



GALVESTON BAY FOUNDATION

January 29, 2019

Evaluation Branch, North Unit
Regulatory Division, CESWG-RD-E
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229

RE: Public Notice SWG-2016-00384

To Whom It May Concern:

The applicant, Romerica Investments, LLC, proposes to discharge 68,323 cubic yards of fill material into 42.35 acres of wetlands and an estimated 285 cubic yards of fill material into 771 linear feet of streams adjacent to the West Fork San Jacinto River during the development of a marina/resort district, a commercial district, a residential district, and roadway expansion.

The project is located in waters and wetlands adjacent to the West Fork of the San Jacinto River, in Kingwood, in Harris County, Texas. The aquatic features onsite include open water, forested wetlands, emergent wetlands, and streams. The subject wetlands and waters are located in the Bens Branch-Frontal Lake Houston watershed (United States Geological Survey (USGS) Hydrologic Unit Code (HUC) 12040101) which flows into the West Fork of the San Jacinto River and Lake Houston. The project can be located on the U.S.G.S. quadrangle map entitled: Moonshine Hill, Texas at latitude 30.036463° North; longitude 95.215438° West, and contains the following elements:

Marina/Resort District (107.41 acres)

The applicant proposes to discharge 19,690.7 cubic yards of fill material into a total of 12.21 acres of wetlands to construct the marina/resort district. The applicant proposes to expand the existing 15-acre lake associated with the West Fork San Jacinto River into an 80-acre marina with a maximum capacity for 640 boats. The applicant proposes to construct a new navigation channel to the south of the proposed marina and expand the existing channel on the east for better connectivity between the proposed marina and the West Fork San Jacinto River. The applicant proposes to develop the 25 acres north of the proposed marina into a resort district. The resort district will consist of a resort hotel, commercial, and residential space. The excavated fill material would be used to raise the elevation of the resort district from 45 feet to 57 feet above base flood elevation, to raise the proposed structures above the Federal Emergency Management Agency (FEMA) 100-year floodplain of the West Fork San Jacinto River.

Commercial District (64.41 acres)

The applicant proposes to discharge 959.6 cubic yards of fill material into a total of 0.59 acres of wetlands and 110 linear feet of streams to construct the commercial district. The applicant proposes to construct, within 47 acres, retail, residential, and office space. The applicant proposes to discharge fill material to

raise the elevation of the commercial district from 45 feet to 57 feet over base flood elevation, to raise the proposed structures over the FEMA 100-year floodplain of the West Fork San Jacinto. The applicant proposes to expand an existing 16.25-acre lake to a 19.25-acre size to create a smaller marina area for personal watercraft parking. The applicant proposes to create a 125-foot wide interconnecting channel between the 80-acre marina and the 19.25-acre marina to provide navigable access between the two marinas and the marina/resort district and the commercial district.

Residential District (136.93 acres)

The applicant proposes to discharge 46,213.9 cubic yards of fill material into a total of 28.60 acres of wetlands and 404 linear feet of streams to construct the residential district. The applicant proposes to construct, within 64 acres, condominium structures on pier and beam foundation. The applicant will construct the pier and beam condominium structures at a height of 58.5 feet, above the FEMA 100-year floodplain of the West Fork San Jacinto River. The applicant also proposes to construct, within 6 acres of the southern portion of the residential district, 25-story condominiums with parking garages. The applicant will discharge fill material within the southern portion of the residential district to raise the proposed structures and elevations to 57 feet above the FEMA 100-year floodplain of the West Fork San Jacinto River. The applicant proposes to construct four lakes at a total of 6.75 acres throughout the western portion of the residential district. The applicant proposes to construct 1.95 miles of 41-foot-wide roadways with 60-foot-wide right-of-way throughout the residential district beginning at Woodland Hills Drive. The applicant proposes to construct 4-foot and 8-foot wide trails, with a 20-foot-wide easement, around the perimeter of the residential district using bridges over all stream and channels. The applicant proposes to avoid trees and construct the trails of natural materials. The applicant proposes to relocate the existing utility easement within the proposed 20-foot proposed pedestrian trail easement.

