



FALL MEETING AGENDA

**Tuesday, October 25, 2016
1:00 pm to 3:00 pm
H-GAC Conference Room B, Second Floor
3555 Timmons Lane**

Call to Order/Welcome/Introductions

Welcome by H-GAC

Introductions of BIG members & staff

Review Agenda. Each agenda item shall provide time for discussion by the BIG followed by comments from the audience.

Certification of Quorum

Approval of the Proposed Members & Alternates

BIG members will review the Bacteria Implementation Group Roster and approve as appropriate.

Approval of the May 24, 2016 Meeting Summary

BIG members will review, comment and approve as appropriate.

Public Comment

The public may sign up at the beginning of the meeting to make an informal comment of no more than three minutes.

Item 1: Approval of the 2016 Annual Report

Staff shall lead the BIG in a discussion data that will be used in the 2016 Annual Report. BIG members will review, comment and approve as appropriate.

Item 2: Approval of the Implementation Plan Updates

H-GAC staff will present Addendum #3 (draft) to the BIG Implementation Plan includes: Addition of 7 AUs/TMDLs in the BIG project area. BIG members will review, comment and approve as appropriate.

Item 3: Draft Letter to the TCEQ

H-GAC staff will provide a draft letter to the BIG for review, comment, and approve as appropriate.

Item 4: Presentations

- Upper Oyster Creek Annual Report
- Top 5/Least 5 Project
- Clean Waters Initiative Workshops

Item 5: Other Business/Roundtable

As time permits, H-GAC, BIG members, and stakeholders are encouraged to discuss implementation activities, related projects, and announcements.

Next Meeting Date

May 23, 2017

Adjourn

BIG Meeting instructions for call-in:

To call in, dial 713-481-0090 (or 800-240-3895). You will be asked to enter your pass code, followed by the # sign. The pass code is 1084242. If you dial in before H-GAC, you will hear "music on hold". Once H-GAC dials in, the music will cease and the conference call will begin. Remember--if you do press hold, everyone will hear your hold music.

In compliance with the Americans with Disabilities Act, H-GAC provides for reasonable accommodation for persons attending H-GAC functions. Requests should be received by H-GAC 24 hours prior to the function.

H-GAC encourages meeting attendees to bring their own mug or cup to all meetings.

BACTERIA IMPLEMENTATION GROUP ROSTER (10-25-16)

Last	First	Representing	Organization	Alternate1	Alternate 2
Bloom	Michael	Business / Industry	Partnership	Jason Maldonado	
Brown	David	Resource Agency / Academia	US Geological Survey	Michael Lee	
Chapin	Richard	Large City	City of Houston	Zafar Ahmed	
Christian	Marilyn	Urban County	Harris County Public Health & Environmental Services	Jennifer Wheeler	Denise Hall
Cioce*	Danielle	Urban County	Harris County	Camila Biaggi*	Nick Russo
Ehrlich*	Denise	Business / Industry	Gulf Coast Waste Disposal Authority	Shaun Austin	
Elliott	Catherine	Urban County	Harris County Flood Control District	Robert Snoza	Carolyn White*
Hall	Greg	Small City	City of Conroe		
Harris	Teague	Utility District	IDS Engineering		
Iken	Jason	Large City	City of Houston	Carol LaBreche	Richard Chapin
Ivy	Tom	Conservation	Texas Stream Team	Jim Williams	
Johnson*	Nate	Conservation	Galveston Bay Foundation	Scott Jones	
Kelly*	Ty	Conservation	Bayou Preservation Association	Steve Hupp	
Lane	Helen	Conservation	Houston Audubon Society	Bethany Foshee	
Lindsey	Mike	Rural County	Montgomery County	Frank Green	Scott Nichols
Maske	Craig	Business / Industry	IDS Engineering	Scott Saenger	
McCoy	Cathy	Agriculture	Harris County SWCDistrict #442		
Olive	Becky	Business / Industry	AECOM	Ralph Calvino	Patty Matthews
Olson	Anne	Conservation	Buffalo Bayou Partnership	Jessalyn Giacona	Linda Shead
Page	Mitchell	Utility District	Schwartz, Page, & Harding, LLP	Michael Page	
Parkhill	David	Business / Industry	San Jacinto River Authority		
Pavlovich	Raymond	Utility District	Nottingham Country Municipal Utility District	Michael Thornhill	Matt Carpenter
Pechacek	Linda	Public	Citizen, Civil Engineer	Rachel Powers	
Robertson	Jim	Conservation	Cypress Creek Flood Control Coalition	Richard Smith	
Shead	Shead	Conservation	Texas Coastal Partners	Mary Ellen Whitworth	
Shmaefsky	Brian	Resource Agency / Academia	Lone Star College, Kingwood	Jon Connolly	
Smith	Earl	Small City	City of League City	Susie Blake	Jody Hooks
Wieczorek	Aaron	Large City	City of Houston		
VACANT		Rural Small City			
VACANT		Agriculture (County)			
VACANT		Rural County			
VACANT		Business / Industry (Boating)			
VACANT		Agriculture			

