

Bayou Chico Basin Management Action Plan

Meeting Summary

Thursday, December 11, 2014

1:30 PM – 3:30 PM

*Escambia County Board of County Commissioners Central Office Complex
3363 West Park Place, Pensacola, Florida 32505*

Participants

Cheryl Bunch, FDEP Steve Cioccia, FDEP Kevin Coyne, FDEP Sarah Dimitroff, 4D Environmental for Pensacola Louviminda Donado, FDOH in Escambia County Christy Draper, Escambia County Carl Flowers, Pensacola Traci Goodhart, WFRPC Glenn Griffin, Escambia County Tim Haag, ECUA Janet Hearn, ATM Wade Jeffrey, UWF Shauna Jones, Escambia County	Mike Kelly, Escambia County Chips Kirschenfeld, Escambia County Dana Morton, Escambia County Anita Nash, FDEP John Naybor, BCA Marcy Policastro, Wildwood Consulting Will R, Pensacola.com John Seymour, ECUA Lacey Starr, FDEP Mollie Taylor, Escambia County Robert Turpin, Escambia County Brent Wipf, Escambia County
--	--

Welcome and Introductions

Steve Cioccia welcomed everyone to the Bayou Chico Basin Management Action Plan (BMAP) annual meeting. Steve noted that the Florida Department of Environmental Protection receives feedback and information for the BMAP from the stakeholders because they have local knowledge. The Maps on the Table exercise this morning provided a lot of good information that will help the Department move forward faster with the BMAP. Steve thanked the supervisors for allowing their staff to participate in the exercise that morning. Steve thanked Escambia County for their help with the Maps on the Table and BMAP annual meetings. Steve introduced Kevin Coyne, who is the Administrator for the Department's BMAP group, and Lacey Starr with the Department's press office. The participants introduced themselves and the entity they represent.

Eight Weeks of Bayou Chico Fecal Coliform Data Post April 2014 Flood Event

Dana Morton stated on April 29-30, 2014, the basin received almost 21 inches of rain, which caused excessive flooding throughout Escambia County. Elevenmile Creek had a 17-foot rise in level, and the bridge near the Jackson Creek at Old Corry Road station was damaged. Escambia County decided to start an intensive monitoring effort to determine if the flooding damaged any sanitary sewer infrastructure, which would then be contributing to the fecal coliform impairment. Dana noted that Brent Wipf prepared a map of the results of this sampling to show the exceedances over the one-time grab sample maximum of 800 colony forming units (CFU). Dana stated that the county was somewhat surprised that they did not find more fecal coliform issues during this intensive sampling. There were some high counts in downtown Pensacola caused by old sewer infrastructure; however, most areas sampled did not have very high counts. The original sampling plan was for eight weeks, but the county decided to add another four weeks of sampling. After the initial eight weeks, the county met with other local stakeholders to discuss what had been found. The Emerald Coast Utilities Authority (ECUA) knew that they had old sewer infrastructure downtown, and the fecal coliform results supported this.

Bayou Chico Basin Management Action Plan

Escambia County samples seven stations for the BMAP. Dana showed a graph that compared the fecal coliform results at these stations to the three-day rain totals prior to the sampling event. For the intensive, weekly sampling after the flood event, the fecal coliform results were within the means of the previous data. In addition, none of the samples collected as part of the intensive monitoring effort were above 5,000 CFU, which is the threshold used to indicate a human source of bacteria. Therefore, it appears that the sanitary sewer system within the Bayou Chico Basin survived with little damage from the flooding. Dana noted that 24% of the samples from the last year exceeded 400 CFU, and the state standard allows an exceedance of no more than 10% of the time. This 24% exceedance includes the intensive weekly sampling for three months. The highest fecal coliform value in the basin after the flooding event was 2,613 CFU on May 6th at Old Corry Road. Chips Kirschenfeld noted that the monthly samples are taken to the University of West Florida (UWF) for analysis.

Dana noted that the county receives information from the Department about sanitary sewer overflows (SSOs). On August 25, 2014, the county happened to be collecting a sample on Jackson Creek on the same day that ECUA had an SSO. The fecal coliform result came back as 6,000 CFU. On November 17th, there was another exceedance on Jackson Creek of greater than 6,000 CFU. There had been very little rain leading up to this sampling event, and the samplers noticed a strong sewage odor while collecting the sample. The result was reported as greater than 6,000 CFU because UWF cannot provide a statistically accurate number over this count using a membrane filter. When Dana asked UWF what the counts really were, he was told over 20,000 CFU at the North New Warrington Road station. Since there were no reportable SSOs this day, the county decided to conduct follow up sampling to try and identify the source.

