**Draft Shared Visioning Proposal**

**31 MAR 17**

**Feasibility Study to Review Modifications of the**

**Gulf Intracoastal Water Way, Matagorda and Brazoria Counties, TX**

**1. Authority.** This draft shared visioning proposal is for a feasibility study to modify the existing Gulf Intracoastal Waterway (GIWW) Project in Texas, pursuant to:

(a) Water Infrastructure Improvements for the Nation (WIIN) Act, Sec 1201 (25), “GULF INTRACOASTAL WATERWAY, BRAZORIA AND MATAGORDA COUNTIES, TEXAS.— Project for navigation and hurricane and storm damage reduction, Gulf Intracoastal Waterway, Brazoria and Matagorda Counties, Texas,” and

(b) Sec 216 of the Flood Control Act of 1970. Pursuant to 33 U.S.C. §2215 (a) (2), the study would be funded at 100% Federal cost from the General Investigations (GI) Appropriation, being part of the Nation’s system of inland waterways, thus does not require a non-Federal cost share partner contribution.

**2. Problem Description.** Unimpeded commercial navigation on the GIWW is critical to the economic well-being of the Gulf Coast region and Nation. Coastal petrochemical industries such as Dow Chemical, BASF, Phillips 66, and Chevron in the region depend on the GIWW to move finished product and feedstock stock across the coast. The pattern of coastal storm events and rising seas have significantly eroded the land barrier on the Gulf of Mexico (GoM) side of the GIWW, as well as adjacent wetlands on both sides of the channel that provide calm water shelter to shallow draft navigation. These land losses increase the vulnerability of continued safe and reliable barge tow transit and mooring on the GIWW with disruption. Increased vulnerability includes greater exposure of the GIWW to the extreme forces of GoM open sea conditions to shallow draft navigation. It also comes with greater exposure of sedimentation source potential from the GoM, inducing greater frequencies and volumes of channel shoaling and associated maintenance dredging requirements.

**3. Proposed Project Description.**

**a. Purpose.** A GI feasibility study is proposed to address the impacts of relative sea level rise, coastal storm forces, and historical losses to adjacent coastal features, on waterway’s commercial navigation conditions and functions, with the purposes that adjacent coastal features provide:

(1) calm water shelter for resilient transit and mooring of commercial vessels on the waterway against waves and currents of the open GoM, and

(2) a reduction to channel sedimentation from GoM open seas for sustainable maintenance scopes, timing, and costs into the future.

**b. Scope.** The study would involve describing waterway reaches that are most vulnerable to losses in GIWW resiliency and sustainability, identifying sediment resources regionally, with emphasis on renewable sources, for harvesting and restoration of degraded adjacent coastal features, with periodic maintenance of these features over the project life cycle on the intended purposes. As an example, a potential renewable resource for investigation is the implementation of sedimentation basins at the confluence of Caney Creek and the GIWW to prevent shoal material from settling out directly into the GIWW navigation channel. This material contains some sandy materials and could potentially be used to nourish eroding shorelines in the region, such as Sergeant Beach, which suffer from chronic losses, posing potential reduction in GIWW sustainability and resiliency. Strategically, the recommended project modifications will also be consistent with: (1) the State of Texas Coastal Resiliency Master Plan, and (2) the comprehensive component of the Coastal Texas Protection and Restoration Study, which the USACE, Galveston District, and its non-Federal sponsors, to include the Texas General Land Office, are pursuing.

**4. Cost Estimate:** Total $3 M (100% Federal, GI Appropriation, pursuant to 33 U.S.C. §2215 (a) (2), and Water Resources Reform and Development Act (WRRDA) 2014, Sec 1001).

**5. Description of Anticipated Benefits.** Replacement of these land losses will decrease the vulnerability to disruption of continued safe and reliable barge tow transit and mooring on the GIWW. Decreased vulnerability includes less exposure of the GIWW to the forces of GoM open sea conditions to shallow draft navigation. It also would reduce exposure of sedimentation from the GoM, diminishing the frequency and volume of channel shoaling and associated maintenance dredging requirements. This would result in a cost savings to the USACE navigation channel maintenance program, toward achieving a vision for Sustainable and Resilient Regionally Integrated Infrastructure (SRRII) on the GIWW.

**6. Non-Federal Support.** A Letter of Intent (LOI) is proposed to be sought from prospective Non-Federal Sponsors for support of this study effort in FY 19 USACE Civil Works Program budget formulation, pursuant to applicable above-cited authorities.

**7. Non-Federal Sponsor Statement of Financial Capability.** Non-Applicable, pursuant to 33 U.S.C. §2215 (a) (2).

**8. Point of Contact.** Edmond J. Russo, Jr., PhD, PE, D.CE, D.NE, D.WRE, Deputy District Engineer for Programs and Project Management, USACE, Galveston District, Phone: (409) 766-3018, Email: [edmond.j.russo@usace.army.mil](mailto:edmond.j.russo@usace.army.mil).