* Requires BIG Approval



**SPRING MEETING
Summary**

**Tuesday, May 24, 2016
1:00 pm to 3:00 pm**

**H-GAC Conference Room B, Second Floor
3555 Timmons Lane**

Members Present

Richard Chapin, Catherine Elliott (phone), Rick Felan, Teague Harris (phone), Jason Iken, Tom Ivy, Mike Lindsey (phone), Mitchell Page, David Parkhill (phone), Raymond Pavlovich, Linda Pechacek, Jim Robertson, Linda Shead, Brian Shmaefsky, Aaron Wieczorek

David Brown was represented by Michael Lee
Marilyn Christian was represented by Denise Hall
Bruce Heiberg was represented by Steve Hupp
Alisa Max was represented by Danielle Cioce
Anne Olson was represented by Linda Shead
Earl Smith was represented by Jody Hooks

Members Absent

Michael Bloom, Greg Hall, Jason Iken, Scott Jones, Helen Lane, Craig Maske, Cathy McCoy

Guests Present

Matt Bencroft, Brian P. Boyd, Glenda Callaway, Lawrence Childress, Tom Douglas, Kate Hallaway, Diane Humes, Scott Galaway, Lisa Groves, Dancie Jones, Janice Keeven, Brian Koch, Carol La Breche, Jason Liefester, Sonja Lewis, Lisa Marshall, Norman Mollard, Chip Morris, Jack Murphy, Heather O'Keefe, Ambrose Okpokpo, Rod Panheiro, Rachel Powers, Richard Smith, Robert Snoza, Carolyn White

H-GAC Staff Present

Justin Bower, Meredith Dang, Mary Martha Gaiennie, Bill Hoffman, Kathy Janhsen, Steven Johnston, Paniz Miesen, Will Merrell, Jean Wright

Call to Order/Welcome/Introductions

Steven Johnston welcomed those in attendance. Members of the BIG and guests were asked to introduce themselves. The agenda was reviewed and the BIG was provided an opportunity to discuss.

Certification of Quorum

A quorum was certified during the meeting.

Item 1: Approval of Proposed Members & Alternates

One change was made to the BIG roster. Carolyn White was added as a Harris County Flood Control District Alternate for Urban Counties.

Item 2: Approval of November 2, 2015 Meeting Summary

The BIG was provided the opportunity to review and give comment to the draft November meeting summary. No changes were requested and the item was approved.

Item 3: Public Comment

No public comments were made.

Item 4: Presentation

Ms. Carolyn White of the Harris County Flood Control District gave a presentation titled, "Streambank Stabilization and Pollutant Load Reduction." The presentation's focus was on the District's efforts to curtail sediment transport by using a variety of streambank stabilization methods as detailed in their recently published "Streambank Stabilization Handbook." Of interest to the BIG is opportunities to prevent the mobilization of bacteria that can be agitated when the soils of streambanks are eroded. Ms. White described the District's latest effort to mimic stream geomorphology and reduce stream energy which causes banks to erode.

Item 5: TMDL Updates

Mr. Jason Leifester of the TCEQ's Total Maximum Daily Load (TMDL) Program gave an update on changes to date for the region's TMDL planning processes. TMDLs become part of the Water Quality Management Program (WQMP) upon adoption and approval. Updates are made by the TCEQ's Water Quality Division quarterly. The update goes through a public comment process and requires the EPA's approval.

