

**MEMORANDUM**  
**Weeks Bay Watershed Management Plan**

TO: File

FROM: Mike Eubanks

DATE: January 18, 2017

SUBJECT: Stakeholders Working Group Meeting #8

DISTRIBUTION: MBNEP, BCSWCD, Thompson Team, Stakeholders Working Group

1. The meeting was conducted on January 18, 2017, at the Baldwin County Central Annex (on Palmer Street) between 8:30 and 10:30 AM. Copies of the agenda and attendees present are attached. Bob Higgins initiated the meeting with opening remarks and had everyone introduce themselves. He asked if there were any comments or changes to the last meeting minutes (November 16, 2016). There were no responses so the previous minutes were approved.
  - a. Bob stated that the project is coming to an end. There will be at least two more SWG meetings (February 23<sup>rd</sup> and March 15<sup>th</sup>), and another public meeting to present the draft results of the Watershed Management Plan.
  - b. As the project starts to come to an end, the team hopes to have a list of “to-do’s” to help the planning community for the municipalities and the county with attaining the long term goals of the Plan.
2. Mike Eubanks reported the overall project status. He emphasized all the data available relating to the Weeks Bay watershed and the time it is taking to analyze it all. The team is in the 13<sup>th</sup> month out of a 15 month timeline. Things are coming down to an end, and the importance of the SWG is to ensure the Thompson Team “hits the target” for all goals discussed.
3. Mike Eubanks then introduced Mary Mekkers who discussed the population growth forecast and land use changes.
  - a. Mary discussed the methodology used to develop the population growth for the watershed area, which was based in large part on the Eastern Shore Metropolitan Planning Organization (MPO) 2040 population estimates for the majority of the Weeks Bay Watershed (does not include portion of the lower Fish River Watershed and the Magnolia River Watershed). Thompson Engineering staff estimated population growth in the census blocks to 2040 based on a similar growth rate used by the MPO and spatially located the growth areas based on aerial imagery identification of undeveloped and underdeveloped subdivisions in this area. The future growth estimates excluded wetland areas. New housing units were assumed for each 2.5 persons and lot size based on an average of 1/3<sup>rd</sup> acre per lot. The population growth map was then converted into two scenarios for 2040 land cover classifications: 1) population based conservative land use change (does not include business/industrial land use changes), and 2) a more aggressive land use change based on population and zoning estimates for 2040. The two 2040 land use scenarios were compared on posters to the 2011 National Land Cover Dataset (NLCD). While there is noted some incremental growth of developed areas within the water near the existing developed municipalities, the most obvious large area of change is in the Upper Fish River Watershed, particularly the “Golden Triangle” area north of Interstate 10, much of which is within the

- corporate limits of Loxley (large PUD in this area). The future land cover projection datasets are used to feed the SWAT model in order to compare existing water quality conditions with future estimated water quality conditions.
- b. Dick Sute – how do you assume development in unzoned areas? Mary responded by stating how challenging it was but analyzed the information that was available and used parcel data to assume future development. As an example he cited the recently rejuvenated Fairhope Fall Subdivision development on the west bank of Fish River just south of Highway 104.
  - c. Bob stated that previous population projections in certain counties were used to predict future growth rates as well. We realize that population and land use projections are not completely accurate but as close an approximation as possible. He stated that the county had agreed early in our study to rerun the flood model of the watershed if we had additional information and asked Seth Peterson to check and see if rerun of the model with either or both of the 2040 land use projections would be possible.
  - d. Christopher Grant pointed out the potential impact on the headwaters, “Golden Triangle” area. This large proposed development should have a key interest in implementation of the “levers” to reduce impacts at the downstream portions of the watershed.
  - e. Miriam Boutwell – emphasized the importance of everyone using the same methodology for future projections. Currently there is no coordination mechanism for the cities and county regarding future developments. If standardized methods are used, it is easier to combine and implement data for future use.
4. John Carlton provided a status of the SWAT model and also gave an overview of the Fish River Water Quality Study by Marlon Cook.
- a. The SWAT model is mainly an agriculture surface water assessment tool.
  - b. Dr. Latif Kalin recently ran the model based on the 2011 land use for sediment yield, phosphorus yield, and nitrogen yield to deliver rates for each based on land use, and compared the results to model runs for the two 2040 future land use scenarios for the watershed. The model run comparisons were visually displayed on color-coded watershed maps for the approximate 200 subwatersheds in Fish River and approximate 50 subwatersheds in Magnolia River. He reiterated that these model results are considered preliminary and additional data analysis is needed, especially since there are no ADEM standards for these surface water parameters.
  - c. Each 2040 scenario shows relatively high sediment, nitrogen, and phosphorus yields in the watershed. Additional discussions on the model outputs are planned with Latif as we prepare summary information for the WMP report.
  - d. Marlon Cook’s water quality data for Fish River (2016) and Magnolia River (2009) were displayed on a map highlighting areas above where high levels of sediment, nitrogen, and phosphorus were found.
  - e. John is working with Joey and Larry regarding agricultural BMPs being implemented within the watershed, and ways to decrease water quality degradation.
  - f. If anyone has thoughts or ideas about the sources of nitrogen/coliform, particularly regarding land application of biosolids please send to John Carlton. Biosolids are an under-regulated material and getting information on application sites within the watershed has proven very difficult. Application rates are typically based on nitrogen level, which may cause excessive application of phosphorus.
5. Mike Shelton explained the Weeks Bay Reserve Draft Management Plan.