The follow up sampling occurred on November 19th. Before going into the field, the county tried to think about possible sources in the area. They identified the Peachtree Common Apartments, which is where the August 25th SSO occurred and the overflow was caused by rags and grease causing a backup through the manhole. They also identified a private lift station at a mini storage site, ECUA lift station, northern branch of the creek, and western branch of the creek. Dana stated that when the county visited the manhole at the apartment complex, they did not find any evidence of a SSO. The same was true for the mini storage private lift station and the ECUA lift station. They looked at Jackson Creek near the ECUA lift station and found an unidentified pipe. Tim Haag asked what the size of this pipe was. Anita Nash responded that it was an eight-inch pipe. Dana added that they originally thought the pipe was the crossing for the Peachtree Apartments to the ECUA lift station, but they found that crossing in a different location.

The county then went to the north branch of the creek, but this part of the creek is typically dry and was dry during the follow up visit. Therefore, they collected samples on the western branch of the creek. The follow up sample at the original site at North New Warrington Road was 1,204 CFU. The follow up sample on the west branch, just after it leaves the naval base, was 648 CFU. The other two samples, collected from where the creek goes onto the base, were 718 CFU and 1,476 CFU. Dana stated that based on this follow up sampling, the county was not able to identify a source. However, it was most likely a SSO or human sewage because the counts were over 20,000 CFU. The county will continue their routine sampling, and will follow up on any future high counts. Steve noted that this was the first time the county had an opportunity to follow up on high counts because the results were not correlated to an event.

Bayou Chico Basin Management Action Plan

Overview of Bacteria Monitoring and Future Source Identification Activities

Steve stated that this is the third annual report for the Bayou Chico BMAP, and it covers the period of November 1, 2013 through October 31, 2014. He noted that some of the data included in the report are outside this date range to provide a reference, but this period was used when asking the stakeholders for updates on their activities. The report includes a summary of the restoration activities, water quality monitoring and some data evaluations, and upcoming activities. The BMAP was developed to address the total maximum daily load (TMDL) for the fecal coliform impairments in the basin. The BMAP was adopted in 2011, and includes Jones Creek, Jackson Creek, Bayou Chico, Bayou Chico Drain, Bayou Chico Beach (Lakewood Park), and Sanders Beach.

During the reporting period, the Bayou Chico Association (BCA) held its annual cleanup day, which removed 2,000 pounds of trash from Bayou Chico. The Bay Area Resource Council (BARC) and UWF added curb markers to the inlets that drain to Bayou Chico. Shauna Jones noted that Escambia County also marked the inlets. Steve responded that this will be added to the annual report. BARC and UWF also distributed stormwater factsheets, and held the 2013 Environmental Symposium. The City of Pensacola received funding for the “R” and Wright Street baffle box, Bayou Drive outfall, and Bill Gregory Park projects. Escambia County largely completed the Southwest Greenway 3rd Extension project, and received Resources and Ecosystems Sustainability, Tourist Opportunities and Revived Economies of the Gulf Coast States (RESTORE) Act funding for the Beach Haven Stormwater Improvement Project Phase I. ECUA continued to phase out septic tanks in the basin through connection to central sewer, mostly in the southern portion of the Bayou Chico Basin. Steve noted that the ECUA has made record advances in septic system connections, with a connection rate of about 90%.

The BMAP monitoring plan consists mostly of monthly ambient sampling. Escambia County samples at seven stations, and UWF analyzes the results. The county also conducts follow up sampling when the fecal coliform counts exceed 5,000 CFU to try and identify a source. Escambia County and the Department added a new station on Jackson Creek at North New Warrington Road because the Old Corry Road station is very shallow, and because a large influx of stormwater comes in at New Warrington Road. There is about one year of data at the North New Warrington Road station, and already this station has a different fecal coliform pattern than the Old Corry Road station. The Florida Department of Health (FDOH) samples at Lakewood Park and Sanders Beach for Enterococcus, and these data are used for the Healthy Beaches Program.

