EMORANDUM

TO: Terence O’Rourke
FROM: Earnest Wotring, Debra Baker, David George, Judith Ramsey
DATE: August 24, 2020
RE: Houston-Galveston Bay Area Protection System

Executive Summary

Legal analyses by outside counsel and the Harris County Attorney’s Office conclude: the proposed Houston-Galveston Bay Area Protection Plan is supported by ample legal authority for Harris County and its Flood Control District together with the Port of Houston Authority, in cooperation with the Texas General Land Office and the Texas Parks & Wildlife Department, to design, build and operate a hurricane barrier and park in Galveston Bay. Even though this hurricane protection plan and park require permits from the U.S. Army Corps of Engineers, no action by the U.S. Congress or Texas Legislature is necessary.

According to the National Oceanic and Atmospheric Administration (NOAA), the Houston-Galveston area is due to be hit by a hurricane roughly every seven years. Although Hurricane Harvey in 2017 changed the landscape of the area, the last hurricane to bring hurricane force winds and storm surge to greatly impact the region was in 2008—Hurricane Ike. This Category 2 storm tracked up the Houston Ship Channel, flooding most of the lands east of Galveston Bay up to as much as 17 feet above mean sea level. Hurricane Ike produced storm surges of up to 13 feet in the west and northwest portions of the bay, flooding thousands of acres of residential and commercial properties. Since that time, no solution has been implemented, and we are now overdue for a large-impact hurricane. Heavily populated bayfront communities, the City of Galveston, the Houston Ship Channel and the surrounding petrochemical facilities remain unprotected. The Severe Storm Prediction, Education, and Evacuation from Disaster (SSPEED) Center predicts that a direct hit to the Houston Ship Channel, which is the fourth largest port in the United States could cripple the nation, and if the chemical storage tanks and, facilities [in this area] are compromised, the result could be a new record setting environmental disaster.

SSPEED has outlined a solution, the Houston-Galveston Area Protection System (H-GAPS), which provides an affordable solution that can be accomplished relatively quickly, as well as provide a recreational area and an archipelago habitat for ecologically diverse coastal and bay flora and fauna. The H-GAPS is a surge protection system that is designed to protect the vital industrial infrastructure of the Houston Ship Channel and the communities that line Galveston Bay’s western shore from hurricanes. It involves the Mid-Bay Barrier Islands and Mid-Bay Gate. The park will be on the western portion of Galveston Bay, with the barrier islands running the length of the Houston Ship Channel to the Texas City Dike. The barrier islands will provide...
protection during storm events, and it will also provide recreational opportunities, including biking, hiking, horseback riding, camping, and boating, during the rest of the time. The barrier islands will protect and enhance the Houston-Galveston area. The community will be protected from damage to its vital infrastructure and the catastrophic environmental consequences that could result. The Port of Houston Authority and/or the State of Texas own the submerged barrier islands on which this park would be built, and the governmental entities that would be involved (the General Land Office, Texas Parks & Wildlife Dep’t., Harris County, Harris County Toll Road Authority, Harris County Flood Control District, and the Port of Houston Authority) together have the authority to create and maintain this park.

In conclusion, there is an urgent need for Harris County, including the Port of Houston and the industries served by it, as well as the surrounding communities, to be protected from future hurricanes and storm surges. It is not a matter of whether Harris County will suffer the devastating effects of another hurricane or tropical storm; it is a matter of when and the extent of catastrophic loss of life and property. The H-GAPS would be a workable and affordable protection against these effects.