

**GALVESTON DISTRICT REAL ESTATE PLAN**

**GULF INTRACOASTAL WATERWAY**

**BRAZOS RIVER FLOODGATES AND**

**COLORADO RIVER LOCKS**

**FEASIBILITY STUDY**

**BRAZORIA AND MATAGORDA COUNTIES, TEXAS**

**APRIL 23, 2019**



**US Army Corps  
of Engineers®**  
Galveston District

This Real Estate Plan has been prepared in accordance with ER 405-1-12 dated 1 May 1998.

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## Acronyms

BRFG	Brazos River Floodgates
CBRA	Coastal Barrier Resources Act
CBRS	Coastal Barrier Resources Systems
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CRL	Colorado River Locks
FWOPC	Future without Project Conditions
GIWW	Gulf Intracoastal Waterway
HTRW	Hazardous, Toxic, and Radiological Waste
IWTF	Inland Waterways Trust Fund
LERRD	Lands, Easements, Rights-of-Way, Relocations and Disposal
NFS	Non-Federal Sponsor
NED	National Economic Development
ODMDS	Ocean Dredged Material Disposal Site
O&M	Operation and Maintenance
PED	Pre-Construction Engineering & Design
PMP	Project Management Plan
PPA	Project Partnership Agreement
PL	Public Law
REP	Real Estate Plan
RHA	River and Harbor Act
ROW	Right-of-Way
TPWD	Texas Parks and Wildlife Department
TxDOT	Texas Department of Transportation
USACE	U.S. Army Corps of Engineers





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## 1. General Background

This Real Estate Plan (REP) is the real estate work product of the U.S. Army Corps of Engineers (USACE), Galveston District, Real Estate Division that supports project plan formulation for the Gulf Intracoastal Waterway, Brazos River Floodgates and Colorado River Locks Feasibility Study (BRFG & CRL). It identifies and describes the lands, easements, and rights-of-way required for the construction, operation and maintenance of the proposed project, including those required for relocations (i.e., Public Law (P.L.) 91-646 relocations and utility/facility relocations), borrow material, and dredged or excavated material disposal (LERRD). Furthermore, the REP describes the estimated LERRD value, together with the estimated administrative and incidental costs attributable to providing LERRD, and the acquisition process.

## 2. Project Type & Applicability

The Galveston District is conducting a feasibility study of the navigation improvements at the Brazos River Diversion Channel and Colorado River Locks, addressing both increased channel width and depth. This study falls under the authority of Rivers and Harbors Act of 1970 and Section 216 of the Flood Control Act of 1970, which authorizes investigations for modification of completed projects or their operation when found advisable due to significantly changed physical or economic conditions, and for improving the quality of the environment in the overall public interest. Table 1 (below) sets forth the multiple authorizations applicable to the project, including dates and descriptions of authorized project features.

Table 1: Authorization Documents under Freeport Harbor, Texas Authorization

<b>Date Authorizing Act</b>	<b>Project and Work Authorized for Freeport Harbor, Texas</b>	<b>Documents</b>
Jun 14, 1880	Provided for construction of jetties for controlling and improving the channel over the bar at the mouth of the Brazos River	Rivers and Harbors Act of 1880
Mar 03, 1899	Dredging and other work necessary in judgment of Secretary of War for improving harbor; for taking over jetties and privately built works at mouth of river	Rivers and Harbors Act of 1899, 55 <sup>th</sup> Congress, Ch. 425
Mar 02, 1907	Examination authorized. Work later confined to maintenance of jetties	H. Doc. 1087, 60 <sup>th</sup> Cong., 2 <sup>nd</sup> Sess.
Feb 27, 1911	Repairs to jetties and dredging	River and Harbor Act of 1911, P.L. 61-425
Mar 04, 1913	Construct seagoing hopper dredge	Rivers and Harbors Act of 1913, P.L. 62-429
Aug 08, 1917	Purchase of one 15-inch pipeline dredge and equipment, its operation of 3 years, operation of seagoing dredge one-half time for 3 years, and repairs to jetties	River and Harbor Act of 1917, P.L. 65-37

