MEETING SUMMARY
Lake Jesup BMAP Basin Working Group Meeting
July 21, 2011
9:30 AM – 12:00 PM
Sylvan Lake Park, Sanford, Florida

Attendees

Basin Working Group Members Present	Samantha Budd, FDEP
Troy Attaway, Winter Park	Tiffany Busby, Wildwood Consulting
Julie Bortles, Orange County	Brian Catanzaro, Orange County
Brian Fields, Winter Springs	Jay Diceglie, Altamonte Springs
Casey Fitzgerald, SJRWMD	Bruce Doig, Altamonte Springs
Mark Gisclar, Casselberry	Marie Duffy, Sanford
Ferrell Hickson, FDOT	Bill Eggers, Aquafiber
Bilal Iftikhar, Sanford	Rod Ghioto, Ardaman & Assoc.
Carol Johnson, FDACS	Gloria Eby, Seminole County
Robert King, Friends of Lake Jesup	Tim Egan, Winter Park
Rick Lemke, Maitland	Chris Ferraro, FDEP
Lisa Lotti, Orlando	Vivian Garfein, FDEP
Danielle Marshall, Altamonte Springs	Dan Homblette, Orange County
Kim Ornberg, Seminole County	Danielle Honour, CDM
Bruce Paster, Lake Mary	Katie Kulbaba, Orlando
John Peters, Longwood	Regina Lovings-Morse, SJRWMD
	Lance Lumbard, AMEC
BWG Members Not Present	Ryan Mitchell, E Sciences
Dennis David, FWC	Marianne Pluchino, Seminole County
Cheryl Harrison-Lee, Eatonville	Marcy Policastro, Wildwood Consulting
Jeremiah Marek, Turnpike Enterprise	Russ Sheibenberger, Sanford
Tony Segreto, Oviedo	Kalina Warren, FDEP
	Lihua Wei, Orlando
Other Attendees	Shannon Wetzel, Seminole County
Mary Brabham, SJRWMD	Marissa Williams, Maitland
Sherry Brandt-Williams, SJRWMD	Tom Ziegler, SJRWMD
Kelly Brock, Casselberry	

Opening Remarks

Vivian Garfein welcomed everyone to the meeting and the participants introduced themselves and the entity they represent. Tiffany Busby stated that the Lake Jesup Basin Management Action Plan (BMAP) was adopted last year and this is the first annual meeting on BMAP implementation. The purpose of the meeting is to highlight activities that occurred in the last year.

Accomplishments in Project Implementation and Research Studies

City of Casselberry

Kelly Brock stated that Lake Concord Park is located about one mile north of the U.S. 17/42 intersection on Lake Concord. The purpose of the project was redevelopment of an existing park facility to include a public education facility and stormwater retrofits. The stormwater best management practices (BMPs) include rain barrels that were installed in the last year, rain gardens including a demonstration garden, exfiltration, dry detention, and baffle boxes. In addition, the park includes low impact development (LID) practices, Florida friendly landscaping, LED lighting, and recycled material in the concrete base and boardwalk.

For the educational components of the park, each BMP has a sign to explain its purpose. There is an overview sign about the park, a sign on the pervious pavement, a sign on the rain garden with information about the plants, and a demonstration baffle box with a transparent lid. The city installed an innovative irrigation system for the park that primarily uses stormwater but can also use reuse water when needed. Between Lake Concord Park and an adjacent project, the city has revegetated approximately 2,000 linear feet of shorelines. Over the past year, Casselberry added additional signs in the park and rain barrels. One of the new signs explains eight simple choices that people can make at home to help the lake. The other new sign provides overarching information for the entire project, such as where the park is located in the watershed, what is a watershed, and how things are connected. Many members of the public are not aware that whatever goes into the stormwater system goes to lake; most people think this water goes to the wastewater treatment facility. There are signs to explain how the stormwater system works, how ponds work, and to highlight the underground exfiltration system.

Casselberry intends to use the park as an education resource. The park has hosted the first ever joint meeting of the Central Florida Lake Management Society and the local American Society of Civil Engineers Water Resources Technical Group. The city also hosted a Florida Stormwater Association (FSA) training in the park. In addition, tours have been held for University of Florida students, St. Johns River Water Management District (SJRWMD) staff, and a Denmark Rotary Club. The city hosted its first Earth Day event in April with about 1,000 attendees. The park has won multiple awards including the FSA 2010 Excellence Award and the 2010 Friends of Our Urban Forest Award for Outstanding Project. The park has become the new cultural center for the city and several concerts have been held there. The park includes a lot of lawn space; however, the original plan was to have hardscape seating. The park has become an educational showcase for the public, developers, and engineers.

