



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
WATER

MEMORANDUM TO ASSERT JURISDICTION FOR SWG-2008-00138

Subject: Jurisdictional Determination for SWG-2008-00138 on Wetlands Adjacent to Traditional Navigable Waters

Summary

The U.S. Environmental Protection Agency (EPA) is asserting jurisdiction over six adjacent wetlands for jurisdictional determination (JD) SWG-2008-00138, the La Porte wetlands. This determination is based on our finding that these wetlands are adjacent (as defined at 33 CFR 328.3(c) and 33 CFR 328.3(a)(7)) to Big Island Slough, a traditional navigable waters (TNW).¹ This JD is consistent with the Clean Water Act (CWA), the agencies' regulations, relevant case law, and the legal memorandum *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States* ("Rapanos Guidance").

Background

This memorandum establishes the basis for asserting jurisdiction over six wetlands for JD SWG-2008-00138 (Wetlands B, C, D, E, F, and G) in La Porte, Texas. The six wetlands are adjacent to Big Island Slough, a TNW and a tributary to Armand Bayou. This determination is based upon a site specific examination of factors including the presence of a man-made berm, hydrologic connectivity, and proximity.

Location and Setting

The entire project site encompasses 170 acres in the city of La Porte, Harris County, Texas, and is divided into a northern portion and a southern portion. The subject wetlands are located in the northern portion of the project site at 29.647683° north latitude and -95.077986° west longitude. Based on a report from the project's consultant, the entire site contains at least 56.2 acres of wetlands and 3.66 acres of a drainage feature.² The northern portion of the site is approximately 60 acres and supports the six vegetated wetlands at issue in this memorandum, totaling approximately 10.71 acres in size (see Exhibit 1). The project area is located immediately west of Big Island Slough, a TNW and a tributary of Armand Bayou. A 2-3 foot high man-made berm with breaches is located between the project wetlands and the Slough. The

¹ Big Island Slough is subject to the ebb and flow of the tide and therefore falls under the agencies' jurisdiction as a TNW.

² Berg Oliver Associates, Inc. December 2007. *Atypical Wetland Assessment: Jurisdictional Waters of the United States*. Report No. 6787.

wetlands are in close proximity to each other and to Big Island Slough (wetlands are between 100-800 feet from the Slough). From the project site, Big Island Slough flows for approximately 3.75 miles to Armand Bayou, which is also a TNW. Armand Bayou then joins up with Clear Lake and West Galveston Bay approximately 3.6 miles downstream from that confluence.

The six wetlands are part of a once-forested natural wetland complex that has been impacted in the past by channelization (deepening and widening) of Big Island Slough and recently by mechanized land-clearing and excavation of a large detention basin. EPA believes that this reach of Big Island Slough was channelized in the late 1950s, forested wetlands were recently cleared, and a large detention basin was recently constructed immediately downslope of the wetlands that outfalls directly into Big Island Slough. The detention basin is a storm-water detention basin approximately 35 acres in size, built to reduce the risk of flooding in Big Island Slough (see Exhibit 2). Such detention structures are generally constructed to mitigate for the loss of valley storage in the 100-year floodplain. The detention basin contains a channel approximately three-quarters of a mile in length that runs along the northern portion of the basin from 1st Avenue.

Once forested palustrine wetlands, the six wetlands are currently vegetated with cattail (*Typha latifolia*), mountain spikerush (*Eleocharis montana*), shortbristle horned beaksedge (*Rhynchospora corniculata*), swamp smartweed (*Polygonum hydropiperoides*), and broadleaf arrowhead (*Sagittaria latifolia*).

On the southern portion of the project site, the U.S. Army Corps of Engineers (Corps) is asserting jurisdiction over six wetlands (Wetlands AA, AB, H, I, J, and K) that are adjacent to Big Island Slough. These wetlands, totaling 49.33 acres in size, are not at issue in this memorandum, but are similar in vegetation and landscape position to the subject wetlands on the North section of the project site.

