tiffany added that pictures and other information could be connected to the map to help communicate with the public.

Neil stated that the boat patrol last year donated about 1,200 hours of time and this is a resource, if the agencies can let the Riverkeeper know where the boats are needed. Robert Burks stated that the SJRWMD staff are out on the water every day and if they know of an issue, they may be able to redirect their efforts to collect a sample. Melissa suggested creating a distribution list to help keep people informed. Robert noted that their preference for information would be latitude and longitude, but an address or a geographic point of reference could be provided. Lucy Sonnenberg stated that information management seems like the main problem. While distribution lists are helpful, the list may not reach everyone who is interested and it would be better to have a central repository for information, photographs, and data. One option for this could be the TAC website.

St. Johns River Water Management District

John stated that SJRWMD is working to respond more efficiently to events and to better integrate with other agencies. Over the past year, there have been staff cut backs, including several field people, and fuel costs have risen, which requires being more efficient when out in the field. SJRWMD has been evaluating all their monitoring efforts, not just the efforts in response to environmental events.

SJRWMD has ambient monitoring along the entire main stem of the river and these stations are sampled twice per month, which is the minimum sampling needed to determine trends because conditions can change quickly. SJRWMD also has a program to look at littoral and near shore areas. In addition, major

inflows to the river are tracked to look at sources. These efforts include the basin management action plan (BMAP) monitoring, agricultural monitoring, point source loading based on discharge monitoring reports (DMRs), and the loading from the major boundaries to the basin. SJRWMD also has specific projects for regional stormwater treatment (RST) facility performance, intensive monitoring in certain areas of the river, and Ocklawaha River monitoring with FDEP. New tools for monitoring the river include satellite tracking of blue-green algae by the National Oceanic and Atmospheric Administration (NOAA). This technology was first used in Lake Erie, and NOAA is now working with the FDOH on images of the St. Johns River. The U.S. Geological Survey (USGS) has continuous monitoring arrays in several areas of river. Two of these stations have blue-green algae sensors that collect data every 15 minutes, which helps capture blooms that would otherwise be missed by the routine sampling.

John noted that interagency coordination efforts were first outlined in the response plan prepared by the Harmful Algal Bloom (HAB) Task Force. This coordination continued during the 2010 environmental events. There are some refinements needed to the process to provide better information. The BMAP monitoring provides a lot of good data but this information is not currently being analyzed. It may be useful to include a "report card" on the data in the BMAP annual reports. There is a lot of microscopic activity occurring in the river from the mouth of Black Creek to the Jacksonville Main Street Bridge that is not well understood. A better understanding of the linkages in the river is needed because all information about the river has not been brought together and studied. In addition, a better plan to disseminate information to the public should be determined.

Tiffany asked if there are resources available to implement the suggested efforts. John responded that there are certain staff groups at SJRWMD with less work to do because of the slowdown in development and, therefore, in permitting activity, as well as the winding down of the water supply impact study efforts. There have been internal discussions about shifting some of these people to other efforts and they may be able to work on some of the data compilation. Marcy Policastro noted that FDEP had made the decision to not include water quality analyses in the BMAP annual reports until about year four of the BMAP to give time for implementation of BMAP efforts that will improve water quality. Tiffany noted that a lot of work was done last summer to investigate the blooms, fish kills, and foam, but it was not well communicated, and there is no place to go for all the information in a way that is written for the public. Tiffany stated that she was impressed by the nutrient reductions reported in the BMAP annual report but those reductions have not yet been reflected in the condition of the river. The public is being left with the impression that things are getting worse. Dana responded that reporter Steve Patterson at the Florida Times Union may be a good resource to help get information out to the public. Melissa noted that while he might be interested in helping, the Times Union also had budget cuts and may not be able to allocate his time to this effort.