City of Maitland

Marissa Williams stated that the major project finished in the last year for the city is the Lake Maitland Basin Drainage Improvements. The city took an historic shovel ready project from the Quality Neighborhood Program, which previously was not funded, and pulled out the stormwater components in the Ridgewood area. This area is fairly built out so they city added exfiltration chambers under existing roadways. This area has a 42.9 acre drainage basin on the shore of Lake Maitland. The city applied for a Section 319 grant for the project and received $550,000, which was half the estimated project cost. Maitland had established a stormwater utility in October 2009, which funded the other half of the project. This was the first project completed using the utility funding. The lowest bid received on the project was almost half the original estimate, which saved money on the project. The city put signage out in the project area to inform people about how the stormwater utility funding was being used. Project construction started in 2009 and was completed in early 2010. Four banks of exfiltration chambers were placed beneath the roadway, all areas that were disturbed were repaved, curbing was added, and the sidewalks were upgraded.

Danielle Marshall asked what kind of feedback the city is getting from the residents. Marissa responded that they have been receiving good feedback. A lot of the residents had expected renovations earlier and there was grumbling because the focus was on the stormwater portion and its related components. However, they also improved roadways and sidewalks. Tiffany asked how this area was selected for the project. Marissa responded that Lake Maitland is one of the main lakes the city is trying to improve and this project already had plans ready. Bruce Paster asked if this area had any stormwater treatment before the project. Marissa responded that it did not, other than street sweeping.

City of Orlando

Lisa Lottie stated that these projects were completed thanks to the help of Kevin McCann and Lihua Wei. The Howell Brach chain of lakes is Orlando's contribution to Lake Jesup. This chain includes 15 lakes, which start in the College Park area and move northeast until the chain exits Lake Sue to the Winter Park

chain of lakes. There are also some lakes near the Fashion Square but they are noncontributing because of drainwells in the area.

The city completed six projects for an estimated 20 lbs/yr of total phosphorus (TP) reduction. The projects cost about $1 million over three years. The Spring Lake/Rio Grande second generation baffle box removes loading from a residential area with heavy leaf canopy. The city obtained a Community Issue Budget Request grant for this baffle box, as well as two other baffle boxes. The Spring Lake Florida Department of Transportation (FDOT) pond project was a wet pond expansion. This pond was contributing 45% of the loading to Spring Lake from commercial and residential areas and a golf course. Since the pond is such a large part of the load, the city wanted to add some treatment to the pond. The average depth of the pond was previously one to two feet and the project modified the depth to 12 feet. The pond is now removing about two-thirds of the load. The city hired an outside contractor for some of the work and city staff did the rest to save on costs. There were some problems during construction due to an unseasonably high rainfall, which increased turbidity. The city addressed the turbidity problem by adding alum. They also monitored for turbidity and pH several times a day and sent the data to SJRWMD. The project took longer than anticipated but in the end it was a success. In addition, the project removed a sandbar from the pond that had accumulated over time.

The Overbrook Creek restoration project was implemented because about 30% of the nutrients to Lake Adair came from this creek. The city designed a treatment train, including a baffle box, which treats 236 acres. The residents in this area did not want to lose the natural look of the creek so the city added checked dams that have a more natural stone look. The city removed exotic vegetation and added native plants. Erosion along the creek banks was prevented by reducing the amount of gravel, adding soil, adding a coconut fiber grass mat, and then planting sod. Rocks were also added to keep the mats in place, reduce erosion, and reduce scouring when the water rises. The city added baffle boxes at Lake Adair at Reading Drive and Lake Winyah at Westchester Avenue. The city installed the Mills Avenue Storm Flo litter screen, which was designed based on the flow, types and volume of trash, and frequency of maintenance. The screen is designed to capture gross pollutants, but once trash and leaves accumulate, it helps to capture sediment, too.

Orlando has several projects scheduled for this year. The city will update the Lake Dot alum station, which is about 20 years old. A treatment train approach will be used in which a baffle box will be added, the wet pond at College Park will be expanded, and an exfiltration system will be added in a city park. Orland is in a good position to remove the loading required in the BMAP.

