December 9, 2013

Andria Davis
Regulatory Branch, CESWG-PE-RE
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229

RE: Public Notice SWG-2013-00797

Dear Ms. Davis:

The applicant, KB Homes, proposes to construct a 36-acre residential subdivision, resulting in the filling 4.5 acres of wetlands. The project site is located adjacent to Willow Fork, near Katy, Fort Bend County, Texas. The project can be located on the U.S.G.S. quadrangle map titled: KATY, Texas at Latitude: 29.767068 North; Longitude: -95.863807 West.

The applicant states that avoidance and minimization consisted of exploring various layout options for the homes on the site. They state that the small size of the project area and bordering Willow Fork limited the developmental options, and therefore they only submitted the proposed project and a no build alternative as options. Mitigation will be conducted through purchasing credits from an approved mitigation bank.

The Galveston Bay Foundation (GBF) has reviewed Public Notice SWG-2013-00797. We oppose the approval of this application for the following reasons:

1. Inadequate alternatives analysis. The applicant's alternatives analysis does not adequately describe attempts made to avoid or minimize impacts to waters of the U.S. The cursory three-sentence explanation does not provide enough information about siting and site-specific efforts the applicant has made to avoid impacts to wetlands. An adequate alternatives analysis must be provided so that the U.S. Army Corps of Engineers and reviewers of the public documents can assess whether the applicant has followed the mitigation sequence. The fact that the project area is deemed small does not relieve the applicant of exploring different options for the placement of specific home lots on their property such that impacts to jurisdictional wetlands and other waters of the U.S. are avoided or at the very least minimized. Based on the information provided in the public notice, GBF feels that the avoidance and minimizations steps may have been skipped. We believe that the applicant can alter the site plan such that impacts are reduced. Specifically, we believe that it is important to arrange the lots in the development in such a way that the oxbow wetland can be preserved. Likewise, we feel that the applicant can utilize conservation development best management practices and build around the two adjacent wetlands by altering the lot layout rather than simply filling them in. If preserved, these wetlands can provide a community asset aesthetically and through the water quality and habitat functions they provide.

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2. Storm water. The development project would result in significantly more impervious surface area within the watershed of Willow Fork and Buffalo Bayou; areas which are already prone to flooding. It is not clear how storm water from the site would be handled post-construction. Research has repeatedly indicated that urban development along riparian corridors and adjacent to water bodies has a well-correlated, negative effect on instream water quality, biodiversity, and aquatic habitat. [1,2,3,4,5,6] These negative effects are often tied to increased impervious surface cover and subsequent frequent and intense disturbance of instream primary producers from increased water volumes and velocities.[5] These effects are usually not temporary and persist so long as the noted land use patterns exist unless steps are taken to buffer these impacts.[5,6] Deposition of herbicides and pesticides associated with developed land management can also have long lasting, complex effects within adjacent aquatic communities.[7,8] Maintaining good water quality is particularly important given the continued increase in development in the watershed. As a part of the application process, we recommend that storm water volumes, handling, and quality measures be reevaluated to be certain that secondary impacts to Willow Fork and Buffalo Bayou will not result from increased runoff associated with increased impervious surface cover within the development footprint. We believe that Low Impact Development (LID) best management practices need to be incorporated into the project, such as utilizing existing wetlands for water quality and quantity functions. These practices would help to maintain water quality and storm water quantity functions on site, which are vital considering the loss of wetlands adjacent to a waterway.

3. Cumulative impacts. In addition to the habitat that it provides, wetland and riparian vegetation in area watersheds should be preserved to protect downstream water quality in Willow Fork, Buffalo Bayou and Galveston Bay. GBF is concerned about cumulative impacts within this streambed portion of the Galveston Bay watershed resulting from present and foreseeable development. One of the greatest threats to coastal habitat in the