Jurisdictional Determination

Wetlands B, C, D, E, F, and G in JD SWG-2008-00138 are jurisdictional because they are adjacent (as defined at 33 CFR 328.3(c) and 33 CFR 328.3(a)(7)) to Big Island Slough, a TNW.

Basis for Determination³

EPA has determined that Big Island Slough at the project site is a TNW, as it is subject to the ebb and flow of the tide and is navigable-in-fact for small watercraft. The Texas Commission on Environmental Quality has conducted sampling in Big Island Slough and in the 2008 Water Quality Inventory indicated that the Slough is tidally influenced.⁴ Big Island Slough contains public fishing piers and park facilities where the public can access the Slough for recreational

³The memorandum summarizes the evidence considered by EPA in reaching this conclusion. Additional information regarding the determination is contained in the administrative record for this action.

⁴Texas Commission on Environmental Quality. 2008 Texas Water Quality Inventory Water Bodies Evaluated (March 19, 2008). http://www.tceq.state.tx.us/assets/public/compliance/monops/water/08twqi/2008_summary.pdf (Last visited September 1, 2009). p. 184. Also, see, for example: http://www.armandbayou.org/documents/00_Armand_Bayou_Watershed_Plan.pdf (Last visited September 1, 2009). See also 33 C.F.R. 328.3(a)(1) and 40 C.F.R. 230.3(s)(1).

activities. The Slough is publicized as a location for canoe trips, and a floating dock on the Slough is planned for the future at Armand Bayou Park.⁵

EPA and Corps regulations define “waters of the United States” to include wetlands adjacent to other covered waters.⁶ The regulations state: “The term adjacent means bordering, contiguous or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes, and the like are ‘adjacent wetlands.’”⁷ The *Rapanos* Guidance states that finding a continuous surface connection is not required to establish adjacency under this definition.⁸ In addition, the Guidance states, “the agencies consider wetlands adjacent if one of [the] following three criteria is satisfied. First, there is an unbroken surface or shallow sub-surface connection to jurisdictional waters. This hydrologic connection may be intermittent. Second, they are physically separated from jurisdictional waters by man-made dikes or barriers, natural river berms, beach dunes, and the like. Or third, their proximity to a jurisdictional water is reasonably close, supporting the science-based inference that such wetlands have an ecological interconnection with jurisdictional waters.”⁹

The six wetlands subject to this JD are adjacent to Big Island Slough. The adjacency determination for the six wetlands is supported by the physical separation of the wetlands from Big Island Slough by a man-made berm, their periodic hydrologic connection to Big Island Slough, and their reasonably close proximity to the Slough, supporting the science-based inference that the wetlands have an ecological interconnection with the Slough.¹⁰

Wetlands B, C, D, E, F, and G are separated from Big Island Slough by a 2-3 foot high man-made berm that contains breaches. Wetland C, a vegetated wetland swale, abuts a breach in the berm.

There is unconfined, directional surface flow between the wetlands and the Slough, both through the partial breaches in the berm and through a culverted outfall structure. As previously stated, Wetland C extends right up to a breach in the berm, providing evidence of a periodic discrete, direct hydrologic connection from the wetland to the Slough. Otherwise, due to the berm, water from the wetlands is forced to flow parallel to the channel and into the detention basin immediately downslope of the wetlands, which empties into the Slough via the culverted outfall structure. The wetlands have a hydrologic connection to the Slough via overland flow during normal precipitation events, both through the breaches in the berm and the culverted outfall structure. Based on the topography of the site as interpreted from a LiDAR survey map, the directional flow at the northern portion of the project site is to the south along the berm to either a breach in the berm or to the outfall structure. Wetland G is furthest away from the Slough (~800 feet) but is only about 150 feet from the channel in the detention basin that flows directly to the invert of the outfall structure into the Slough. The LiDAR survey map indicates

⁵ See, for example: <http://www.tamug.edu/paddler/bennickslist.html> and <http://www.bayoupreservation.org/default.aspx?act=documents2.aspx&category=Armand+Bayou&AspxAutoDetectCookieSupport=1> (Last visited August 20, 2009).