Shannon Wetzel asked how often the litter screen needs to be cleaned out. Lisa responded that the screen is made up of two units that the city cleans once per month. The total cost for both units was $60,000 and the city put the screen in place. Some modifications had to be made to minimize erosion from backflow. Kelly asked if there is a bypass feature if the screen becomes clogged. Lisa responded that the water backs out of the system if it becomes clogged, which is why the city added a concrete pad to help with erosion. Bruce stated that the stormwater projects achieve 20 lbs/yr of TP reduction whereas the city received about 100 lbs/yr of TP reduction from their education efforts. He noted that stormwater projects are a onetime cost but the education activities are an annual cost. He asked what the city pays for their education efforts. Lisa responded that they have a dedicated person for education so part of the cost is her salary. The city will also contribute about $6,000-$7,000 per year for the Florida Yards and Neighborhoods (FYN) program. There are also educational mail outs, which cost about $20,000 per year.

Orange County

Brian Catanzaro stated that the county wanted to understand how much material they were removing from street sweeping, as well as the nutrient content. This county study was completed about the same time as the FSA study, so they were able to compare the results. The street sweeping in this study is separate

from the Orange County Public Works Department sweeping and is funded by the Lake Management program. This sweeping involves about 65 curb miles per cycle in four residential watersheds. The roads in these areas are swept weekly for eight months and two times a week for four months during leaf season. This is about 68 cycles per year. For the one year period of the study, approximately 4,456 curb miles were swept. The contractor quarterly screened the materials and provided the weight of each fraction of the materials (sediments and leaf litter). The contractor also provided the total weight of material collected each month. The bid for the sweeping was awarded at $15.50 per curb mile. The FSA study estimates $68-$140 for in house staff; however, an estimate from FDOT in Gainesville was $30 and that is probably the more accurate cost estimate.

The weight per curb mile varied from 11.4 kg – 54.8 kg of wet weight, with an average of 24.01 kg of dry material. FSA reported a range of 20.8 kg – 1,210 kg of dry material with an average of 144 kg of dry material. Orange County tested the material for total nitrogen (TN), TP, organic matter, and bulk density. They found that TP is more leachable than TN. The ratio of dry to wet material is about 77%, which is a good number to calculate dry weight, if needed. The median value in the Orange County study was 602 mg TP and 2,515 mg TN, compared to the FSA median values for street sweeping of 375 mg TP and 832 mg TN. It could be that the FSA results only represent the sediment fraction, whereas the Orange County values include both sediments and leaf litter.

The FSA approach to determining load removal is to take the yearly total mass in dry weight times the mg/kg of TN and TP. However, many people are not collecting this information. Another option could be to calculate a load per curb mile and then multiply this by the number of curb miles swept. From the Orange County data, the average load per curb mile is 14.81 g TP and 61.87 g TN. Orange County found that they are collecting about 22 kg of debris per curb mile per event (dry weight), which equates to 2.17 lbs TP per curb mile annually and 8.84 lbs TN per curb mile annually.

Kim Ornberg stated that she has been working on the study as part of FSA and there was a conference call last week with Eric Livingston (FDEP). Eric wants to use a weight or volume of material collected, not an average per mile. FSA and the study team are trying to come up with a feasible way to determine the moisture content of material collected, which will likely involve testing once per quarter for a year. Eric did say that anyone can conduct a local study on the content of their material but there will be parameters for the sampling. There was also discussion about the "BMPs" category in the study. Although the BMPs are variable in their efficiency and amount of material collected, the mg/kg of the nutrients was statistically the same for each BMP. As part of the study, FSA is also working on a spreadsheet that could be used to calculate nutrient load reductions based on volume or weight.

Tiffany asked what type of sweeper Orange County used in this study. Brian responded that it is a mechanical sweeper. Gloria Eby asked if the sweeping was done countywide or in a specific area. Brian responded that the study was specifically for one lake management area, which is residential. The lakes include Conway, Holden, Jasmine, and Sue. John Peters asked if the additional sweeping during high leaf periods has led to an unintended consequence of people blowing leaves into the streets. Brian responded that there are some people that do this but not as many as you would think. Shannon asked if each of the lake areas have similar canopy covers. Brian responded that they do and they are all curbed streets and a similar age.