Derek stated that the main point is that information needs to be compiled in one place, and it would be helpful if the information were analyzed and put in report card format so the data can be comparable from year to year. Pam Livingston Way added that a timeline for reporting also needs to be established, whether it is yearly data or a three or five year dataset is used. Pat O'Connor suggested that if the public mainly wants to know if the waterbody is fishable and swimmable, that information can be compiled for the public and a separate, more detailed report can be prepared for the TAC. John noted that the public information has to strike a balance between keeping people safe and preventing negative impacts to people's livelihoods that depend on the river. John suggested convening an ad hoc subcommittee to meet separately to discuss the best way to organize and disseminate information.

Robert Burks stated that his field staff has been reduced to four scientists. SJRWMD has stations all along the river that are sampled every two weeks. The field staff coordinate with the other agencies when an issue is found. The team is working on being flexible and, depending on their location, can change their plan for the day to collect samples where needed. The SJRWMD monitoring schedule is listed in a

Google calendar, and Robert can provide the link to the TAC members along with a key to the codes used to the represent monitoring efforts. The calendar is usually updated daily to provide the most accurate information for where the team will be that day.

Robert stated that he is meeting with NOAA and FDOH this afternoon to discuss a technique using radiometry along the river. The necessary equipment is being loaned to SJRWMD for the next six months. Robert noted that another effort they are working on is to augment the field notes with a voice processor that also includes information on the date, time, and location of the entry. This system will be tied into GPS to capture the exact location associated with the voice log. Pat asked if these comments are included in the STORET database. Robert responded that they are determining the best way to store this information, and they are thinking of using SJRWMD's current GIS database. John added that any conditions that affect samples designed to go into STORET are noted in the comments. The recorded observations are used to augment the comment entries.

Florida Fish and Wildlife Conservation Commission

Russ stated FWC is responsible for responding to all fish and wildlife events, whether natural or anthropogenic, and they also provide assistance in extreme natural events (such as hurricanes) and manmade events (such as oil and toxic chemical spills). FWC is usually informed of a fish kill or HAB by their staff, an outside agency, or the public. There is a hotline for the public to report issues and these reports are tracked in a database. During the fish kill last summer, there were more than 300 reports from the public alone. Once FWC is aware of an issue, they will investigate and work with partners to obtain water samples, environmental data, and moribund animals to help determine what is occurring. Obtaining information and getting it out to the public is important and having the calls last year with FDOH were useful. FWC also tracks information on federally managed marine species.

The Fisheries Independent Monitoring (FIM) group is out on the river 10-15 days per month, collecting samples from Mayport to Palatka. Samples are collected at random sites that change monthly. FWC also monitors the Nassau and St. Marys rivers. They can provide samples, if needed, to other agencies when they are out on the river. FWC has a historical fisheries database from 2001 to the present, and they will use this information to put together a species composition for last year's event. The Fish and Wildlife Health (FWH) and HAB groups have expertise in light and electron microscopy, and different analyses and diagnostics. During the 2010 events, FWC received a lot of questions from the public on whether the fish were safe to eat and these questions were referred to FDOH. FWC also receives a lot of requests to clean up dead fish but this is not FWC's responsibility; the homeowner's association, homeowner, or city is responsible.

During an event, FWC continues the usual monthly sampling but also runs dedicated trips to collect fresh specimens of dying fish. Dedicated staff are identified for this additional sampling during an event. FWC has an extensive network of internal and external partners that they coordinate with for a response, including the Riverkeeper, SJRWMD, FDEP, and local universities. John stated that SJRWMD hopes to get a sample of the bloom in Doctors Lake to determine what type of plankton is involved, which affects the type of event that can be expected. Robert noted that the field staff receive a lot of questions about swimming and fishing and they direct these questions to the FWC reporting number. Robert asked if it would be better to direct these calls to Russ. Russ responded that the hotline takes calls on all issues, and they are better set up to take calls and disseminate information. Neil added that getting the hotline number out to the public makes reporting more efficient and helps eliminate some of the duplicate reports. Robert asked if the FWC team can collect a sample if they see a bloom along the shoreline, which is not where the SJRWMD team usually samples. Russ responded that they have talked about doing this and he hope they can move forward with helping to provide samples.