Steve noted that the largest fecal coliform data range occurs at the Navy Boulevard Bridge. The highest count was 11,300 CFU on August 19, 2013, and the lowest count was 0 on August 25, 2014. For all the BMAP stations combined, the fecal coliform counts exceeded the standard of 400 CFU 40% of the time in 2012, 29% of the time in 2013, and 24% of the time in 2014. The lowest exceedance rate during the period of 2013-2014 was at Sanders Beach with an exceedance of 7% (1 in 14 samples). Steve noted that this exceedance rate is only based on two years of data but it could be that this location is on the path to meeting the fecal coliform criteria; however, a longer period of time will be needed to make this determination. The reduction in fecal coliform counts could be due to the rerouting of a stormwater outfall that used to go to Sanders Beach.

Steve noted that for the period of 2013-2014, it seems that the fecal coliform data are correlated with rainfall events. During the last annual report, the Department noticed the periodic spikes in the fecal

Bayou Chico Basin Management Action Plan

coliform data and thought it might be correlated to rainfall so they started to compile the rainfall data to compare with the fecal coliform data. The higher fecal coliform counts occurred in August and November 2013 and February and March 2014, which all correlate with rainfall events, especially at the upstream sites. The geometric mean for 2013-2014 is 177 CFU for all the stations combined. However, if the rainfall events are removed, the geometric mean drops to 99 CFU, which seems to indicate that the periodic fecal coliform spikes are related to rainfall. In August 2013, the Old Corry Road station really peaked with the rainfall, while the other stations were also high but not as high as the Old Corry Road station. There appears to be an increase in the fecal coliform counts with rainfall, although the increases are not always of the same magnitude. There are times when there is a large increase in the fecal coliform counts with a small rainfall event, and a small increase in the fecal coliform counts with a large rainfall event. The station with the largest fecal coliform increase with rainfall was at Old Corry Road, and the second largest increase was at "W" Street. The Sanders Beach station was the least correlated with rainfall, but this station has very low fecal coliform counts. The fecal coliform geometric mean using the data from the TMDL period was 161 CFU, and the geometric mean with post-TMDL data is 63 CFU. This a reduction in fecal coliforms of 60.9%.

Steve stated that the Department also evaluated the Enterococcus data. These data were increasing over the period of 2012-2014. The Enterococcus data are typically low with periodic spikes. The highest counts were found at the Old Corry Road station, and seem to be correlated with rainfall events.

Steve noted that the Maps on the Table exercise was held in the morning to identify potential sources in the basin. Steve and Anita spent two days in the field before this exercise to gain a better understanding of the nature of the watershed. There was good participation at the Maps on the Table meeting, and a lot of good information was provided. This exercise will be followed up with a Walk the Watershed effort where the Department will walk the waterbodies with local experts to try and identify fecal coliform sources that need to be addressed. As part of the field effort, the Department will collect samples to analyze for human waste indicators to identify human fecal coliform sources that need to be addressed to reduce the human health risk and meet the TMDL.

Updates on Activities During the 2014 Reporting Period

BARC

Traci Goodhart stated that BARC has not met frequently in the last year but the council will start to meet again regularly in January. The West Florida Regional Planning Council has been conducting stormwater education in local schools. They are also planning the April 27, 2015 Environmental Symposium, which will include information on stormwater management and the BMAP. Traci noted that they are hoping that the Washington High School Marine Academy will do a demonstration.

BCA

John Naybor stated that BCA conducts the bayou cleanup every year, as well as other educational activities. BCA tries to act as the steering committee to help Bayou Chico, and they are interested in all the pollutants coming into the bayou. BCA has two main concerns. The first concern is the load coming to the bayou from the tributaries. There are projects being done by ECUA and Escambia County, and additional money is coming in to help through RESTORE Act funding. The stakeholders in this area are doing a good job addressing the sources into the bayou. The other main concern is the loading from within the bayou, which gets churned up by boats. BCA is trying to obtain funding for a dredging project, which was proposed many years ago by the Northwest Florida Water Management

Bayou Chico Basin Management Action Plan

District on the advice of UWF. Bayou Chico has a strong Clean Marina Program, and most of the marinas are designated. Those marinas that are not designated are usually also clean but do not want to be in the program. There are pump out facilities available at different locations along the bayou. These facilities are free so most boaters pump out their waste instead of dumping it overboard. John noted that, in his opinion, wildlife and animal contributions are not the major sources of fecal coliform bacteria. He stated that the fecal coliform pattern with rainfall could be a septic source that runs off in a small amount of rainfall but becomes diluted in a larger rainfall event.