Seminole County

Kim stated that the Cassel Creek restoration project is on schedule and will be completed in the next year. The Red Bug facility was completed but there is a hydrilla problem in the creek and ponds. The county is working to eradicate the hydrilla and then they will conduct two years of monitoring. The first year of monitoring will not include plants in the facility and the second year the county will add the littoral zone. The two regional pond projects, Navy Canal and Cameron, have almost completed their efficiency

monitoring. The seepage study that Harvey Harper is conducting in Lake Jesup has completed Phase 1. The county is in the process of putting together the work order for a follow up study. The loading from Phase 1 of the seepage study was significant but there was a question about whether the load is in the groundwater itself or from the muck on the lake bottom. The second phase will include four sites with side by side tests of with muck and without. This should help quantify the loading from the sediments and groundwater. The results of Phase 1 of this study were consistent with a SJRWMD study on the volume of groundwater. The QUAL2K model is being updated with additional information from the seepage study and other studies.

In addition, the county continues to do cooperative projects in Lake Jesup. The county and the Florida Fish and Wildlife Conservation Commission (FWC) revegetated the northern side of the lake. They are also growing a specific type of eelgrass that seems to do well in Lake Jesup. There is a nursery for the eelgrass at the Red Bug facility, and a revegetation project is scheduled with volunteers on November 5th to plant a two-acre plot. They county applied for a U.S. Environmental Protection Agency (EPA) grant. If they receive the grant, they will hold a follow up planting event. There are several other revegetation projects that occurred on other waterbodies in the basin. The county just started to develop a scope of work with Harvey Harper on Crow Creek off Soldiers Creek, which is an area that SJRWMD identified as a large source of nutrient loading. There also has been good cooperation on the monitoring network. The county is doing a cooperative project with FDOT on Soldiers Creek to convert an existing pond to an alum system. The feasibility study is almost complete with a removal estimate of 2,000 lbs/yr TP.

Review of Monitoring Results in the Lake Jesup Basin

Seminole County Monitoring Results

Shannon stated that Seminole County has water quality, storm event, and biological monitoring stations, several of which are specifically included in the BMAP monitoring network. The major difference between the county's monitoring program and what is required for the BMAP is that the county monitors quarterly whereas monthly monitoring is needed for the BMAP. Many of the cities did not have a program in place for monitoring so the county tried to incorporate the cities' needs for the monitoring plan. The county is collecting samples for Sanford, Lake Mary, Casselberry, and Oviedo, and they will start sampling the Longwood site soon. This monitoring for the cities is being implemented through the interlocal agreement for total maximum daily load (TMDL) activities. A letter of understanding was executed with each city and the cities pay the county quarterly for the monitoring. All the data are uploaded to STORET through the Seminole County Water Quality Atlas. The BMAP sampling started in June 2010.

At the Navy Canal site in Sanford, the average nutrient concentrations over the entire period of record were 0.085 mg/l TP and 0.75 mg/l TN. This site usually has some flow, although it is minimal most months. The Chub Creek station is located off the new Lake Mary Boulevard extension and has low flow. The average nutrient concentrations were 0.482 mg/l TP and 1.87 mg/l TN. The county has not been able to take a sample at this site over the last few months; however, the next sampling event is on Monday, July 25th, and there will likely be flow from the recent rain. The Six Mile Creek site also has a storm event sampler and the average nutrients concentrations were 0.158 mg/l TP and 1.46 mg/l TN. The Soldiers Creek Upstream site in Lake Mary comes from a wetland system and is very shallow, which makes it difficult to collect samples at certain times of the year. The average nutrient concentrations were 0.069 mg/l TP and 1.32 mg/l TN. The dissolved oxygen at this location is very low year round. The Soldiers Creek downstream site also flows through wetlands and the average concentrations were 0.083 mg/l TP and 1.79 TN. Soldiers Creek at County Road (CR) 419 is one of the county's long term stations and also one of the biological monitoring sites. The creek in this area is usually flowing with an average concentration of 0.145 mg/l TP and 1.1 mg/l TN. The Gee Creek Upstream station in Casselberry is located at the weir on Lake Kathryn, so there is not always flow. The average concentrations were 0.043 mg/l TP and 0.88 mg/l TN. The Gee Creek Downstream site is located near the confluence with Lake

