



Public Meeting Minutes

Thursday, October 8th, 2020
2:00 pm – 4:00 pm

In Attendance:

Organizers:

Houston-Galveston Area Council (H-GAC):
Andrea Tantillo
Justin Bower
Rachel Windham

Texas Commission on Environmental Quality (TCEQ):
Jessica Uramkin

Attendees:

Bailey Rohde (Houston Wilderness)
Becky Martinez (Bayou Land Conservancy)
Ben Thompson (Community Impact)
Bobby Martin (Harris County Precinct 4 (HCP4))
Catherine Elliott (Harris County Flood Control District)
Danielle Cioce (Harris County Engineering)
Diana Foss (TPWD)
Glenna Sloan (TMN - Heartwood)
Jennifer Seale (TMN - Heartwood)
Kent Walters (Resident)
Mac Martin (Texas A&M University Forest Service)
Marie Sivils (HCP4)
Marla Endieveri (Native Prairies Association of Texas)
Monte Parks (HCP4)
Paul Nelson (Resident)
Patti Carothers (Resident)
Roger Moore (Moore Archeological Consulting, Inc.)
Rozalind Shepeard (TMN – Heartwood)
Shawn Schoeller (TMN – Heartwood)
Stephanie Zertuche (Montgomery County MUD 7)
Steve Ellison (TMN - Heartwood)

Todd Running (H-GAC)
Tom Douglas (Houston Canoe Club)
2 Callers

Meeting Notes:

Welcome and Introductions

- Rachel Windham (H-GAC) commenced the meeting at 2:00 pm by welcoming the attendees. Andrea Tantillo (H-GAC) reviewed Zoom Meeting platform functions for asking questions and making comments throughout the presentation. Ms. Windham also introduced TCEQ Project Manager Jessica Uramkin (TCEQ) and colleague Justin Bower (H-GAC). Attendance was recorded by the Zoom platform.

Project Overview and Preliminary Findings

- Ms. Windham provided an overview of the Spring Creek Watershed Protection Plan Project facilitated by TCEQ and H-GAC:
 - Spring Creek and many of its tributaries are impaired for contact recreation use due to fecal indicator bacteria levels in exceedance of the state water quality standard. Depressed dissolved oxygen and high nutrient levels are also causes for concern.
 - The Spring Creek Watershed Partnership is being formed to develop a watershed protection plan informed by data analyses and stakeholder knowledge to implement water quality improvement strategies.
- Steering Committee
 - The following Steering Committee members were nominated and approved by the partnership:

Name	Organization	Representing
Becky Martinez	Bayou Land Conservancy	Community Organizations
Bobby Martin	Harris County Precinct 4	Counties
Diana Foss	Texas Parks and Wildlife Department	Environmental
Mac Martin	Texas A&M Forest Service	Other Interests
Monte Parks	Harris County Precinct 4	Counties
Paul Nelson	--	Residents
Teri MacArthur	The Woodlands Township	Cities/Townships

- Mr. Bower suggested selecting one nominee from Harris County Precinct 4 to act on the committee
- Becky Martinez (Bayou Land Conservancy) recommended Justin Fausek of Montgomery County as an additional Steering Committee nominee
- Mr. Bower reminded the group that as the project continues, more Steering Committee members may be added

Model Results and Discussion

- Ms. Windham explained the results of analyses used to estimate the magnitude and sources of the fecal indicator bacteria *Escherichia coli* (*E. coli*) in Spring Creek and its tributaries. Both load duration curve (LDC) and spatially explicit load estimation calculation tool (SELECT) analyses were used.
 - LDC results – by comparing observed *E. coli* loads to the maximum acceptable load at the state water quality standard level, bacteria reduction targets are identified at different rates of streamflow. Six sites throughout the watershed selected for their monitoring period of record and proximity to streamflow gages were observed. The results of LDC analyses indicated that reductions were needed at all six sites. Sites in the eastern half of the watershed (downstream) demonstrated more similar results compared to those in the western half (headwaters). Therefore, H-GAC recommends different overall reduction targets for the two sides of the watershed. A weighted average based on the streamflow specific reduction targets of two representative sites was used to calculate these targets. H-GAC recommends an overall bacteria reduction of 49% in the headwaters portion of the watershed and a target of 63% reduction in the downstream area.
 - SELECT results – Many factors contributing to *E. coli* loading in the Spring Creek Watershed were incorporated into a SELECT model to determine the contribution of each source to the total load and the locations where each source is most likely to contribute to pollution in waterways. H-GAC

considered human sources (wastewater treatment facilities (WWTFs), onsite sewage facilities (OSSFs)), domestic animals (dogs, livestock), invasive species (feral hogs) and wildlife (deer).