City of Pensacola

Carl Flowers stated that the Bill Gregory Park project received funding, and this project will include pervious pavement, a nature walk, and kiosk with information on stormwater projects. The “R” and Wright Street baffle box project received funding, and will be located on Maggie’s Ditch. The city is in the process of determining what type of treatment to use for the Bayou Drive outfalls project.

ECUA

Tim stated that ECUA’s main activity during the reporting period was to continue with sewer expansion. They have had a good success record with phasing out septic tanks. Once a project is completed, ECUA gives the residents a year to hook up to the sewer system without being assessed the impact fee, which provides a monetary incentive to connect. This impact fee is \$1,602. ECUA also has a consent order with the Department to reduce SSOs, which they are doing by reducing inflow and filtration by lining the collection system pipes. ECUA continued with the Fats, Oil, and Grease Program, and their program to upgrade lift stations throughout the collection system. ECUA and the county are applying for RESTORE Act funding for sewer and stormwater system improvements in the Beach Haven area. They have split the project into phases to help obtain funding. The total project cost is about \$30 million. ECUA completed the sewerage in the Lakewood area in five phases, and the Edgewater area in three phases. There has been about 90% connection in these areas. The Beach Haven area is partially within the Bayou Chico watershed, and partially in the Bayou Grande watershed.

Dana asked how many homes are in the Edgewater area. John Seymour responded that there are about 400-500 houses, and a little over 1,100 homes in the Lakewood area. In addition to waiving the impact fees, the county has funding to help people with connection to the sewer system and to phase out their septic tank.

Escambia County

Chips stated that the RESTORE Act funding comes from different sources, and Bayou Chico has become a high priority for funding. This is because of all the stakeholder involvement, success of existing projects, and the BMAP (the only adopted one in northwest Florida). The monitoring data show that the fecal coliform problem is coming from Maggie’s Ditch, Jackson Creek, and Jones Creek so this is where the county has put in projects. The goal is to slow down the runoff and treat it to help with the peaks in bacteria counts.

FDOH in Escambia County

Louviminda Donado stated that FDOH continues to monitor from March through October at the two beaches, and they are sampling weekly at Sanders Beach with funding from the City of Pensacola. There have not been many advisories for Sanders Beach, but there are more for Bayou Chico. This sampling is conducted for the Healthy Beaches Program. FDOH also continued with their septic tank

Bayou Chico Basin Management Action Plan

program permitting. FDOH conducted a Sanders Beach cleanup this past year, which they hope to hold yearly. They also participated in Bay Day. FDOH is starting a health impact assessment in Escambia County for the April extreme weather event. In addition, FDOH helps ECUA with the septic tank connections.

Florida Department of Transportation (FDOT)

Janet Hearn stated that FDOT set up a website for the statewide mandatory Illicit Discharge Detection and Elimination (IDDE) training for all contractors working within FDOT right-of-way. This training is available in English and Spanish. Some of the FDOT districts are already seeing an increase in the identification of potential illicit connections.

Public Comments and Wrap Up

Kevin Coyne thanked the stakeholders for hosting the Department. The success in this area says a lot about the work the stakeholders have done. The Department appreciates the stakeholders working with them as the BMAP moves forward.

Steve asked if the stakeholders have any thoughts about additional sources in the basin. Carl noted that dumpsters seem to be an issue. It may be a good idea to require that dumpsters be enclosed and covered, with a drain that goes to the ECUA sewer system to prevent the leachate from entering the stormwater system. Anita responded that a less intrusive option could be to remind people to keep the dumpster lid closed and to replace the dumpster if the bottom is rusting out.

Christy Draper noted that rainfall is not the only factor that could affect the fecal coliform counts. There are fluctuations in salinity and salinity wedges that would reduce the fecal coliform counts.

Enterococcus is a better indicator in areas with high salinity. Cheryl Bunch stated that the rainfall pattern might be occurring because a lot of rain could cause dilution of the bacteria. Brent noted that the 12-week period of weekly fecal coliform data could be evaluated with the hourly rainfall data to determine patterns, and where in the watershed the source is coming from. Steve responded that this is a good idea but more data would be needed, which may not be able to be collected with the available resources.

Adjourn

The meeting was adjourned at 3:19 PM.

Action Items

- The annual report will be updated to note that Escambia County also marked inlets that go to Bayou Chico. – *Completed*.
- The Walk the Waterbody event and source identification sampling will be scheduled for January.