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**Research Workgroup**  
**Wednesday, May 13, 2009**  
**10:30 AM to 11:30 AM**

**Individuals Present:**

Linda Broach (TCEQ); Tony Bennett (AECOM); Tom Ivy (Texas Stream Team); Steven Johnston (GBEP); Bruce Heiberg (BPA); Richard Chapin (City of Houston); James Walls (Harris County)

**H-GAC Staff Present:**

Rachel Powers; Erin Livingston

**Reporter to BIG:**

Bruce Heiberg

**Discussion:**

Erin discussed how potential research topics will be included in the implementation plan.

*Review/Refine top research priorities*

Erin quickly reviewed the prioritized list of suggested research topics.

Richard Chapin asked about some of the language in the item on regrowth, expressing concern that the importance of the relationship between sediment and bacteria was not adequately represented. There was discussion that it is a topic of continuing interest even though there are current studies that show a correlation between sediment and bacteria regrowth. Tony discussed his understanding that most bacteria in our waterways are naturalized and persistent.

The group agreed that we need to rephrase the research topic to say that current research on the topic does not completely explain the relationship between bacteria levels in our waterways and the issues of bacteria persistence and regrowth.

Bruce brought up the fact that none of the top big IAs address persistence or regrowth.

Richard asked about bacteria source tracking.

Is there a relationship between *E.coli* and nutrients? Between pathogens and nutrients?

What is the behavior of bacteria in the streams? We really don't understand.

Are there native (or other) bacteria that have been pushed out by the high population of *E. coli*?

We need to look at both IA effectiveness AND regrowth issues.

Linda reiterated her belief that there is a relationship between *E. coli* and illness based on her own experience.

What is the correlation between paved surfaces and levels of bacteria in stormwater?

Rachel asked for opinions of the list that the group generated at the last meeting. Does it make sense? Is it flawed? Is it a surprise or as expected? There was general agreement that the ranking was appropriate.

A few folks commented that the third topic, about appropriate indicators, is being studied by the EPA (at least at some level) and might not be appropriate for additional efforts by the BIG, even though it is an important topic.

The topic of recreational UAAs was discussed, and whether these would be appropriate at all, if the goal of a UAA is to remove protections from the waterways.

Where does all of the bacteria come from? The group identified this as an important question but that it should not be elevated to the level of the top three identified research priorities. Where was the bacteria born (in a person, in the stream, in a deer) and how did it come to be in the bayou (WWTF effluent, stormwater, etc.)?

### *Relevant Research*

City of Houston has put in two requests for 319 funds. 1) To study The neighborhood of Cottage Grove and the implementation of LID techniques. 2) A sediment supply model in Buffalo Bayou—will look at sediment and bacteria under different flow regimes, and then tie samples into hydrological models to examine erosion. These two projects have been provisionally approved by TCEQ and submitted to EPA. There was some discussion of methodology.

Harris County has contracted research to quantify the bacteria loading from the Waugh Street Bridge Mexican Free-tailed bat population and from fish.

GBEP is studying a solar pump system that would divert Horsepen Bayou during dry weather through a constructed wetland in two borrow pits to evaluate cleaning potential.

### *Funding*

- 319 Funds
- Sea Grant
- CMP
- GBEP
- 106
- Clean Water SRF (state revolving fund)—604 (?) activities
- WERF & WEF
- NSF
- Coastal Impact Assessments Program (long shot?)
- CDGB
- Etc.

### **Next meeting:**

H-GAC will compile and refine this information, and will call a meeting when we have a document that is ready for review.