

Meeting Summary
Clear Creek Bacteria TMDL Public Meeting

September 21, 2006

ATTENDING: Linda Broach (TCEQ); Gian Villarreal (UH); Rodrigo Carreon; Rex Ward (Clear Creek Environmental Foundation); Jon-Paul Komar (Harris County); Mel Measles (Friendswood); Dick Carter; Susan Karlins (Houston); Jerald Landis (GCWDA); Randy Palachek (Parsons); Bob Hunt (Houston); Steve Johnston (GBEP); Jean Wright (H-GAC); Mark Muhich (Galveston County)

SUPPORT TEAM PRESENT: Carl Masterson (H-GAC); Mary Jane Naquin; Hanadi Rifai (UH); Ron Stein (TCEQ); Monica Suarez (Parsons)

WELCOME & INTRODUCTIONS/AGENDA REVIEW

Following introductions facilitator Mary Jane Naquin reviewed the purpose of the meeting and the agenda, and presented the ground rules for the meeting.

PROJECT UPDATE

Dr. Hanadi Rifai, University of Houston presented a status of the Clear Creek TMDL project that is being conducted by UH and Parsons Water and Infrastructure. She began with a review of current water quality standards and moved into a description of the project. The project was initiated in 2005 with the gathering and analysis of historical data. The project also includes sampling and analyses as well as the development of mass balance and load duration curves for the six water quality segments in the Clear Creek watershed.

Data reviewed and/or collected for the project include annual precipitation rates, water quality data from wastewater treatment plant outfalls, soil types and stream flows. Stream flows data was identified as the biggest information gap. Data from the discharge outfalls was examined to identify the sources of bacteria in Clear Creek. Soil types were used to help determine runoff and infiltration rates and showed runoff rates are fairly high. To determine how much of the stream flow was made up of wastewater discharge; the project team looked at how much water there was in the streams compared to discharge data. The problem they encountered is that there is only one active flow gauge in the watershed.

The project team looked at the various land use categories (broad) found use in the watershed. The watershed contains urban, suburban and rural. More bacteria were found in the urban areas, with their wastewater treatment plants and higher runoff rates (sweeping pollutants into the streams after rain events) compared with the rural areas which have slower runoff rates and more infiltration into the ground to filter out pollutants before they reach the streams.

Dr. Rifai discussed population increases forecasted for the cities in the watershed and also looked at water demand (direct correlation). The cities in the watershed examined by the project team with forecasted year 2020 population and water demand in acre-feet are shown as follows:

City	2020 Population Forecast	2020 Water Demand Forecast
Brookside Village	2,551	296
Pearland	53,105	11,873
Friendswood	61,567	4,537
Webster	8,309	3,097
Nassau Bay	6,485	1,104
League City	63,313	8,273

Sources of bacteria were identified by the project team. There are an estimated 64,218 households connected to centralized wastewater collection and treatment systems, 5,598 households served by individual septic systems and there is a wide variety of livestock in the watershed. All of these generate bacteria. Dr. Rifai reviewed the number of samples collected by various agencies in Clear Creek and the number of samples that exceeded the State Standards for Surface Water Quality. She reviewed historical data with the group showing trends for bacteria species and no conclusions can be drawn yet and there are indications from the data review that problems vary throughout the watershed and may have different sources both point and nonpoint. Another source looked at were storm water outfalls that flowed during dry weather, indication illicit connections to the system. Data on sediment quality vs. water quality are now undergoing Quality Assurance/Quality Control and results will be presented later.

Additional information yet to be presented to the group includes activities completed in 2006: stormwater runoff samples at tributaries; intensive surveys for flow-bacteria paired data; wastewater treatment plant wet-weather sampling; dry-weather pipe reconnaissance; and in-stream sampling.

Future plans include: completion of sampling; analysis of the data from this study and developing the mass balance and load duration curves.

FORMATION OF 24-MEMBER WATERSHED ADVISORY GROUP STEERING COMMITTEE

To provide focused stakeholder involvement in this study and the implementation phase, a 24-member steering committee is proposed. The group was presented with a draft proposal for this group's make-up and will be asked for consensus acceptance of a revised group (based on their input) at the next meeting (2007). The draft proposed steering committee makeup is:

Clear Creek Stakeholder Group Formation

LOCAL GOVERNMENTS

Pearland	☺
Friendswood	☺
League City	☺
Webster	☺
Nassau Bay	☺
Houston	☺
Brookside Village - most or totally on septic systems	☺
Alvin - small area	▪
Clear Lake Shores - CL watershed but not Clear Creek watershed	▪
Harris County (Stormwater Quality)	▪
Galveston County (Health District)	☺
Fort Bend County	☺
Brazoria County	☺
Harris County Flood Control Dist	▪

Harris County Pct 1 Parks	▪
Harris County Environmental Health	▪
	▪
STATE AGENCIES	▪
Texas Parks & Wildlife	▪
	▪
	▪
FEDERAL AGENCIES	▪
Corps of Engineers	▪
	▪
INTEREST GROUPS	▪
Gulf Coast Waste Disposal Authority	☺
Gulf Coast Water Authority	▪
Developers	☺
Industry (concrete, mulch)	▪
Businesses (Chambers of Commerce)	▪
	▪
	▪
ACADEMIA	▪
College of the Mainland (TX City)	▪
Environmental Institute of Houston (at UH Clear Lake)	☺
	▪
	▪
USER GROUPS	▪
Churches	▪
Schools	▪
Soil & Water Conservation Districts (Waters-Davis SWCD)	☺
SPCA	▪
Animal Control	▪
Land Owners	▪
Recreation (Clear Lake Rowing Club)	☺
Upper watershed Resident	☺
Mid watershed Resident	☺
Lower watershed Resident	☺
	▪
NON-GOVERNMENT ORGANIZATIONS	▪
Galveston Bay Foundation	▪
Galveston Bay Conservation & Preservation Association	▪
Clear Creek Watershed Partnership	☺
Audubon	▪

Clear Creek Environmental Foundation	☺
Clear Creek Nature & Tourism Council	▪
Clear Creek Flood Study Steering Committee	☺
	▪

The group was given time to review a large reproduction of the list and made suggestions for changing or adding or removing categories to be represented on the steering committee. Their suggestions included:

Removing: Environmental Institute of Houston & the Clear Lake Rowing Club; Gulf Coast Waste Disposal Authority;

Adding: an additional citizen representative in the upper – middle – lower watershed; Harris County Flood Control; Harris County Environmental Health; Harris County Stormwater Quality; Galveston County Parks; Sea Grant; Corps of Engineers; Independent School Districts; Galveston Bay Foundation; Gulf Coast Water Authority; Environmental Institute of Houston (1 vote to remove, 1 vote to add); churches; an additional rural landowner; TCEQ Region 12; and Texas A&M Galveston.

These suggestions will be reviewed, discussed and a new recommendation presented to the stakeholders at the next meeting (2007).

NEXT MEETING

It is anticipated that the next meeting will be held sometime in early 2007.

ADJOURN

Business being completed, the group adjourned at approximately 8:30pm.