Jesup and it has flow through the year. The average concentrations were 0.136 mg/l TP and 1.12 mg/l TN. Howell Creek at County Border had concentrations of 0.037 mg/l TP and 0.82 mg/l of TN. The Howell Creek at Red Bug station had concentrations of 0.056 mg/l TP and 0.88 mg/l TN. The Bear Creek station had concentrations of 0.112 mg/l TP and 0.9 mg/l TN. The Howell Creek at State Road (SR) 434 site is located near Lake Jesup, and is one of the county's long term stations and a storm event site. The concentrations were 0.113 mg/l TP and 0.96 mg/l TN. The nutrient concentrations increased along Howell Creek moving downstream. Solary Canal is a very shallow system that typically has flow year round. The concentrations were 0.231 mg/l TP and 1.61 mg/l TN. Sweetwater Creek is more of an agricultural ditch with floating vegetation. This area has high nutrient averages with concentrations of 0.437 mg/l TP and 1.42 mg/l TN. Salt Creek has flow year round and high concentrations of 0.299 mg/l TP and 1.79 mg/l TN. The nutrient concentrations are higher in this Black Hammock area of the watershed.

The county's biological monitoring is used to support the water quality data. The biological data are collected as lake condition index (LCI), stream condition index (SCI), biorecons, and conventional sampling in Lake Jesup. The biological values were poor in Lake Howell, fair in Howell Creek, healthy moving down Howell Creek to Lake Jesup, exceptional at Bear Creek, healthy in Soldiers Creek and Gee Creek, and very poor in the Black Hammock area and Lake Jesup. Tiffany noted that the Howell Creek at County Border station had good water quality but poor SCI. Shannon responded that the biological data are not from the same location as the water quality data. Kim added that Lake Howell has a control structure and historically received wastewater treatment facility discharges. Tiffany asked why the creeks in the eastern portion of the watershed have poorer water quality. Marianne Pluchino stated that the Black Hammock area has generations of heavy sedimentation, lack of habitat, and poor water quality.

Troy Attaway noted that some of the data collected are in small creeks that go dry and he asked if data are collected in these locations on a monthly basis. Shannon responded that the county goes out monthly; however, if they cannot obtain a good sample, they do not collect anything. Troy noted that the data are more event based after a storm event. If these data are being used to determine a load, they could affect the estimates. Shannon responded that the county has storm event samplers on the major tributaries; on the smaller streams, they are just collecting monthly grab samples when there is flow. Carol Johnson asked if volunteers collect grab samples. Shannon responded that county staff perform all the monitoring to ensure that quality control measures are met.

SJRWMD Monitoring Results

Sherry Brandt-Williams stated that she conducted a time series analysis of SJRWMD's station data to determine if water quality is improving in the tributaries and Lake Jesup. SJRWMD has ambient sampling stations on Soldiers Creek, Gee Creek, Howell Creek, Sixmile Creek, and three in lake sites. This analysis makes a comparison of data from 1996-2000 (before the majority of the BMAP projects were completed) to the data from 2008 to April 2011. The Howell Creek station had a decrease from 0.134 mg/l TP to 0.088 mg/l TP. A lot of projects have been completed in this area and they are making a difference in water quality. There was a slight increase in TP at the Soldiers Creek site from 0.138 mg/l to 0.158 mg/l. However, there is less variability in the data, which is likely from the projects being implemented. There was a very small increase in TP at the Gee Creek station from 0.118 mg/l to 0.120 mg/l. The TP concentration at the Sixmile Creek station decreased from 0.177 mg/l to 0.167 mg/l. The Lake Jesup station near Soldiers and Gee Creeks increased from 0.146 mg/l TP to 0.156 mg/l TP. The Lake Jesup station near Howell Creek also increased from 0.150 mg/l TP to 0.167 mg/l TP. While Howell Creek TP concentrations are improving, there is a circular flow in that part of the lake so other contributions are also being measured at this site. The Lake Jesup station near Site 10 increased from 0.150 mg/l TP to 0.176 mg/l TP. However, the new Site 10 permit was issued in November 2009 and the average TP concentration since that time is 0.145 mg/l, so there has been a decrease.