TMDL updates are made to existing TMDLs for two main reasons: 1) Changes involving WWTFs in the watershed and 2) Changes to allocations for regulated vs. unregulated stormwater. In addition, updates are made to address adding new segments/AUs in existing TMDL watersheds. Since the TMDL was completed, whenever a new WWTF receives a permit, an existing permit expires or is canceled or an amendment to discharge in an existing permit, an update is required as the change can affect an individual WLA and the TMDL equation.

Following the TMDL, a change in percentage of the watershed area designated as an Urbanized Area (UA) or TMDLs completed when 2000 census data was used now that there is 2010 census data, can affect the TMDL equation and require an update.

Since the original TMDLs for the BIG Project Area were completed, there have been 64 WQMP updates and 7 Addenda. The updates were needed as there were 534 WWTF permitted when the TMDLs were originally approved. There are 552 WWTF currently permitted. The bulk of WQMP changes take place in the 2,204 square mile BIG Project Area due to the number of WWTFs, which average 1.4 million gallons per day (MGD) with a median of 0.5 MGD.

The addition of Armand Bayou added two WWTF and the future additions of Jarbo Bayou and East and West Fork of the San Jacinto River will add one and 53, respectively. Mr. Leifester noted that the East and West Fork is currently set to go before the TCEQ Commissioners on August 24, 2016. He also noted that Jarbo Bayou was pulled from the Agenda due to the change in the TMDL equation from the addition of a WWTF permit request, where there had been no WWTF dischargers.

As a comparison, the 406 square mile (one-fifth the size but the most similar to the BIG), Greater Trinity I – Plan contains four WWTFs, three of which are over 150 MGD. Since the seventeen TMDLs were completed in this region, there has not been a WQMP update.

The BIG asked Mr. Leifester why there was such a difference in number of WWTFs between Houston and Dallas and whether regionalization could help improve water quality. Mr. Leifester did not feel he could adequately answer these questions with the data he has available. He did state that he would study these questions to see if more information can be found and was willing to report back to the BIG.

Item 6: Implementation Plan Updates

Mr. Johnston presented a draft Addendum to the BIG I-Plan for review by the BIG. Mr. Johnston noted that the Addendum when approved in October, would add seven AUs to the BIG Project Area and complete the process of adding the East and West Fork of the San Jacinto River to the project area based on the Commissioners for the TCEQ approving the East and West Fork TMDL at their August 24, 2016 Agenda. Mr. Johnston noted that Jarbo Bayou's addition to the BIG is delayed due to changes to the TMDL required due to the WWTF permit request in the watershed.

Item 7: 2016 Annual Report Update

Mr. Johnston reviewed progress to date with the 2016 Annual Report. There remains data gathering work to complete the WWTF Permit and DRM analysis. Additionally, the Clean Rivers Program data has only been certified through August 31, 2015 and staff would like to have the full year completed to update all graphs and the Top Ten/Least Ten lists. Mr. Johnston asked the BIG for suggested success stories and noted that the timeline has been adjusted for BIG and stakeholder review during the summer.

Mr. Johnston presented the current bacteria trend graph to the BIG, noting the missing data. It was also noted that the graph is slightly changed from previous years. Staff previously included enterococci data collected alongside *E. coli* in fresh water as assumptions in the relationship were used. When reviewing this last year, those assumptions did not appear to be proven and all enterococci data were removed from fresh water streams. That had the effect of lowering both trend lines as the enterococci data was inflating the graph for stations in the BIG and those outside the BIG project area.

Mr. Johnston then reviewed the new geometric bacteria trend line graph that includes a bacteria geometric mean graph for Armand Bayou, BIG project area, and Big project area minus Armand Bayou. With the addition of Armand Bayou, the combined trend line is notably lower than the trend line that excludes Armand Bayou. BIG members in attendance liked the revised trend graph.

Mr. Johnston reviewed highlights from data and information gathered for the Annual Report. Data and observation were presented on sanitary sewer overflow data and discharge monitoring reports. Substantial outreach, training and options for pollution reporting were completed over the course of the last year. Several key implementation projects started, continued or were completed during 2015.

Item 8: BIG Implementation Report Story Map

Mr. Johnston reviewed updates to the BIG Implementation Report Story Map website. Mr. Johnston walked through the online application during the meeting and took comments. The story map application is set up like the BIG I-Plan with sections focused on I-Plan strategy areas. The goal as data becomes available for each area, add that data and allow viewers to see what happened over the past year or progress that is made since the I-Plan was approved. Eventual trends will be added as multiple years of data can be viewed. The challenge remains in getting data for all strategies. WWTF data and SSO data is available, however, MS4 activities and enforcement activities are more challenging to access.