[1] Jones, E.B. Dale III, Helfman, Gene S., Harper, Joshua O., and Paul V. Bolstad. "Effects of Riparian Forest Removal on Fish Assemblages in Southern Appalachian Streams." Conservation Biology. Vol. 13, No. 6, pp. 1454-1465. December 1999.
[2] Semlitsch, Raymond D., and J. Russell Bodie. "Biological Criteria for Buffer Zones around Wetlands and Riparian Habitats for Amphibians and Reptiles." Conservation Biology. Vol. 17, No. 5, pp. 1219-1228. October 2003.
[3] Lerberg, Scott B, Holland, A. Frederick, and Denise Sanger. "Responses of Tidal Creek Macrobenthic Communities to the Effects of Watershed Development." Estuaries. Vol. 23, No. 6, December 2000, pp 838-853.
[4] The State of the Bay- A Characterization of the Galveston Bay Ecosystem, 2nd Ed. Galveston Bay Estuary Program Publication GBEP T-7. Lester and Gonzalez, Eds., 2002, 162 pages.
[5] Moore, Aaron A., and Margaret A. Palmer. "Invertebrate Biodiversity in Agriculture and Urban Headwater Streams: Implications for Conservation and Management." Ecological Applications. Vol. 15, No. 4, pp. 1169-1177. August 2005.
[6] Dodson, Stanley I., Lillie, Richard A., and Susan Will-Wolf. "Land Use, Water Chemistry, Aquatic Vegetation, and Zooplankton Community Structure of Shallow Lakes." Ecological Applications. Vol. 15, No. 4, pp. 1191-1198. August 2005.
[7] Rohr, Jason R. and Patrick W. Crumrine. "Effects of an Herbicide and an Insecticide on Pond Community Structure and Processes." Ecological Applications. Vol. 15, No. 4, pp. 1135-1147. August 2005.
[8] Relyea, Rick A. "The Lethal Impact of Roundup on Aquatic and Terrestrial Amphibians." Ecological Applications. Vol. 15, No. 4, pp. 1118-1124. August 2005.

Houston-Galveston area is currently urbanization and residential development.[9,10] The *Galveston Bay Plan* recognizes habitat destruction and its effect on fish and wildlife populations as the "single greatest environmental problem affecting the Galveston Bay System".[11] Research has repeatedly indicated that urban development has a well-correlated, negative effect on instream water quality, biodiversity, and aquatic habitat.[12,13,14,15] These effects are usually not temporary and periodic. Rather, these are often associated with lack of streamside vegetative buffers in urban/industrial waterways, increased impervious surface cover, and related frequent and intense disturbance of instream primary producers related to these developments, such as from increased flood flows. These conditions generally persist so long as the noted land use patterns exist unless steps are taken to buffer these impacts.

GBF requests that any granted permit should include language that addresses our concerns noted above.

Thank you for the opportunity to comment. If you have any questions, please contact Brady Johnson, Wetland Permit Review Specialist, at (281) 332-3381 x220 or bjohnson@galvbay.org.

Sincerely,

Brady Johnson
Wetland Permit Review Specialist
The Galveston Bay Foundation

cc: TCEQ – 401 Program
TPWD
USEPA
USFWS

[9] Moulton, Daniel W. and John S. Jacob. Texas Coastal Wetlands Guidebook. Texas Sea Grant. 2000. Page 16 of 66 pages.
[10] Moulton, D.W., T.E. Dahl, and D.M. Dahl. Texas Coastal Wetlands: Status and Trends, Mid-1950's to Early 1990's. U.S. Dept. of the Interior. March, 1997. Page 14 of 32 pages.
[11] Galveston Bay Estuary Program Publication GBNEP-49, The Galveston Bay Plan; The Comprehensive Conservation and Management Plan for the Galveston Bay System, 1994, 457 pages
[12] Lerberg, Scott B, Holland, A. Frederick, and Denise Sanger. "Responses of Tidal Creek Macrobenthic Communities to the Effects of Watershed Development." Estuaries. Vol. 23, No. 6, December 2000, pp 838-853.
[13] The State of the Bay- A Characterization of the Galveston Bay Ecosystem, 2nd Ed. Galveston Bay Estuary Program Publication GBEP T-7. Lester and Gonzalez, Eds., 2002, 162 pages.
[14] Moore, Aaron A., and Margaret A. Palmer. "Invertebrate Biodiversity in Agriculture and Urban Headwater Streams: Implications for Conservation and Management." Ecological Applications. Vol. 15, No. 4, pp. 1169-1177. August 2005.
[15] Dodson, Stanley I., Lillie, Richard A., and Susan Will-Wolf. "Land Use, Water Chemistry, Aquatic Vegetation, and Zooplankton Community Structure of Shallow Lakes." Ecological Applications. Vol. 15, No. 4, pp. 1191-1198. August 2005.