Date Authorizing Act	Project and Work Authorized for Freeport Harbor, Texas	Documents
Mar 03, 1925 <sup>1</sup>	Diversion dam, diversion channel, and necessary auxiliary works	Rivers and Harbors Committee Doc. 10, 68 <sup>th</sup> Cong., 2 <sup>nd</sup> Sess.
July 03, 1930	Maintenance of diversion channel at expense of local interest	Rivers and Harbors Committee Doc. 18, 70 <sup>th</sup> Cong., 1 <sup>st</sup> Sess.
July 03, 1930	Jetty channel, all inside channels and turning basins, and 2 rubble mound jetties	Rivers and Harbors Committee Doc No 16, 71 <sup>st</sup> Cong., 2 <sup>nd</sup> Sess.
May 24, 1934 P.W.A. Aug 30, 1935	Local cooperation requirements modified to provide for the contribution of sufficient funds to cover the entire cost of the original dredging of all inside channels and turning basins.	Rivers and Harbors Committee Doc. No 10, 72 <sup>nd</sup> Cong., 1 <sup>st</sup> sess.
Aug 30, 1935	Deepening channels and basins	Rivers and Harbors Committee Doc. 15, 72 <sup>nd</sup> Cong., 1 <sup>st</sup> Sess.
Aug 30, 1935	Maintenance of present project dimensions of channels and basins at federal expense	Rivers and Harbors Committee Docs. 15, 72 <sup>nd</sup> Cong., 1 <sup>st</sup> Sess., and 29, 73 <sup>rd</sup> Cong., 2 <sup>nd</sup> Sess.
Aug 26, 1937	Deepening the Jetty Channel to 31 feet and all inner channels and the Brownsville and Point Isabel turning basins to 28 feet, provided no dredging will be done at public expense within 50 feet of any established pier head line, wharf, or other structure.	Rivers and Harbors Committee Doc. No. 32, 75 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
Aug 18, 1941	Existing project (Eagle Lake to Matagorda, Colorado River, Tex) was authorized by the Flood Control Act approved August 18, 1941	Flood Control Act H. Doc. No. 312, 76 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
May 17, 1950	Deepen outer bar channel to 38 feet from gulf to a point within jetties, thence 36 feet in authorized channels to and including upper turning basin.	H. Doc. 195, 81 <sup>st</sup> Cong., 1 <sup>st</sup> Sess.
Jul 03, 1958	Relocate outer bar channel on straight alignment with jetty channel and maintain Brazos Harbor entrance channel and turning basin (constructed by local interests)	River & Harbor Act of 1958 (House Doc. 433, 84 <sup>th</sup> Cong., 2 <sup>nd</sup> Sess.)
1975	Authorized the State of Texas to act as a local study partner for the Gulf Intracoastal Waterway (GIWW) in Texas and designated the State Highway and Public Transportation Commission, now the Texas Transportation Commission, of which the TxDOT is a part of, to act as agent for the state in fulfilling the responsibilities of TxDOT.	Texas Coastal Waterway Act
Nov 17, 1986	Modified local cooperation requirements for the 1970 Act	Sec. 101, PL 99-662

Date Authorizing Act	Project and Work Authorized for Freeport Harbor, Texas	Documents
1998	The Secretary of the Army, acting through the Chief of Engineers, is authorized to review the operation of projects the construction of which has been completed and which were constructed by the Corps of Engineers in the interest of navigation, flood control, water supply, and related purposes, when found advisable due to significant changed physical or economic conditions, and to report thereon to Congress with recommendations on the advisability of modifying the structures or their operation, and for improving the quality of the environment in the overall public interest. This study has been conducted and prepared in response to the provision of funds in this act.	Energy and Water Development Appropriations Act of 1998, under the authority of Section 216 of the 1970 Flood Control Act
Nov 08, 2007	Amends Sec 101 of Rivers and Harbor Act of 1970 to make all costs for removal of the sunken vessel COMSTOCK a federal responsibility	Sec. 3148, PL 110-114
<sup>1</sup> Construction of lock in diversion dam at local expense considered inactive.		

**3. Project Location**

The study area (Figure 1) encompasses approximately 40 miles of the Gulf Intracoastal Waterway (GIWW) in Texas, at the intersections of the Brazos and Colorado Rivers along the Gulf Coast and covers two counties, Brazoria and Matagorda. The Brazos River Floodgates are 7 miles southwest of Freeport, Texas in Brazoria County (Figure 2) and accessible via Floodgate Road, 3.5 miles south of State Highway 36. Forty miles west, the Colorado River Locks are located near Matagorda, Texas in Matagorda County (Figure 3). The East Lock is located on Matagorda Street approximately 0.25 miles west of the FM 2031 Bridge over the GIWW. The West Lock is not accessible by road.

**4. Non-Federal Partner**

The BRFG and CRL were constructed by USACE and remain under USACE control for continued operations and maintenance. This project is fully Federally funded, with 50 percent of the funds supplied by USACE and the remaining half provided by the Inland Waterways Trust Fund (IWTF).

