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JUL 11 2014

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 3, 2014

Mr. Dwayne Johnson, Project Manager
Galveston District CESWG-PE-RE
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229

Re: USACE Permit Application No. SWG-2012-01007

Dear Mr. Johnson:

As described in the Joint Public Notice, dated April 29, 2014, the applicant, Harris County Flood Control District (HCFCD), proposes to conduct the Memorial Park Demonstration Project. The project is located on Buffalo Bayou in Houston, Harris County, Texas.

The applicant proposes to restore approximately 6,600 linear feet of Buffalo Bayou and 800 linear feet of Hogg Bird Tributary of Buffalo Bayou. The applicant proposes to use natural channel design techniques to create a stable stream reach by establishing a riffle and pool system, installing in-stream structures to protect the banks from erosive flows and provide aquatic habitat, modifying the stream bed and banks to restore stream meanders, re-establishing native vegetation, and stabilizing banks that have eroded and are threatening the integrity of adjacent properties.

In addition to the information contained in the public notice, the following information is needed for review of the proposed project. Responses to this letter may raise other questions that will need to be addressed before a water quality certification determination can be made.

1. Title 30, Texas Administrative Code (TAC), Chapter 279.11(c)(1), states that "No discharge shall be certified if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, . . ." please have the applicant explain why this section of Buffalo Bayou was the primary site selected to conduct a demonstration project. Practicable alternatives are preliminarily assumed to exist, but the applicant does have the opportunity to clearly demonstrate that no practicable alternatives exist.
2. If the aquatic resources cannot be avoided, appropriate and practicable steps should be taken to minimize potential adverse impacts (30 TAC §279.11(c)(2)). Please provide more detailed information on what options were considered to minimize impacts and why they were eliminated. Please have the applicant detail why the oxbow area in Transect 6 cannot be used as a mitigation area or potential overflow channel for Buffalo Bayou, and why wetland areas cannot be avoided. Also, please have the applicant explain how the

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overall footprint can be reduced for the demonstration project, considering that the project is experimental and success has not been proven. If these or other options are not feasible, please explain why.

3. Please provide a list of Best Management Practices (BMPs) that will be used to protect and maintain water quality during the construction phase of the project.
4. In the Galveston District stream assessment tool, several metrics suggest a tree is determined to be functional at 3 inch diameter breast height (DBH) or greater. The tree survey conducted on Buffalo Bayou examined trees equal to or greater than 8 inches DBH. Please have the applicant explain how this size threshold was selected.
5. From the public notice, one of the objectives of the proposed project is to improve water quality within the Buffalo Bayou watershed. However, the project as proposed may degrade water quality over the long term due to the removal of significant amounts of riparian vegetation. Riparian function supports stream integrity, especially in the area of bank stabilization. Please have the applicant reconsider the amount of riparian vegetation to be preserved, removed, and re-established within the Buffalo Bayou corridor. The Texas Commission on Environmental Quality (TCEQ) suggests preserving as many existing native trees as possible and recommends consultation with Texas Parks and Wildlife Department regarding proposed plantings. Please have the applicant submit a clear and concise plan outlining what requirements must be met to remove riparian vegetation. Also, please have the applicant submit any plans to control invasive species until the riparian corridor is reestablished. Lastly, please also have the applicant submit a monitoring plan associated with the plantings to ensure survivability of planted species.
6. The public notice and additional information provided do not provide any baseline ecological data for current stream conditions. Please have the applicant perform a baseline ecological assessment prior to construction of the demonstration project. To better ensure the replacement of existing stream functions and values, a functional assessment of the stream before and after the proposed modifications should be performed. It is recommended that TCEQ stream assessment methods be utilized (Surface Water Quality Monitoring Procedures Volumes 1 and 2, TCEQ publication numbers RG-415 and RG-416). Please have the applicant provide performance standards and a monitoring plan to show the success of the stream restoration. The applicant should consider permanent stations along the restored stretch for monitoring purposes. Please also have the applicant provide an Adaptive Management Plan for contingency purposes.
7. Additional information provided by the applicant at site visits and in the application suggests that heavy equipment access points will need to be established prior to construction. Please have the applicant submit planned locations for access points and detail any proposed impacts that will occur in these areas.

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8. Project plans depict areas that will be channelized throughout the project reach. The applicant suggests that stormwater conveyance needs, stream profile improvement, and sedimentation issues may be resolved through the proposed project. Please have the applicant demonstrate how the overarching purpose of water quality enhancement is served through these proposed stream pattern and profile improvements.
9. The applicant also proposes to dredge and regrade the channel profile to create stream sequences that may not be supported by a stream of this magnitude. Please have the applicant demonstrate that the proposed project incorporates a design that appropriately supports stream mechanics in this area. Wherever possible, fluvial geomorphological principles should be adhered to in the project design such that the stream can most closely mirror natural stream functions. Channel modification should be designed to achieve a stable, naturally vegetated floodplain-meander channel with consideration of appropriate stream bed features such as riffle-pool sequences. The channel, bank slopes, and floodplain shelves should be vegetated with suitable woody and herbaceous species to provide for stability, pollutant filtration, instream shading and cover, and enhanced wildlife and fisheries habitat.
10. Considering that the proposed project is situated between Addicks and Barker Reservoirs upstream and a channelized portion of the bayou downstream, please have the applicant explain how the integrity of the project site will be maintained in the midst of these modified sections of Buffalo Bayou.

The TCEQ appreciates the opportunity to comment and looks forward to receiving and evaluating other agency or public comments. Please provide any agency comments, public comments, as well as the applicant's comments, to Ms. Brittany Lee of the Water Quality Division MC-150, P.O. Box 13087, Austin, Texas 78711-3087. Ms. Lee may also be contacted by e-mail at Brittany.Lee@tceq.texas.gov, or by telephone at (512) 239-5210.

Sincerely,



David W. Galindo, Director
Water Quality Division
Texas Commission on Environmental Quality

DWG/BML/tc

cc: Ms. Denise Wade, Harris County Flood Control District, 9900 Northwest Freeway,
Houston, Texas, 77092