Florida Department of Environmental Protection

Pat stated that FDEP responds to water quality concerns, algae blooms, HABs, fish kills, sanitary sewer overflows (SSOs), and oil and hazardous waste spills as part of emergency response. FDEP's standard response is to notify the other agencies when FDEP staff are out on the water. Staff will make visual observations and collect samples for water chemistry. If a source can be easily identified, FDEP will collect a sample. If there is a responsible party for the issue, then FDEP will take enforcement. Following an event, FDEP revisits the site to ensure the issue was corrected.

FDEP capabilities include water quality data collection, analysis of water chemistry, benthic/biology samples, algal taxonomy and density, and limited toxin identification and quantification. FDEP can retrieve and interpret data from STORET to examine conditions in an area. FDEP can also provide logistical support if another agency needs assistance. FDEP staff can also help with public outreach through public meetings and the FDEP website. There are multiple disciplines at FDEP that can provide assistance to other agencies. In addition, if the source of a problem is identified as a permitted facility, FDEP can address the problem by modifying the permit or taking enforcement action.

Pat noted that during last year's event, the regular updates from FWC and the HAB group were very useful. It would be best to set up a help desk immediately, in the case of another event, to answer the public's questions. FDEP also conducts routine monitoring. They monitor the Ocklawaha River and reservoir monthly with SJRWMD. This partnership allowed for an increased frequency in communication between the two agencies. FDEP also has the river at a glance sampling from Welaka to the Arlington boat ramp. This program involves eight sites that are sampled quarterly and were selected based on where the public will come into contact with the river. These sites were originally established for fecal coliforms and have been expanded for nutrients. FDEP also has bi-monthly chlorophyll-a sampling in the Tri-County Agricultural Area (TCAA) area of the river, and a continuous dissolved oxygen (DO) monitoring station on Clapboard Creek. Pat stated that coordination with the HAB team, Tributaries Assessment Team (TAT), and SJRWMD has been very useful.

John stated that many events, such as spills, occur on the tributaries and he asked where this information is stored. Pat responded that if the event is associated with a regular monitoring station then it will be captured with STORET data. Otherwise, the State Warning Point should have information on these events. John Higman asked where the continuous DO station is located. Pat responded that it is located at the confluence with the river at the Clapboard Creek bridge.

City of Jacksonville

Dana stated that the presentation will focus on the efforts of the city's Water Quality Branch. This branch responds to many types of events, and also it also has a regulatory side that can pursue enforcement and an emergency response group for events such as fuel spills. The city only responds to events in Duval County.

The Water Quality Branch is made up of the Ambient Water Quality Section, Erosion Sedimentation Control, Private Sanitary Sewage Lift Station Inspection, High Priority Industry, and Potential Illicit Connection (PIC) Program. Many of the complaints that the city responds to are located in the tributaries and not the main stem of the river. The city is in charge of inspection and enforcement of the private lift stations and sewer collection systems in Duval County. The Ambient Water Quality Section responds to fish kills, algae blooms, colored water/unusual pollution, and foam. The city is likely not the agency that will provide an answer for the causes of these events but they can respond to the events and collect data. The Water Quality Branch responds to toxic events, such as waste ink in a tributary. The branch also responds to SSOs to determine if it is an ongoing problem or a onetime leak. The follow up also determines jurisdiction depending on whether it is private sewer infrastructure, JEA infrastructure, or septic tanks. If the issue is related to septic tanks, the city sends this information to FDOH. The branch

responds to fish kills, such as the one in Hanna Park earlier this month. However, the city does not respond to fish kills in stormwater ponds. The city also responds to odor complaints because the odor could be related to SSOs, fish kills, or algae blooms. In addition, the city takes samples at new ash sites and provides this information to FDOH to make a determination on whether the fish in the area are safe to eat. Dana stated that the city has boats and a full analytical laboratory that is in the process of being certified for fecal coliform analysis.