However, the State of Texas legislature passed the Texas Coastal Waterway Act in 1975, which authorized the Texas Department of Transportation to act as the local sponsor for the GIWW in Texas. Therefore, the Non-Federal Partner (NFP) is the Texas Department of Transportation (TxDOT). TxDOT has actively participated in the development of the Feasibility Study and the Project Management Plan (PMP) for cost sharing purposes, but they are not a construction sponsor and are therefore, not responsible for acquiring LERRD.

## 5. Purpose

The study purpose is to develop alternatives to determine the feasibility of undertaking modifications to BRFG and CRL river crossings. This study will identify changes that are structurally sustainable, economically justified, and environmentally acceptable. There is a need to reduce navigation impacts and costly waterborne traffic delays resulting from aging infrastructure and inadequate channel dimensions for wider barge and shipping vessels that travel through these structures.

## 6. Scope and Content

The scope of the study is to update existing and future without project conditions (FWOP) from a previous report completed in 2000. The earlier study focused on hydrology, hydraulic, sedimentation, erosion, dredging requirements, assessments of riverine changes, operational adequacy of the floodgates/locks dimensions, and economic analyses to estimate National Economic Development (NED) benefits and environmental impacts. This study also evaluated and compared alternatives to develop and select a recommended plan. The study considers all reasonable measures, including alternatives considered under previously initiated projects and/or studies and recommendations from other Federal and non-federal stakeholders.

## 7. Real Estate Requirements

The Brazos River Floodgates and Colorado River Locks are federal improvements. In conjunction with the NFP, any improvements or modifications to the existing gates/locks will be the sole responsibility of USACE.

### 7.1 Array of Alternative Plans

Below are the alternatives for BRFG and CRL. These were screened further based on preliminary cost estimates from similar navigation studies and best professional judgment:

- No Action on Brazos and Colorado
- Minimal improvements on existing floodgate/lock structures at Brazos and Colorado
- Major rehabilitation of existing floodgate/lock structures at Brazos and Colorado
- Open channel at Brazos and Colorado with bypass channel
- Conversion of existing Brazos floodgates into locks and Colorado River Locks into floodgates
- Relocation Colorado Locks south of existing locks
- Rebuild Colorado Locks in same location with a temporary bypass
- Maintain existing alignment with open channel at Brazos and Colorado
- Widen existing channels and include bypass channel at Brazos and Colorado
- Shift channel alignments north/south of existing at Brazos
- Open system on existing alignments with improvement at Brazos and Colorado
- Rehabilitation of the structures at Colorado

### 7.2 Recommended Plan

Brazos River Floodgates Alternative 3A: Open Channel on Existing Alignment/ Floodgate Structure Removal (Figure 4)

- This alternative would involve an open channel along the existing GIWW alignment through the removal of the existing 75-ft wide floodgate structures and widen the channel. Construction of a new 125-ft wide floodgate structures further away from the Brazos River

along the existing GIWW alignment. A temporary construction bypass channel would be added to prevent delays to navigation during construction of the new floodgate structures.

Colorado River Locks Alternative 4A (Figure 5)

- This alternative would remove the river side (west) gates, dredge up to the gates remaining, and rehab remaining gates.

Refinements to the TSP have resulted in slightly altered alignments that have been reviewed by industry for the final recommended plan. For the BRFG, refinements suggest a permanent shift of the GIWW to the south, eliminating the need for a temporary bypass channel (Figure 6). For the CRL, refinements suggest a permanent shift to the southeast (Figure 7).

### 7.3 Estates

USACE has existing perpetual easement interests in the lands required for the construction of the project (Figures 8 and 9). USACE also has existing interests in the placement areas identified to receive dredged material from the construction of the project (Figures 2, 3, 8, and 9). Engineering has confirmed the placement areas are of sufficient capacity for the construction and has indicated that once at capacity, maintenance material will be shifted to the Ocean Dredged Material Disposal Site (ODMDS) as depicted in Figure 12. Therefore, no acquisition of real estate is anticipated for the construction of the project.

Mitigation may also be completed within USACE's existing interests. In the event mitigation requires acquisition of real estate, below are the additional expected estates necessary for the project.

#### **Standard Estate #1. Fee**

*The fee simple title to (the land described in Schedule A) (Tracts Nos. \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_) subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.*

#### **Standard Estate #15. Temporary Work Area Easement**

*A temporary easement and right-of-way in, on, over and across (the land described in Schedule A) (Tracts Nos. \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_), for a period not to exceed \_\_\_\_\_, beginning with date possession of the land is granted to the United States, for use by the United States, its representatives, agents, and contractors as (borrow area) (work area), including the right to (borrow and/or deposit fill, spoil and waste material thereon) (move, store and remove equipment and supplies, and erect and remove temporary structures on the land and to perform any other work necessary and incident to the construction of the \_\_\_\_\_ Project, together \_\_\_\_\_ with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions, and any other vegetation, structure, or obstacles within the limits of the right-of-way; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.*

## **8. Borrow Material**

Currently the proposed project does not require borrow material. Should borrow material be required, it is assumed that the material will come from the project sites. If borrow material is identified as a necessity for the project during Pre-Construction Engineering and Design (PED), the REP will be updated to provide the locations, any necessary easements, and duration of easements.