Woodland Hills Road Expansion (22.7 acres)

The applicant proposes to discharge 1,743.8 cubic yards of fill material into a total of 0.960 acres of wetlands and 257 linear feet of streams to construct the Woodland Hills Roadway expansion. The applicant proposes to expand Woodland Hills Drive within the existing right-of-way from two lanes to four lanes.

The applicant has stated that they have avoided and minimized the environmental impacts by configuring the location of the proposed structures and reducing the size of the proposed lakes within each district. The applicant proposed to mitigate for the proposed impacts by developing a permittee responsible mitigation site and/or purchasing credits from an approved mitigation bank within the Galveston District boundaries.

The Galveston Bay Foundation (GBF) has reviewed Public Notice SWG-2016-00384. We are opposed to U.S. Army Corps of Engineers' (Corps') approval of this permit application as currently proposed for the following reasons:

1. Water dependency, impact avoidance, indirect and secondary impacts through induced flooding and pollutant loading: The proposed resort/commercial/residential development is not a water dependent activity. However, the application materials do not include a discussion of alternatives/alternatives analysis consistent with Section 404 (b)(1) guidelines found at 40 CFR 230. Other than a one sentence description indicating that the applicant "avoided and minimized the environmental impacts by configuring the location of the proposed structures and reducing the size of the proposed lakes within each district", we are provided no information as to how the applicant avoided and minimized impacts to the Waters of the U.S. open water, forested wetlands, emergent wetlands, and

streams contained in the 331.45 acres of undeveloped woodlands including open water, forested wetlands, emergent wetlands, and streams, all of which provide for critical habitat and water quality functions.

We further note that the area is historically subject to severe flooding impacts, which could result in pollutant loading from these developed areas to the West Fork of the San Jacinto River and thus to Lake Houston, the major drinking water supply to the Houston Metro Area. Pollutants can include toxicants and nutrients contained in household cleansers, pesticides, fertilizers, and petroleum products that may be released in flood events.

From our review, it appears that most of this development is located in the 100-year floodplain, and that floodway is in the footprint of the southern marina and in portions of the resort, commercial, and residential districts' footprint. This development will result in increased impervious cover to areas located in floodway and floodplain, which can lead to flooding of adjacent residential and commercial areas. As such, the applicant should perform hydrological analysis to ensure the design will not induce flooding to surrounding developments, which in turn can further increase risks of pollutant loading to the waterways.

Based on prior history of flooding events in this particular area, we recommend that a site more suitable for a resort/commercial/residential development, or at the least a reduced floodplain project footprint in the floodplain be sought. For the reasons listed in this section, the applicant should not be allowed to develop in any floodways.

2. Assessment of impacts to Waters of the U.S. and proposed mitigation: The application materials provide no assessment of the impacts to functions and services provided by the open water, forested wetlands, emergent wetlands, and streams to be impacted, nor an assessment of the functional lift to be provided by any permittee-responsible mitigation plan. The applicant must assess the impacts to the functions and services provided by the impacted wetlands and other waters of the U.S., as required in the 2008 Final Rule for Compensatory Mitigation for Losses of Aquatic Resources, as well as that of the proposed mitigation.
3. Absence of mitigation plan: The application materials do not include an acceptable mitigation plan, as required by the 2008 Final Rule for Compensatory Mitigation for Losses of Aquatic Resources, including all twelve required elements. Since the applicant has indicated that permittee-responsible mitigation is contemplated, a mitigation acceptable plan must be provided for the application to be complete. In addition, the applicant should provide information on the suitability and credit availability of potential mitigation banks for public review and comment. This will allow GBF and the public to make informed comments as to chosen plan's chances of success.
4. Potential impacts to threatened and endangered species, eagles, and other migratory birds: The application indicates that "bald eagles and their potential habitat were observed within the project area; however, no nests were found." The applicant should be required to produce a survey of threatened and endangered species, as well as bald eagles and other migratory birds, for public review and comment.
5. Impacts to existing conservation easement: The applicant indicates that a 17.59-acre conservation easement exists in the commercial and residential district as compensatory mitigation in Corps'

permit “SWG-99-26-012.” The applicant appears to propose mitigating for the destruction of this mitigation site through placing “21.90 acres (12.19 acres of wetlands and 8.99 acres of upland buffer) into a conservation easement.” We believe that this existing mitigation site should instead be protected in perpetuity, as was agreed upon in the original permit action. Therefore, the applicant should be required to avoid impacts to this easement from either direct or indirect impacts. Should the Corps consider approving this aspect of the application, the applicant must be required to provide a functional assessment of the impacted mitigation site and the 12.19 acres of wetlands that are intended to serve as new mitigation and show that adequate functional lift is provided.