Through the PIC Program, the city investigates inputs to the stormwater system to determine if the inputs are legal or not. Information about the inspections is included in a database where reports on PICs can be generated. This information will soon be posted on the city's website so it can be updated as inspectors are in the field collecting information. The Erosion Sedimentation Control Section follows up on turbidity complaints, which are compiled in the city's Citizen Action Response Effort (CARE) database.

People can report river pollution to the city by going to www.coj.net, which lists a phone number to call or there is a link to access the CARE database to request a service or file a complaint. The city is supposed to respond to a complaint within 24 hours. The database is being updated to include a field for waterbody identification (WBID) number to help correlate activities to the BMAPs. John Hendrickson asked if there is a compiled list of actions from the database because it would be helpful to see what action was taken to address an issue. Dana responded that the database is searchable by type of event. Betsy Deuerling added that she is not sure what capabilities the public has for searching the database online but the city employees have several options. Dana noted that if a TAC member is looking for information, they can contact him or Betsy.

Jacksonville University

Lucy stated that the people outside the responding agencies really depend on the agencies to provide information on the events. The TAC provides a forum to share a lot of this valuable information. Lucy outlined Jacksonville University's (JU) staff capabilities based on the 2010 events. There was one staff member who worked with FWC on researching the cause of the dolphin mortality event. Through this effort, a dolphin watch program was initiated, and they are looking for any sightings south of downtown because they are investigating the dredging barriers that prevent dolphins from getting back to the saltwater portion of the river. Another JU staff member does pigment and toxicosis analyses and they are looking to obtain funding for a mass spectrometer to better understand the macromolecular changes in the river. The goal of this effort is to establish a baseline for the river and to differentiate between perturbed and unperturbed events. Lucy was involved in the chemical analyses on the foam including proteins, carbohydrates, and lipids to look at the distributions of these compounds. There are other staff members at both JU and the University of North Florida (UNF) that could be resources during an event.

The main issue for JU and UNF involvement is providing information to the staff members. Lucy stated that she is able to attend the TAC meetings but other staff have class schedules that do not work with the TAC meeting time. There needs to be a good way to share information more efficiently, and one way to do this would be to create a central repository for data. From discussions at the meeting today there seem to be issues with the scope of the data and the difficulty in compiling all the information so it would be helpful to have a separate group discuss this in more detail. JU can be used to help fill in the gaps during investigations of environmental events. Lucy noted that she received a second foam sample and she found that the fatty acid distributions match the first sample. This seems to indicate that the foam composition stays the same over time but Lucy is conducting further analyses to verify.

Wrap Up

A subgroup meeting will be held on April 19th at 10:00 AM to discuss creating a central data repository. Melissa offered to find a meeting room. People interested in participating in this meeting include Lucy,

Russ, Chuck Jacoby, Pat, Derek, Betsy, Dana, Melissa, John Higman, John Hendrickson, and Dean. Tiffany will send an email to the TAC distribution list to see if there are other people interested in participating. Dana noted that FWC needs to provide feedback on their protocols for fish collection. Russ responded that they will put something together and send it to the TAC members.

Danny Johns stated that the tour of his farm in the afternoon will provide a good opportunity for people to better understand how a farm works. The tour should take about one hour and cover both the farm and packing facility.

Anne Lewellen stated that the National Park Service just hired a new biotech staff member. There will also be a Natural Resources Conditions Assessment workshop on April 28th and Shauna Allen will provide more details to Tiffany to send to the TAC.

Tom Mallett asked if there has been any research to determine which websites are most frequently visited by the public for information on events. Dana responded that he has found that the City of Jacksonville website comes up pretty high on a Google search. Tiffany responded that the results of a search often depend on how the website is set up and what keywords are imbedded.

The next TAC meeting will be held in June and will be hosted by the City of Jacksonville. The Florida Stormwater Association meeting is in early June and the Florida Lake Management Society meeting is June 10th – 14th so those dates will be avoided.

Adjourn

The meeting was adjourned at 12:35 PM. Several of the TAC members then took a tour of Blue Sky Farms Packing Facility.