## **9. Access/Staging Area**

There is an assumption that four (4) staging areas will be required for BRFG and two (2) staging areas for CRL. Once staging areas are identified, the REP will be updated to include the locations as well as the duration for any work area easements necessary. The estate necessary will be a temporary work area easement as described in Section 7.3.

## **10. Recreation Features**

There are no recreation features proposed for this project.

## **11. Induced Flooding**

There will be no induced flooding by virtue of the construction of the project. Most areas surrounding the BRFG and CRL are in the 100-year floodplain. Flooding events are primarily due to high river flows after heavy rains in the Colorado, Brazos and San Bernard River watersheds, but also occur during tropical depression, tropical storms, and hurricanes. Federal flood protection levees have been constructed near both facilities. The nearest levee to the BRFG is on East Floodgate Road about a mile north of the East Floodgate. The CRL facility ties into an existing levee.

## **12. Mitigation**

The estimated mitigation acreages are based on the TSP and subsequent refinements to arrive at the recommended plan.

### **12.1 Proposed Mitigation for BRFG**

The estimated mitigation acreage is 14.5 acres. Depending upon the final project design and construction sequence, the contemplated mitigation will be located in areas along the existing GIWW where the government already holds perpetual easements (Figure 10). However, three (3) alternate off-site locations to the mitigation plan have been identified (Figure 11). Locations #1 and #3 were recommended by the Texas Parks and Wildlife Department (TPWD), although Location #3 would not likely be used due to its distance. Location #2 has not been vetted by the agencies, but review of aerial photography shows that the marsh there has disappeared over the last 20-25 years (Figure 11). The baseline cost estimate provides the expected cost for acreages required for mitigation in Table 2.

### **12.2 Proposed Mitigation for CRL**

The estimated mitigation acreage is .76 acres. Due to this relatively small area, it is proposed that mitigation occur on-site where the river side gates are removed (Figure 10). The agencies have not provided any recommendations for potential alternate off-site locations, nor have any obvious



restoration needs been identified within the immediate area. The baseline cost estimate provides the expected cost for acreages required for mitigation in Table 3.

### **13. Federally Owned Land & Existing Federal Project**

With the exception of the ODMS (Figure 10), the Federal Government holds easement interests in both project footprints. USACE acquired easements for the original projects.

#### **13.1 Brazos River Floodgates**

The BRFG project footprint is within five (5) current perpetual easements (Tracts numbered 100E, 101E, 307, 308, and 309) (Figure 8).

- A perpetual right-of-way and easement to enter, dig or cut away and remove any or all of that part of the hereinbefore described tracts of land lying and being located within a distance of 1000 feet from the center line of the diversion channel as finally approved. At any time in the prosecution of the aforesaid work of improvement, or any enlargement thereof... perpetual right to maintain the portion so cut away and removed, or the full width of any new channel in any location that may be established by future natural meanderings of the stream, as a part of the public navigable waters of the US. FREEBR 100E was acquired 27 April 1927 from Susie C. Gaines, recorded 27 June 1927; Vol. 203/ Pg. 564.
- A perpetual right-of-way and easement to enter upon, dig or cut away and remove any or all of that part of the hereinbefore described tracts of land lying and being located within a distance of 1000 feet from the center line of the diversion channel. FREEBR 101E was acquired 18 June 1927 from Gulf Production Company, recorded 8 July 1927; Vol. 205/ Pg. 10.
- A perpetual right and easement to enter upon, dig or cut away, and remove any or all of the hereinbefore described strip tract of land as may be required at any time in the prosecution of the aforesaid work of improvement, or any alignment thereof, and maintain the portion so cut away and removed as a part of the navigable waters of the United States, and the further perpetual right and easement to enter upon, occupy, and use any portion of said strip tract or parcel of land as herein conveyed, not so cut away and converted into public navigable waters as aforesaid, for the deposit of dredged material and for such other purposes as be needful in the perseveration and maintenance of the said work of improvement; and the future perpetual right and easement to deposit dredged material during construction and maintenance of the waterway. GIWW3 307 was acquired 14 June 1940 from American Sulphur Royalty Company, recorded 7 April 1941; Vol. 346/ Pg. 265.
- A perpetual right and easement to enter upon, dig or cut away, and remove any or all of the hereinbefore described tract of land as required at any time in the prosecution of the aforesaid work of improvement, or any enlargement thereof, and maintain the portion so cut away and removed as part of the navigable waters of the United States; and the further right and easement to enter upon, occupy, and use any portion of said tract or parcel of land as herein conveyed, not so cut away and converted into public navigable waters as aforesaid, for the deposit of dredged material, and for such other purposes as may be needful in the preservation and maintenance of the said work of improvement. GIWW3 308 was acquired 20 Aug 1940 from Freeport Sulphur Company; recorded 5 April 1941; Vol. 346/ Pg. 253.