Item 9: H-GAC Staff Project Updates

H-GAC staff were present to provide select H-GAC project updates.

- Upper Oyster Creek TMDL and I-Plan

Justin Bower present the update on Upper Oyster Creek TMDL. Mr. Bower reviewed the TMDL project area and background. Upper Oyster Creek is impaired for bacteria and dissolved oxygen. The I-Plan was completed and approved in 2014. The impairments remain and efforts to better track flow and gather additional monitoring data are ongoing. The stakeholders have been active through MS4 implementation, improved utility management, development of pet parks, strong educational focus and agriculture programs.

- Basin 11 and 13 TMDL Projects

Mr. Johnston reviewed progress on the TMDL basin projects. He noted that data gathering was completed and final analysis is wrapping up. Staff are working on

informing area stakeholders and gathering stakeholder feedback. The data analysis and feedback will be used to develop watershed recommendations within the Basins.

- LID Guidebook

Mary Martha Gaiennie updated the BIG on the development of a LID Guidebook. Ms. Gaiennie reviewed the project and efforts to include target stakeholders through two workshops. The first workshop included LID design elements and encouraged stakeholders to participate on several design scenarios. The last workshop held on May 20, 2016, presented the results of the project which culminated in the LID Guidebook. Ms. Gaiennie stated that her current focus is on distributing the guidebooks to targeted groups, particularly local governments.

- CRP

Ms. Jean Wright presented an update on the Clean Rivers Program (CRP). Ms. Wright stated that this year the focus has been on writing the Basin Summary Report which is completed every five years and comprehensively reviews water quality data for trends and changes to all basins within the H-GAC CRP region. Each segment within the basins are evaluated and summaries are developed using the state's water quality standards.

Ms Wright reported significant findings for the CRP region, which include:

- Bacteria impairments for 41% of stream miles with an improvement in 9% and decline in 2%;
- Dissolved Oxygen impairment in 21% with an improvement in 6% and decline in 4%;
- Nutrients exceeded screening criteria in 33% of the region with 2% improvement and 39% decline; and
- PCBs and Dioxins impairments found in 37%.

In addition to summarizing water quality, the Basin Summary Report includes detailed segment summaries for each watershed contained within the basins found the H-GAC CRP region. These summaries include segment descriptions, monitoring station locations, assessment of the impairments, review and analysis of water quality trends and available geospatial analysis.

Ms. Wright concluded by noting the H-GAC is receiving additional funds from the TCEQ CRP that will be allocated to additional monitoring in the region. One area that will receive additional attention is the East Fork of the San Jacinto River to better understand water quality in that region and to work with a new partner from Sam Houston State University – Texas Research Institute for Environmental Studies.

- Our Great Region

Meredith Dang presented the latest on the Our Great Region 2040 project. Ms. Dang reminded the BIG that the goal develop during the project was to create a plan if

implemented would ensure our region is as good or better a place to live, work, and prosper in 2040 than it is today. There are six strategies in the plan: Economic Development, Healthy Communities, Housing, Transportation, Resiliency, and Environment. The 24 partner organizations developed these six goals in an effort to strengthen economic competitiveness, secure clean and ample water, cultivate healthy places to live, work and play, provide balanced housing choices, while achieving a world-class transportation system. Ms. Dang stated that next steps for the project include:

- Updating the data,
- Update Implementation Report,
- Gather Local Examples and
- Implement an Awards Program

Item 10: Other Business/Roundtable

As time permits, H-GAC, BIG members, and stakeholders are encouraged to discuss implementation activities, related projects, and announcements.

Next Meeting Date

October 25, 2016

H-GAC Conference Room B (2nd Floor)

Adjourn

Bacteria Implementation Group Implementation Plan

Third Addendum

- 1) **Change to Title Page to reflect the addition of 7 new TMDLs (in bold) within the BIG project area.**

New Title Page:

Approved by the Commission: January 30, 2013

Approved by the Bacteria Implementation Group: October 16, 2012

Revised by the Bacteria Implementation Group: **October 25, 2016**

Implementation Plan for **One Hundred and Two** Total Maximum Daily Loads for Bacteria in the Houston-Galveston Region