- a. An information sheet was passed out explaining where a copy can be obtained ([www.weeksbayreserve.com](http://www.weeksbayreserve.com)). The plan is still out for public comment until the end of February.
  - b. The plan explains what has been done and what the Reserve hope to get done. The Weeks Bay Reserve Management Plan is updated every five years.
  - c. There is a timeline laid out for actions they hope to implement. There are lots of opportunities to identify research needs.
  - d. The Weeks Bay Reserve Management Plan is an operational plan for the Reserve over the next five years as opposed to the Weeks Bay Watershed Management Plan, which is an effort to assess watershed conditions and recommend implementation measures to help improve and protect the Alabama's coast.
6. Once the presentations were finished, Bob Higgins asked for any final comments.
- a. Ken Underwood stated his concern about the increased sediment loads into Magnolia River. Over the past few years, areas have been getting shallower due to more discharge from upstream developed areas.
  - b. Roberta Swann stated her general agreement with the information/approach being taken for the WMP, but asked what the members of the SWG thought about the progress of the effort and the potential outcomes being discussed. Joey Koptis stated that he liked the approach being taken, especially thanking the contractor team for providing him with the livestock survey of the watershed. Also he discussed the value of the plan to implement fencing to keep cattle out of wetland and riparian areas, use of cover crops, and use of no-till agriculture. He then summarized a common practice that has been implemented in Baldwin County is advanced soil testing to manage fertilizer application rates. Larry added that there are opportunities for conservation stewardship projects in the watershed and how funding can be directed to "hot spots" identified in the Cook sampling and/or SWAT modeling. Roberta mentioned that NFWF funding can be available for partnering with NRCS conservation programs.
  - c. Dick Sute mentioned that he fears that agriculture is rapidly being replaced in the watershed by residential developments. He recommended discussing in the WMP the rate of sale of farmland within the watershed and conversion to non-agricultural use.
7. The next meeting of the SWG is scheduled for February 23, 2017 in the Baldwin County Central Annex (on Palmer Street), Robertsdale, AL, from 8:30 to 10:30 AM. The probable last meeting will occur March 15<sup>th</sup>.

Prepared by  
Courtney Harkness and Mike Eubanks

Attachments:

- a. Meeting Agenda/Recommendations for Action and Funding Development
- b. List of Attendees



# Weeks Bay Stakeholder Work Group

Baldwin County Central Annex

8:30 – 10:30 am January 18, 2017

## AGENDA

1. Welcome/Opening Remarks/Approval of Minutes
2. Overall project status – Mike Eubanks
  - a. Growth forecast baseline – Mary Mekkers
  - b. Draft SWAT model projections thru 2040 – John Carlton
  - c. Fish River Water Quality Study by Marlon Cook – John Carlton
3. Weeks Bay Reserve Draft Management Plan – Mike Shelton
4. Roundtable discussion
5. Next steps

### Next meetings:

Thursday, February 23<sup>rd</sup>, 8:30 – 10:30

Wednesday, March 15<sup>th</sup>, 8:30 – 10:30

Baldwin County Central Annex, Robertsdale

## **Draft recommendations for action and funding development**

### **Develop a baseline scenario:**

Projected water quality and flooding if we continue the current trends for the next 25 - 50 years. This would represent our baseline projection if no new corrective actions or rulemaking.

### **Develop potential action plans**

At this stage, recommendations for action and funding should:

1. Describe what could be done & expected benefit.
2. Identify data or research needed to run model or models.
3. Implementation costs or funding sources do not need to be identified.

### **Potential action plans** (evaluate impact using simulation modelling):

1. Joint county/municipal stormwater management plans and associated rulemaking
  - a. How to organize for this?
  - b. Model ordinances?
  - c. Use the baseline growth forecast for guidance?
  - d. Is this an organizational model: Choctawhatchee, Pea and Yellow Rivers Watershed Management Authority. MBNEP: Discussion on 9/16
2. Consistent implementation of certain LID practices:
  - a. Which ones are most effective sensitive locations? In high growth locations?
3. Strategic land acquisition:
  - a. Where is this most beneficial?
  - b. Where is it planned?
4. Agriculture:
  - a. Livestock exclusion from wetlands/streams
  - b. Other best practices? Which ones are most effective?
5. Repair failed septic systems or replace with sewers
  - a. Impact of 100% repair?
6. Repair HOA managed stormwater detention ponds
  - a. How many and where are they? How many need repair?
  - b. How to incentivize maintenance?
7. Mitigate current sources of pollution; minimize future sources.
8. Continue public outreach and education
9. Establish an implementation team

## **Weeks Bay Watershed Management Plan, Stakeholders Working Group**

### **Meeting, January 18, 2017, List of Attendees**

1. Larry Morris, Baldwin County Soil and Water Conservation District
2. Seth Peterson, Baldwin County Highway Department
3. Mike Shelton, Weeks Bay Reserve
4. Kenny Pfeiffer, DR Horton
5. Rick Wallace, Weeks Bay Foundation
6. Steve Heath, Homeowner Interest, Fish River
7. Shannon McGlynn, ADEM
8. Randy Shaneyfelt, ADEM
9. Roberta Swann, MBNEP
10. Christian Miller, MBNEP
11. Joey Koptis, USDA
12. Miriam Boutwell, City of Foley
13. Ken Underwood, Homeowner Interest, Magnolia River
14. Dick Sute, Homeowner Interest, Fish River
15. Mike Eubanks, Thompson Engineering
16. Courtney Harkness, Thompson Engineering
17. John Carlton, Thompson Engineering
18. Christopher Grant, Thompson Engineering
19. Mary Mekkers, Thompson Engineering
20. Bob Higgins, Higgins and Associates
21. Scott Jackson, Ecology and Environment
22. Tim Thibaut, Vittor and Associates
23. Neil Johnston, Hand Arendall LLC