- A perpetual right and easement to enter upon, dig or cut away, and remove any or all of the hereinbefore described as tract GIWW3 309 as required at any time in the prosecution of the aforesaid work of improvement, or any enlargement thereof, and maintain the portion so cut away and removed as part of the navigable waters of the United States; and the further right and easement to enter upon, occupy, and use any portion of said tract GIWW3 309 herein conveyed, not so cut away and converted into public navigable waters as aforesaid, for the deposit of dredged material, and for such other purposes as may be needful in the preservation and maintenance of the said work of improvement, acquired 20 Aug 1940 from Freeport Sulphur Company; recorded 5 April 1941; Vol. 346/ Pg. 254.

### 13.2 Colorado River Locks

CRL project footprint is within eight (8) current perpetual easements (Tracts numbered GIWW3 138, GIWW3 139, GIWW3 140, GIWW3 141, GIWW3 142, GIWW3 143, GIWW3 144, and GIWW7 146) (Figure 9).

- A right and easement enter upon, dig or cut away, and remove over any or all of the hereinbefore described as tract GIWW7 146, as may be required at any time in the prosecution of the aforesaid work of improvement, or any enlargement thereof, and maintain the portion so cut away and removed as part of the navigable waters of the United States; and the further right and easement to enter upon, occupy and use any portion of tract GIWW7 146 not so cut away and converted into public navigable waters as aforesaid, for the deposit of dredged material, acquired 20 Jan 1939 from R.A. Welch and Tulane Gordon, recorded 28 Jan 1939; Vol. 128/ Pg. 557-560.
- A perpetual right and easement to enter upon, dig or cut away, and remove any or all of the hereinbefore described as tracts GIWW3 138, GIWW3 139, and GIWW3 140 as may be required at any time in the prosecution of the aforesaid work of improvement, or any enlargement thereof, and maintain the portions so cut away and removed as parts of the navigable waters of the United States; and the further perpetual right and easement to enter upon, occupy and use any portion of tracts GIWW3 138, GIWW3 139, and GIWW3 140 as herein conveyed, not so cut away and converted into public navigable water as aforesaid, for the deposit of dredged material, and for such other purposes as may be needful in the preservation and maintenance of the said work of improvement; and the further perpetual right and easement to deposit dredged material during construction and maintenance of the waterway, acquired 1 March 1940 from Mary E. Braman, et. al., recorded 9 May 1940, Vol. 134/ Pg. 151-155.
- A perpetual right and easement to enter upon, dig or cut away, and remove any or all of the hereinbefore described tracts being GIWW3 141 as may be required at any time in the prosecution of the aforesaid work of improvement, or any enlargement thereof, and maintain the portion so cut away and removed as a port of the navigable waters of the United States; and the further perpetual right and easement to enter upon, occupy, and use any portion of said tract GIWW3 141 herein conveyed, not so cur away and converted into public navigable waters as aforesaid, for the deposit of dredged material, and for such other purposes as may be needful in the preservation and maintenance of the said work of improvement; and the further perpetual right and easement to deposit dredged material during construction and maintenance of the waterway acquired 9 April 1940 from Julian Inglehart; recorded 12 April 1940; Vol. 133/ Pg. 458-462,