Segments

Buffalo and White Oak Bayous: 1013, 1013A, 1013C, 1014, 1014A, 1014B, 1014E, 1014H, 1014K, 1014L, 1014M, 1014N, 1014O, 1017, 1017A, 1017B, 1017D, 1017E, and 1017F

Clear Creek: 1101, 1101A, 1101B, 1101C, 1101D, 1101E, 1102, 1102A, 1102B, 1102C, 1102D, 1102E, and 1102G

Greens Bayou: 1016, 1016A, 1016B, 1016C, and 1016D

Eastern Houston: 1006F, 1006H, 1007F, 1007G, 1007H, 1007I, 1007K, 1007M, 1007O, and 1007R

Halls Bayou: 1006D, 1006I, and 1006J

Brays Bayou: 1007B, 1007C, 1007E, and 1007L

Sims Bayou: 1007 D and 1007N

Watershed Upstream of Lake Houston: 1004E, 1008, 1008H, 1009, 1009C, 1009D, 1009E, 1010, and 1011

Armand Bayou: 1113, 1113 A, 1113B, 1113C, 1113D, and 1113E

Lake Houston, East Fork San Jacinto River, West Fork San Jacinto River, and Crystal Creek: 1002, 1003, 1004, 1004D

October 25, 2016

Mr. Chris Loft, Program Lead
Total Maximum Daily Load Program
Texas Commission on Environmental Quality
MC-203
P.O. Box 13087
Austin, TX 78711-3087

Subject: Texas Commission on Environmental Quality Implementation of the Bacteria Implementation Plan

Dear Mr. Loft,

The Houston-Galveston Area Council, on behalf of the Bacteria Implementation Group (BIG), is writing this letter to request information from the TCEQ in support actions taken to implement the Implementation Plan for Seventy-Two Total Maximum Daily Loads for Bacteria in the Houston-Galveston Region (I-Plan). The BIG created the I-Plan to address bacteria impairments and improve water quality in the region. A copy of the I-Plan can be found at: <http://www.h-gac.com/community/water/tmdl/BIG/reports.aspx>.

As part of the I-Plan, BIG stakeholders are required to draft an annual report that chronicles projects carried out during the year to assist in tracking implementation of the plan, highlight impactful projects, and to determine if stakeholder efforts are meeting plan goals. TCEQ, notably Region 12 staff, has contributed greatly toward documenting TCEQ's implementation effort and development of annual reports.

The BIG respectfully requests TCEQ provide any additional information covering I-Plan strategies and activities that directly reference contributions by TCEQ, data to support tracking or areas where TCEQ might have additional information.

The BIG is specifically interested in the following:

- **Will TCEQ consider increasing the monitoring frequency permit requirement for WWTFs in the BIG Project Area, I-Plan Activity 1.1?** The BIG proposed in the I-Plan, monitoring at WWTFs at greater frequency than current state permit requirements (Table 6, page 52). The BIG has found since the approval of the I-Plan that the present

frequency at larger permitted flow WWTFs has helped improve plant function. The BIG feel that increasing the frequency at the smaller permitted flow WWTFs would likely prove to be a benefit.

- **How the TCEQ will increase in WWTF compliance and enforcement and provide data to track implementation, I-Plan Activity 1.3?** Activity 1.3 on page 54, Increase Compliance and Enforcement recommends increased 'no notice' inspections, allowing TCEQ to utilize focused sampling investigations, and to increase staffing if necessary.
- **How the TCEQ will strengthen controls on subscriber systems, I-Plan Activity 2.5?** Activity 2.5 found on page 62 recommends identifying subscriber systems and recommends the TCEQ consider rulemaking to require registration of subscriber systems.
- **How the TCEQ will strengthen and better facilitate reimbursement of Bacteria Reduction Measures, I-Plan Activity 4.6?** Activity 4.6 on page 75, the BIG is concerned that the lack of a concrete policy to facilitate MUD reimbursement to developers for stormwater quality features instills risk and inhibits their broad use due to the risk-adverse nature of development process.

Excerpts of the listed I-Plan activities have been enclosed with this letter. Please let us know who we need to follow up with. Thank you for the opportunity to work together on improving water quality in the greater Houston area.

Sincerely,

Todd Running
Water Resources Program Manager
Community and Environmental Planning
Houston-Galveston Area Council

Cc: Members of the BIG
Jason Leifester
Lauren Oertel

Enclosure