⁶ 33 C.F.R. 328.3(a)(7) and 40 C.F.R. 230.3(s)(7).

⁷ 33 C.F.R. 328.3(c) and 40 C.F.R. 230.3(b).

⁸ *Rapanos Guidance*, page 5.

⁹ *Rapanos Guidance*, page 5-6.

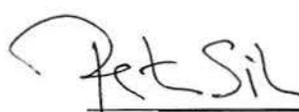
¹⁰ Note that the *Rapanos Guidance* states that only one of the three criteria mentioned on pages 5-6 of the Guidance needs to be present in order for a wetland to be adjacent.

that Wetland G during extended hydroperiods flows directly into the detention basin and then to Big Island Slough via the culverted outfall structure. During extreme events (such as the 100-year storm event), it is possible that flow would migrate from Big Island Slough and infiltrate the wetlands, via the breaches in the berm and the detention basin. These wetlands provide flow to the TNW and serve to store floodwaters by intercepting storm and floodwater that would otherwise enter the TNW, and release filtered water to the TNW in a more even and consistent manner throughout the year. Though they are not within the mapped Federal Emergency Management Agency (FEMA) 100-year floodplain, wetlands do not need to be located within the 100-year floodplain to be considered adjacent.

The wetlands are reasonably close to Big Island Slough, with most of the wetlands within 200 feet of the TNW (wetlands are between 100-800 feet from the Slough), and have an ecological interconnection with the Slough. They provide significant natural biological functions including food chain production, general habitat, and nesting, spawning, rearing and resting sites for aquatic species that can also utilize the Slough. For wetlands that are reasonably close, according to the *Rapanos Guidance*, "Because of the scientific basis for this inference [that such wetlands have an ecological interconnection with jurisdictional waters], determining whether a wetland is reasonably close to a jurisdictional water does not generally require a case-specific demonstration of an ecologic interconnection. In the case of a jurisdictional water and a reasonably close wetland, such implied ecological interconnectivity is neither speculative nor insubstantial."¹¹ Though case-specific information is not necessary, on a site visit on June 23, 2009, EPA staff observed schools of mosquitofish (*Gambusia affinis*) and other fish species near the outfall into Big Island Slough. Mosquitofish do not spawn, but due to close proximity of the wetlands to the Slough, it is reasonable to infer that the wetlands do contribute to their food chain production and that other aquatic species do likely spawn and rear their young in the adjacent wetlands or otherwise utilize the wetlands during extended hydroperiods and then enter Big Island Slough.