- A perpetual right and easement to enter upon, dig or cut away, and remove any or all of the lands described as tract GIWW3 142 as may be required at any time in the prosecution of the aforesaid work of improvement, or any enlargement thereof, and maintain the portions so cut away and removed as parts of the navigable waters of the United States; and the further perpetual right and easement to enter upon, occupy and use any portion of said tract GIWW3 142 as herein conveyed, not so cut away and converted into public navigable waters as aforesaid, for the deposit of dredged material, and for such other purposes as may be needful in the preservation and maintenance of the said work of improvement; and the further perpetual right and easement to deposit dredged material during construction and maintenance of the waterway acquired 9 March 1940 from Lillie Culver; recorded 16 April 1940; Vol. 133/ Pg. 518-524.
- A perpetual right and easement to enter upon, dig or cut away, and remove any or all of the hereinbefore described tract GIWW3 143 as may be required at any time in the prosecution of the aforesaid work of improvement, or any enlargement thereof, and maintain the portion so cut away and removed as a part of the navigable waters of the United States; and the further perpetual right and easement to enter upon, occupy, and use any portion of said tract or parcel of land as herein conveyed, not so cut away and converted into public navigable water as aforesaid, for the deposit of dredged material, and for such other purposes as may be needful in the preservation and maintenance of the said work of improvement; and the further perpetual right and easement to deposit dredged material during construction and maintenance of the waterway acquired 14 March 1940 from Minnie B. Serril et. al; recorded 18 April 1940; Vol. 133/ Pg. 568-573.
- A perpetual right and easement to enter upon, dig or cut away, and remove any or all of the hereinbefore described tracts GIWW3 144 and GIWW3 145 may be required at any time in the prosecution of the aforesaid work of improvement, or enlargement thereof, and maintain the portions so cut away and removed as parts of the navigable waters of the United States; and the further perpetual right and easement to enter upon, occupy, and use any portion of tracts GIWW3 144 and GIWW3 145 as herein conveyed, not so cut away and converted into public navigable waters as aforesaid for the deposit of dredged material, and for the such other purposes as may be needful in the preservation and maintenance of the said work of improvement; and the further perpetual right and easement to deposit dredged material during construction and maintenance of the waterway acquired A.B. Lorino et. al.; recorded 7 March 1940; Vol. 133/ Pg. 428-433.

### 13.3 Coastal Barrier Resources Act

The Coastal Barrier Resources Act (CBRA) of 1982 established the John H. Chafee Coastal Barrier Resources Systems (CBRS), a defined set of geographic units along the Atlantic, Gulf of Mexico, Great Lakes, U.S. Virgin Islands, and Puerto Rico coasts. Most new Federal expenditures and financial assistance are prohibited within the CBRS, unless those activities qualify for an exception under Section 6 of CBRA (16 U.S.C. § 3505). Within the proposed project footprint are Coastal Barrier Resources System and Otherwise Protected Areas (Figure 13 and Figure 14).

The RHA of July 3, 1958 authorized the maintenance of the Brazos Harbor entrance channel. While the proposed project footprint is within the CBRS it is expected to receive an exception under Section 6:

A federal expenditure is allowable within the CBRS, if it meets any of the following exceptions (16 U.S.C § 3505(a)(1)-(5)):

- The maintenance or construction of improvements of existing federal navigation channels (including the Intercoastal Waterway) and related structures (such as jetties), including the disposal of dredge materials related to such maintenance or construction. A federal navigation channel or a related structure is an existing channel or structure, respectively, if it was authorized before the date on which the relevant System unit or portion of the System unit was included with the CBRS.

## **14. Navigation Servitude**

Navigation Servitude emanated from the Commerce Clause of the Constitution of the United States, Article I; Section 8, Clause 3. The servitude gives the Federal Government the right to use the “Navigable Waters” of the United States without compensation for navigation projects. These are non-transferable rights, and are not considered interest in real property. The GIWW and Colorado River are navigable waterways. This project may utilize ODMDS 1 for the O&M if it is deemed the least cost alternative. ODMDS 1 is located in navigable waters; therefore, there are no real estate requirements associated with this site (Figure 10).

## **15. Public Law 91-646 Relocations**

There are no residential, nonresidential, commercial, industrial, or farm properties that would be subject to relocations pursuant to PL 91-646.

## **16. Assessment of Project Sponsor Land Acquisition Capabilities**

The NFP will not be participating in the acquisition of real property interests in this project. The project is 100% federally funded. The NFP will only contribute to the Feasibility Study and will not participate in the acquisition, relocation, or construction of this future project.

## **17. Baseline Cost Estimate for Real Estate**

The costs listed below reflect the estimated real estate costs for the proposed feasibility study and are subject to change through final draft. The cost assumes four (4) staging areas for each BRFG alternative, and two (2) staging areas for the CRL, as well as potential mitigation land acquisition for each site. Due to the likelihood of on-site mitigation, only general locations for off-site mitigation were identified. Without an exact footprint for mitigation lands, the estimate below assumes the acquisition of 5 tracts for BRFG mitigation and 1 tract for CRL mitigation.