This analysis did not include TN because there were no meaningful TP concentration reductions. There is not enough discharge data available to determine load changes based on the TP concentration changes. In addition, lake stage data indicate significantly lower levels from 2007 to 2011 compared to the period of 1996 to 2000. There is very low flow in the lake and stagnant pools of muck. Danielle asked if SJRWMD determined if significant development occurred in Gee and Soldiers Creeks between the two periods that might account for the TP concentration increases. Sherry stated that she does have this information and can send it to Danielle.

Lake Jesup Interagency Restoration Strategy Update

Sherry stated that the Interagency Restoration Strategy was adopted in 2008; however, there have been significant changes in the watershed since that time. An addendum was developed in response to these changes. The original strategy was written as a broad lake restoration strategy as a supplement to the BMAP. Since the strategy was adopted, the BMAP has been adopted, SJRWMD paid $2.5 million for the pay for performance project, and research studies and feasibility studies have been completed by SJRWMD and other stakeholders. The addendum changes implementation such that the first phase (external load reductions) and second phase (in lake reductions) are in parallel. The addendum also includes the BMAP timeline of 2014 for the first iteration of load reductions, and notes that new data will be included in the next iteration of the TMDL and BMAP. The updates on the strategy will now occur once a year instead of twice a year, and a simpler format will be used to highlight changes and links to additional information. The final draft addendum has been sent to the Executive Offices of the three involved agencies, and once it is approved, the addendum will be distributed to the stakeholders. The next meeting on the strategy will be held in 2012 after the BMAP annual meeting.

The feasibility studies included in the strategy are either ongoing or complete. The preliminary findings from the sediment nutrient cycle study will be presented on August 4th at 2:30 PM at the SJRWMD Palatka office. The study uses isotope dating to assess whether the nutrients are from a legacy source or a new source that is upflowing into the water column. The final report is due on September 30th. The floating TP treatment study uses adsorptive media for finishing or polishing of the water. The goal is to have a small footprint for the treatment so it could be floated on a waterbody with a solar panel. The adsorptive media is very effective for the TP range found in Lake Jesup. The media is washed and reused with minimal by product. SJRWMD has enough information on this project to work with the stakeholders if anyone is interested. Kim asked if this treatment can be put in the tributaries. Sherry responded that it could and it is small enough to go under a bridge to keep it safe. SJRWMD does not have funding for this project but can provide guidance to the stakeholders.

The initial phase of the *Phragmites* harvest project was finished with a small level of harvesting completed in a structured design to determine how much TP removal could be achieved. This study resulted in removal of 10-20 lbs of TP per acre, which would equal about 2-3 metric tons from Lake Jesup. The ideal harvest period in Lake Jesup coincides with the ideal harvest conditions. The cost is approximately $50-$300 per lb of TP removed. There is a need to get rid of a lot of biomass because if the *Phragmites* are left in place, more than 8 lbs/acre of TP would go back into the lake. Funding for a larger scale harvest to determine any impacts from harvesting fell through.

For the alum feasibility study, Harvey Harper studied several creeks to look at the loading and determine if it would respond well to alum dosing without negative impacts. The best locations are those sites close to the lake where the nutrient concentrations and flows are the highest. The tributaries responded well to a reasonable alum dosage with no need for buffering. The estimated TP removals from this project are 454 lbs/yr at Gee Creek, 1,662 lbs/yr at Howell Creek, and 368 lbs/yr at Soldiers Creek. SJRWMD was only planning on conducting the feasibility study and will not be doing more with this project. The Aquafiber pay for performance project is located on the south central shore of the lake. The project is achieving more dependable removal rates from the water column, with an average 82% TP reduction.

The TP removal range is 46% to 99% with the more recent data in the 90% to 99% range. The main problem with the project is drying and removing the biomass from the site. Sherry will send Samantha Budd the feasibility studies files for posting to the FTP site. Sherry noted that the Solary Canal project was not included in the strategy because it was already underway. While some problems were encountered with the project in the last year, it is moving forward now.