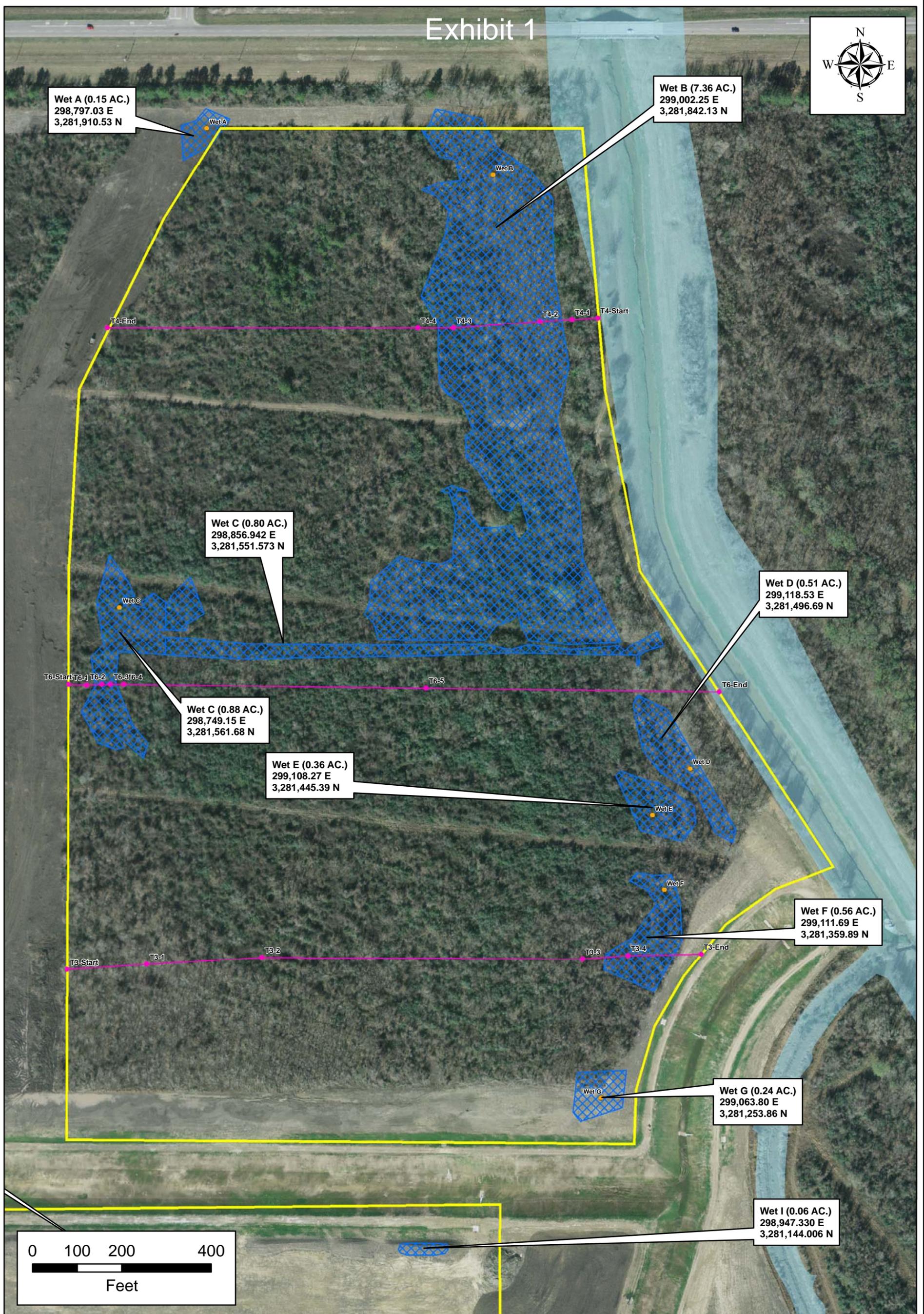
Conclusion

EPA has determined that the wetlands for JD SWG-2008-00138 are jurisdictional because they are adjacent (as defined by 33 CFR 328.3(c) and 33 CFR 328(a)(7)) to Big Island Slough, a TNW. This determination is supported by the physical separation of the wetlands from Big Island Slough by a man-made berm, their periodic hydrologic connection to Big Island Slough, and their reasonably close proximity to the Slough, supporting the science-based inference that the wetlands have an ecological interconnection with the Slough.

 9/3/09
Peter S. Silva (Date)
Assistant Administrator
Office of Water
U.S. Environmental Protection Agency

¹¹ *Rapanos Guidance*, page 6.

Exhibit 1



WETLAND DELINEATION MAP SITE LOCATION MAP

Project #: 6787
For: Duke Realty Corporation
Location: SE Corner of Fairmont Pkwy & Underwood Rd.
Harris County, Texas

REVISIONS
Nov. 8, 2007 by MDB
Jan. 17, 2008 by LFM
July. 11, 2008 by AWL
Dec. 8, 2008 by MDB

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Exhibit 2