6. Marina water quality and sedimentation impacts: The applicant proposes a 640-boat capacity marina on a major tributary to Houston’s main drinking water source. Marinas have been shown to be a source of pollutants to waterways, including nutrients, bacteria and other human pathogens contained untreated boater sewage, toxicants in boat cleaners, and petroleum and heavy metals contained in fuels and bilge water. As marina water bodies usually have poor circulation, water quality problems can result. To help reduce such impacts, we highly recommend that the applicant apply and complete the steps necessary to become a certified Clean Texas Marina should the Corps grant the permit application.

In addition, maintenance dredging will need to be performed periodically. The applicant should provide a description of the dredging methods to be used and the best management practices that will be employed to prevent offsite migration of sediment and pollutants disturbed during these operations.

7. Storm water runoff: The development project would result in significantly more impervious surface area within the watershed. We appreciate that the applicant has included a storm water detention basin in the proposed plan, but we are concerned it may be undersized to adequately treat the volumes of polluted runoff that will result. Research has repeatedly indicated that urban/suburban 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}

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 Macroinvertebrate 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.

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 the receiving streams will not result from increased runoff associated with increased impervious surface cover within the development footprint.

We believe that Low Impact Development 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.

For example, lots should be sloped away from the canal to prevent direct runoff into these features; runoff should be controlled, minimized, and routed away from the canals and into water quality improvement features such as treatment wetlands, vegetated swales, or similar features.

8. Cumulative impacts: Considerable development is evident when reviewing the historical aerial photography of the San Jacinto River Watershed which is one of two major tributaries to Galveston Bay; impacts from past, present, and reasonably foreseeable future actions could have a substantial effect on water quality and aquatic resources in the region; cumulative impacts/effects should be carefully considered during evaluation of projects in this area. One of the greatest threats to habitat in the Houston-Galveston area is currently urbanization and residential development.^{9,10}

Wetlands in Harris and surrounding Houston Metro Area counties have been shown to be quickly declining as a result of urban and rural development.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 Unfortunately, much of the area is under substantial development pressure. The proposed impacts associated with this project could, when viewed in light of the total number of projects completed and/or reasonably foreseeable, have a significant impact on aquatic resources.

Prior to approval of this project, GBF recommends that the Corps and/or USEPA consider cumulative impacts to the aquatic resources of this region thoroughly. This consideration may require preparation of either an environmental impact statement (EIS) for the project, or a regional EIS examining cumulative impacts to this area as a whole; this would be consistent with the

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.

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

federal regulations and subsequent case law regarding cumulative impacts and identifying the requirements to trigger the preparation of an EIS.^{12,13,14,15}

Given the concerns above, Galveston Bay Foundation recommends that the Corps deny the application as currently proposed. We strongly encourage the applicant to revise the permit application to address the items noted above and resubmit it to the Corps for issuance of a revised public notice for public review and comment.

Given the potential impacts to the receiving waters, including the Lake Houston drinking water source, from runoff pollution and potential impacts to area residents and businesses from induced flooding, we also request that the Corps conduct a public hearing on this project.

Thank you for the opportunity to comment. Please contact me at (281) 332-3381 x209 or sjones@galvbay.org if you have any questions.

Sincerely,



Scott A. Jones
Director of Advocacy
The Galveston Bay Foundation

cc: TCEQ – 401 Program
TPWD
USEPA
USFWS

¹² 40 CFR 1502 and 1508

¹³ 33 CFR 230

¹⁴ Lafitte's Cove at Pirate's Beach Nature Society v. U.S. Army Corps of Engineers, WL 3186592, 59 ERC 1641, S.D. Tex. Dec. 14, 2004

¹⁵ Fritiofson v. Alexander, 772 F.2nd 1225, 23 ERC (BNA) 1297, 5th Cir. October 7, 1985