Table 2: Baseline Cost Estimate for BRFG Alt 3A Hybrid

Brazos River Floodgates Alternative		
Alternative 3A Hybrid		
Federal Cost		
Account	Description	Amount
0102	Acquisition (50 hrs. X \$125/hr x 5 tracts) (Labor for Negotiations, Planning Documents, Verifying Ownership, and Mapping)	\$31,250.00
0105	Appraisals (\$2,500/tract x 5 tracts)	\$12,500.00
0105	Appraisal Review (10 hrs. X \$150/hr x 5 tracts)	\$7,500.00
	Survey (\$4000/tracts x 5 tracts)	\$20,000.00
	Temporary WAE, Permits, License (\$500/Owner x 5 Owners)	\$2,500.00
01-1501	Land Value Estimate for Mitigation (\$3,400/acre x 14.5 acres)	\$49,300.00
01-0117	Title Commitment (\$1,000/tract x 5 tracts)	\$5,000.00
0112	Office Administration and Management Oversight (6 hrs. X \$125/hr. x 5 tracts)	\$3,750.00
	Staging Area (Assuming 4 locations x \$3,000 each)	\$12,000.00
	Project Related Administration	\$15,000.00
	Subtotal	\$158,800.00
	Contingency (25%)	\$39,700.00
<b>Federal Total</b>		<b>\$198,500.00</b>

Table 3: Baseline Cost Estimate for CRL Alt 4A

Colorado River Locks Alternative		
Alternative 4A		
Federal Cost		
Account	Description	Amount
0102	Acquisition (50 hrs. X \$125/hr. x 1 tract) (Labor for Negotiations, Planning Documents, Verifying Ownership, and Mapping)	\$6,250.00
0105	Appraisals (\$2,500/each x 1 tract)	\$2,500.00
0105	Appraisal Review (10 hrs. X \$150/hr. x 1 tract)	\$1,500.00
	Survey (\$4,000/tract x 1 tract)	\$4,000.00
	Temporary WAE, Permits, License (\$500/owner x1 owner)	\$500.00
01-1501	Land Value Estimate for Mitigation (\$3,400/acre x 1 acre)	\$3,400.00
01-0117	Title Commitment (\$1,000/tract x 1 tract)	\$1,000.00
0112	Office Administration and Management Oversight (6 hrs. X \$125/tract x 1 tract)	\$750.00
	Staging Area (Assuming 2 locations @ \$3,000 each)	\$6,000.00
	Project Related Administration	\$10,000.00
	Subtotal	\$35,900.00
	Contingency (25%)	\$8,975.00
<b>Federal Total</b>		<b>\$44,875.00</b>

## 18. Acquisition Schedule

USACE currently has perpetual easements over the project footprint however, additional interest may be required for the access/staging areas and mitigation. Table 4 below provides an estimated schedule for land acquisition, should it be required for access/staging areas or mitigation.

Table 4: Land Acquisition Schedule

Land Acquisition Schedule	
Milestone*	Approximate Duration
Transmittal of ROW drawings & estate(s)	30 days after PPA signed
Obtain Surveys	120 days after transmittal of ROW drawings & estate(s)
Obtain Title Evidence	120 days after obtaining surveys
Obtain Appraisals & Reviews	120 days after obtaining titles
Authorization to Proceed with Offer	30 days after obtaining appraisals & reviews
Conclude Negotiations	90 days after negotiations begin
Begin Condemnations	30 days after negotiations conclude
Conduct Closings	90 days after conducting closings
Conclude Condemnations	240 days after condemnation process begins
Attorney Certify Availability of LERRD	30 days after condemnation concludes
Corps Certifies Availability of LERRD	30 days after NFS Attorney Certifies LERRD
Review LERRD Credit Request	120 days after receiving LERRD documentation
Approve or Deny LERRD Credit Requests	15 days after concluding review of LERRD documentation

\*Milestones are based on the Project Partnership Agreement (PPA) being signed.

## 19. Mineral and Energy Activity

The type of mineral activity in the vicinity of the project is oil and gas exploration and production. However, no wells or pipelines are located in the recommended plan's project area.

## 20. Facilities/Utilities/Pipelines Relocation

There are no known pipelines crossing the GIWW channel at BRFG or CRL project locations.

ANY CONCLUSION OR CATEGORIZATION CONTAINED IN THIS REAL ESTATE PLAN, OR ELSEWHERE IN THIS PROJECT REPORT, THAT AN ITEM IS A UTILITY OR FACILITY RELOCATION TO BE PERFORMED IS PRELIMINARY ONLY. THE GOVERNMENT WILL MAKE A FINAL DETERMINATION OF THE RELOCATIONS NECESSARY FOR THE CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE PROJECT AFTER FURTHER ANALYSIS AND COMPLETION AND APPROVAL OF FINAL ATTORNEY'S OPINIONS OF COMPENSABILITY FOR EACH OF THE IMPACTED UTILITIES AND FACILITIES.

