Lower Laguna Madre Brownsville Ship Chanel Watershed Partnership
Steering Committee Meeting
Wednesday October 11, 2017 10:00 am
Cameron County Annex
San Benito, Texas

Annotated Agenda

1. Introductions (Commissioner David A. Garza)

2. Historical Water Quality in the watershed (Jude Benavides and Tim Cawthon)

    - Water quality is much worse in the Laguna Madre at the outlet of the Arroyo Colorado versus the Brownsville Ship Channel outlet.

    - Arroyo Colorado has much more freshwater inflow than Ship Channel.

    - Water quality gets worse as you progress west in the Brownsville Ship Channel. The area that shows bacteria higher than criteria begins near confluence with San Martin Lake and extends west from there.

    - No bacteria data collection since 2008 due to lab logistic issues.

3. UTRGV Sampling and Results so far (Jude Benavides)

    - Jude Benavides presented the results of the watershed characterization to date. Good water quality observed in the Lower Laguna Madre, South Bay, and far eastern portion of ship channel so far.

    - Routine sampling in the western portion of Ship Channel began in September 2017. Results will be presented at a later meeting.

4. Subwatersheds Delineation (Jude Benavides)

    a. Methodology

    - Dr. Benavides explained his methodology in delineating sub-watersheds. He combined LiDAR data and crosschecked it with anecdotal information and adjusted it in order to better represent the reality.

    - Due to complexity of drainage issues and the level of manipulation of the watershed, the hydrology of the watershed needs to be studied further.

    b. Explanation of Flow Patterns

    - Usually the hydrology of a watershed is already understood enough to write a WPP at beginning of project. However, this is a unique situation where a hydrology study should maybe be the first step in the watershed planning process. Stakeholders seemed to agree on this point.

5. Watershed Characterization Progress to date and Timeline Through August 2017 (Jude Benavides and Tim Cawthon)
    - Most of the watershed drains to the Ship Channel through the Cameron County Drainage network
    - The area near Los Indios is considered to be a "Sink", where no clear connection to the Brownsville drainage network was identified nor to the Rio Grande River.
    - The area near the County Airport and Laguna Atascosa drains directly to the Laguna on the North East end of the watershed.
6. New Project Introduction (Augusto Sanchez Gonzalez)
    - Overview of the FY17 WPP development grant was presented.
7. Proposed Sampling Sites (Augusto Sanchez Gonzalez)
    - Three sites near the outlets of the three main Cameron County Drainage ditches were proposed. There has been no data collection by TCEQ or Clean Rivers Program in these three main ditches. In addition, it was brought up that there may be some local data collected on these ditches through volunteer efforts or local organizations that could be used in the watershed characterization.
    - The data collected by volunteers could be used for the characterization (was per the group consensus)
8. Further Watershed Characterization (Augusto Sanchez Gonzalez)
    - The plan is to have the monitoring QAPP approved by early January to start collecting data for the characterization ASAP and throughout the duration of the project.
    - For the north east region (Laguna Atascosa – County Airport), an intensive monitoring effort will be proposed in the QAPP to have a better understanding of drainage patterns in that area.
9. Modeling (Jungseok Ho)
    - A Variable Infiltration Capacity (VIC) model and HEC-RAS models were proposed to be used for modeling the hydrology. City of Brownsville and Cameron County Drainage District have HEC-RAS models for their systems and those could be obtained. The models could potentially be combined and additional areas added. The VIC model could help to understand the flow accumulation in the watershed

and give a good understanding of potential flow patterns. The hydrology models will allow revision on the subwatershed boundaries.

- Mechanistic water quality models of SWAT and SWMM were proposed as well. One option was to have a SWMM model for the Brownsville subwatersheds since it handles urban areas the best and have a SWAT model for the other non-urbanized areas. There are other options as well.

- This water quality modeling should follow after completion of the VIC and HEC-RAS modeling. However, for now work could begin on going through the TCEQ-Pre-Modeling Checklist and documenting all modeling assumption such as septic system failure rate. The assumptions should be presented to stakeholders prior to any modeling so adjustments can be made based on local feedback.

- It was brought up that 1m resolution landcover data was developed under an EPA project with the City of Brownsville for Zika prevention, etc. The data could be used in the modeling effort. It has now been obtained and covers most of the watershed.

10. Timeline Moving Forward (Augusto Sanchez Gonzalez)

- Time line was presented. The major deliverables to complete before of the end of the year are the PPP and QAPPs (monitoring and hydrologic model)

11. Work Groups (Discussion)

- Four Advisory groups were identified: 1) Technical Advisory Committee, 2) Agriculture, 3) Habitat/Coastal, and 4) Urban Stormwater

- A new list and participants was developed considering Stakeholders input and what was proposed in the contract.

- Each workgroup will include the following elements in their scope
    o Funding Sources (grants, corporate partners, etc.)
    o Economic Development
    o Education and Outreach
    o Coastal issues
    o Regulatory issues

12. Schedule Next Meeting

- Scheduled for late January- Early February 2018

13. Other

14. Adjourn