- Human sources – WWTF potential load contribution is highest in the downstream portion of the watershed but only contributes less than 1% to the overall watershed load. OSSF potential load is more generally widespread but highest in the downstream areas as well. About 4% of the overall watershed load is attributed to OSSFs. Loads and distribution of these two sources are expected to increase over time as development moves westward throughout the watershed.
- Domestic animals – *E. coli* loads resulting from dog waste comprise the majority of the total load (64%). The potential for dog waste loading is highest in the more developed downstream areas. Loads and distribution related to dog waste is expected to increase over time with westward expansion of development. Livestock (cattle, horses, sheep and goats) contribute 20% of the total watershed load. Potential for livestock related loading is higher in the headwaters area of the watershed. This is expected to decrease as westward expansion of development encroaches on agricultural land.
- Invasive species – Feral hogs are a common invasive species in the watershed. Potential for bacteria loading related to feral hogs is highest in the headwaters area. Overall, feral hogs contribute only 2% to the total watershed load. This is expected to decrease as habitat areas are replaced by new development.
- Wildlife – Deer have the most well supported population data in this watershed and are the only wildlife represented in the SELECT model. Potential for bacteria loading related to deer is highest in the headwaters area. Overall, deer contribute less than 1% to the total watershed load. This is expected to decrease as habitat areas are replaced by new development.
- Other *E. coli* loading sources are important to consider but were not formally included in the SELECT model due to lack of data.
 - Other wildlife – Wildlife animals (not including deer) lack spatial population data but are potentially a key component to bacteria loads. H-GAC proposes assuming the total SELECT load estimate could be assumed to represent 90% of the load and that an additional 10% of the load could be attributed to other wildlife.

- Birds – short-term migratory populations and long-term colonial species may contribute to bacteria loading in the Spring Creek Watershed. Stakeholder knowledge is needed to account for this.
- Sanitary Sewer Overflows (SSOs) – While these events have great impacts on bacteria loading and present a considerable risk to human health, they are not consistent in regard to timing or location. H-GAC proposes considering management strategies for this challenge separately from the other factors when developing the watershed protection plan.
- Overall, E. coli loading in the Spring Creek Watershed is expected to double in magnitude between 2018 and 2045 without effective management.

Discussion and Public Comments

- Model Results Questions
 - Monte Parks (HCP4) asked if any data closer to the confluence of Spring Creek and West Fork San Jacinto River was available for LDC analysis. Ms. Windham answered that the furthest downstream station (Spring Creek at I-45) used in the LDC analysis was selected due to being the best fit in terms of monitoring period of record and gage data.
 - Mac Martin (Texas A&M University Forest Service) asked why a distance of 300 feet was used to represent the riparian buffer in SELECT models. Mr. Bower answered that although this distance was determined through riparian buffer data employed on past projects, H-GAC encourages the partnership to provide feedback on how to refine this value to more accurately reflect the watershed.
 - Kent Walters (Resident) and Glenna Sloan (TMN - Heartwood) asked about how fertilizers and pesticides are considered in the development of the watershed protection plan. Ms. Windham explained that these factors are important to consider in watershed protection plan development but were not specifically included in the SELECT model. Tom Douglas (Houston Canoe Club) reinforces that one of the benefits of a watershed protection plan is the ability to address many other factors impacting water quality beyond bacteria loading based on stakeholder interest.
- Announcements
 - Mr. Parks and Bobby Martin (HCP4) offered to host partnership members on tours of both Spring Creek (canoe/kayak) and the Spring Creek

Greenway (trails), respectively. They provided their email contacts: mtparks@hcp4.net and bmartin@hcp4.net.

- Paul Nelson (Resident) shared information on the following meeting:
 - 9th Annual Gulf Coast Water Conservation Symposium
 - October 28th and 29th
 - [Purchase Tickets/Register](#)
 - [More Information](#)

Meeting Adjourned at 3:45 pm.

For more information, visit <http://springcreekpartnership.com>,
or contact Rachel Windham at:
Phone: 713-993-2497
Email: rachel.windham@h-gac.com



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