Kim noted that with the pay for performance project, the Florida Department of Environmental Protection (FDEP) was not allowing in lake projects for the BMAP so it would be difficult for stakeholders to participate without credit. Sherry responded that she has been working closely with FDEP staff in Tallahassee on what a reasonable lake load would be. FDEP is planning on sending representatives to the August 4th meeting to learn more about the sediment loading. SJRWMD is also using an earlier paleolimnology study that quantified soft flocculent sediment to help determine the legacy load in Lake Jesup. Drew Bartlett (FDEP) is the lead on determining if it is reasonable to look at in lake reductions now. Vivian added that Drew came down recently to look at the project and see its benefits. Kim noted that as part of this effort, they also need to determine how to convert the removal of in lake loads to the BMAP lbs/yr reduction requirement for credit. Sherry responded that she has been working with FDEP on this issue and has been sending them information to help make a science-driven decision. Kim asked if FDEP has looked at Harvey Harper's groundwater study. Sherry responded that Dr. Xueqing Gao (FDEP) looked at the information but he probably needs the results of Phase 2 to use the information. Casey Fitzgerald stated that there is a lot of interest in the pay for performance project and he asked if EPA has a role in the approval of giving credit for this project. Vivian responded that she believes that FDEP can make the decision on moving forward with credit for this project. Sherry added that there are four or five TMDLs since 2006 that include internal loads and EPA has approved them.

Robert King stated that he had conversations with several Seminole County commissioners about this project and they think it is cleaning up the lake. However, this is only a small pilot project and the percent removal quoted in the annual report is only for that small area. The project would have to be huge to treat the entire lake. We need to be careful how we describe this project. Sherry responded that this is only a seven million gallon per day pilot project, and FDEP is calculating the size of the facility needed to treat a significant amount of the water column. The pilot project is removing the one metric ton of TP that SJRWMD is paying for, and the project is not running at capacity. There will likely need to be facilities in different locations on the lake and the biggest problem will be how to remove the biomass. Bill Eggers stated that Aquafiber can scale the project to treat more of the lake. They are also working to determine the best way to remove the biomass. Kim asked if FDEP is only looking at nutrients in the water column or if they are also looking at concentrations in the sediment. Sherry responded that this is why SJRWMD is doing the sediment study and using the paleolimnology information to determine legacy loads. Robert stated that we have to be careful using the term water column because some areas of the lake have no water and are only muck. Sherry responded that SJRWMD does not sample areas with no water and they have not been able to get to the station at the neck of the lake for a few months.

BMAP Annual Progress Report

Samantha Budd stated that this is the first annual progress report, and it includes information from the stakeholders from BMAP adoption (May 2010) through May 2011. The report describes the accomplishments, issues, and future activities. The Lake Jesup TMDL was adopted in April 2006 for TN and TP. The BMAP includes reductions for TP over a 15 year period, with the first one-third of reductions addressed in this BMAP. Casselberry, Maitland, Orlando, FDOT, Orange County, and Seminole County all completed projects in the last year. The Florida Department of Agriculture and Consumer Services (FDACS) has been enrolling growers in the BMP manuals. The total reductions from all new projects (not including the agricultural BMPs) are 133.9 lbs/yr TP. The total project reductions, including the projects shown as completed in the BMAP, are 8,244 lbs/yr TP, which is greater than the 6,249.5 lbs/yr required reduction for the first BMAP. For the monitoring plan, all responsible

stakeholders participated in the first year. Oviedo, Orange County, Seminole County, and SJRWMD have research studies that are underway.

The issues encountered in BMAP implementation include several project delays; however, these delays are not causing an issue with BMAP compliance because the projects are still scheduled to be completed in the first five year period. Obtaining funding for projects and research studies has also been an issue. Data were not collected at a few monitoring stations due to lack of flow, and these sites may need to be moved in the future. The annual progress report will be posted on the BMAP site and FTP site. Kim asked if there is time to make some corrections to the report. Marcy Policastro responded that if edits can be provided by July 28th, the report will be updated before posting. Kelly asked if some of the BMAP projects could be swapped out for projects in the tributaries. Samantha responded that FDEP will need to see where the project is located to determine if credit can be assigned.

Public Comments and Wrap Up

Casey stated that all the stakeholders deserve credit for what they have accomplished. The completed projects achieve almost half of the total TMDL required reductions. Many of the stakeholders have stormwater master plans in place and ongoing projects. This BMAP could be used as a model throughout the state. Vivian added that while this BMAP could be used as a model now, it did take time to get through all the details and she congratulated the stakeholders on their work and projects. There is hope for restoring Lake Jesup. Vivian noted that she will be retiring in January and February and will, therefore, not be attending the next annual meeting. She thanked the stakeholders for their participation in this process.

Adjourn

The meeting was adjourned at 11:58 AM.