## **21. Hazardous, Toxic and Radiological Waste or Other Environmental Contaminants**

A Phase I Environmental Assessment was completed and the potential for Hazardous, Toxic, and Radiologic Waste (HTRW) present at either project sites are low.

## **22. Attitudes of the Landowner**

A public meeting was held on 12 July 2016 in West Columbia, Texas. The comments from the public and industry varied. The Friends of the San Bernard River have concerns about the potential impact to the San Bernard River and potential increase of sedimentation at the mouth of the river. Industry had opposing views regarding the gate widths and potential sedimentation caused by the removal of the west gate a BRFG project location. While there were many comments about the scope of the study or concerns of increased sedimentation, there were no direct comments regarding real estate at this meeting.

# Exhibits A

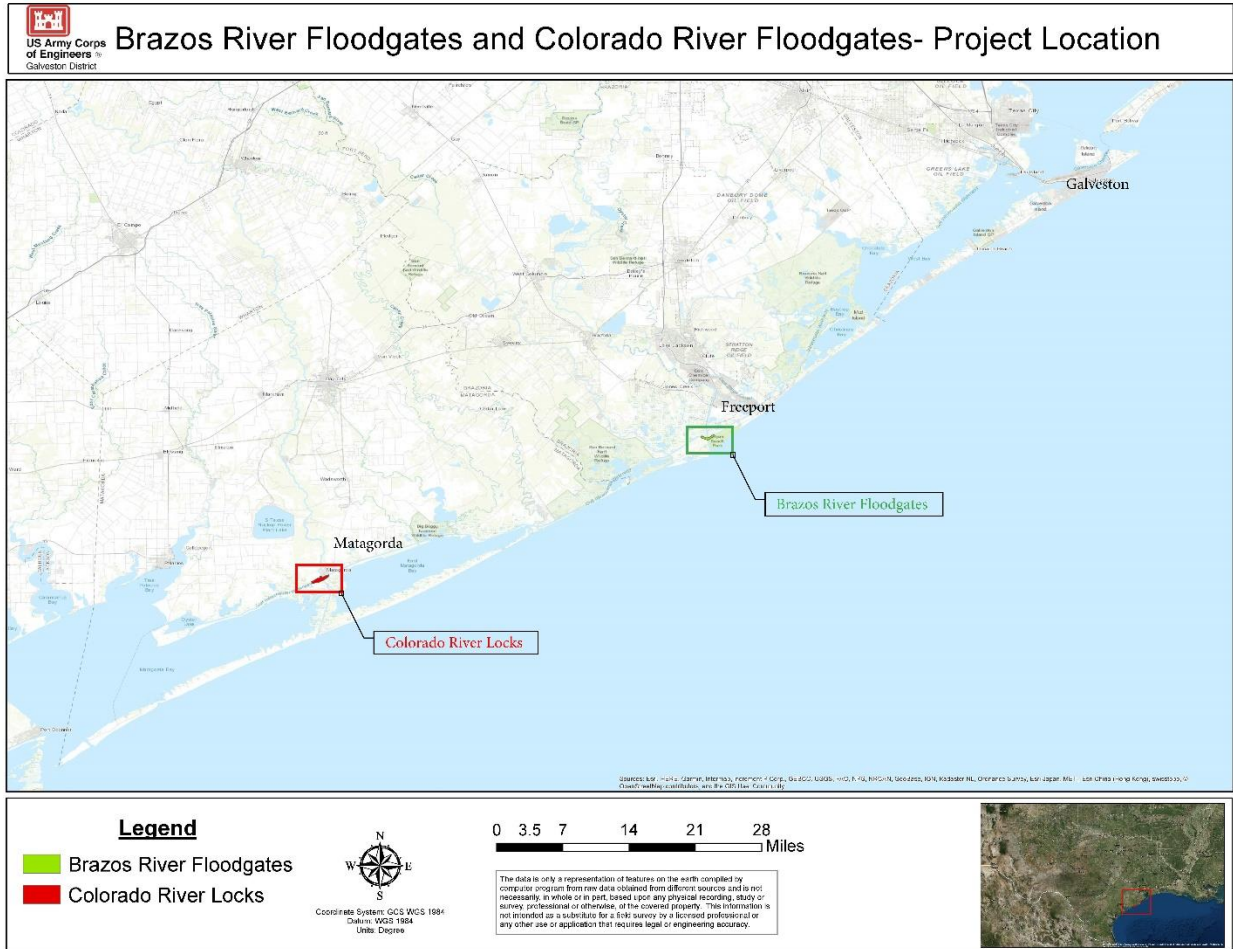


Figure 1: Study Area Overview



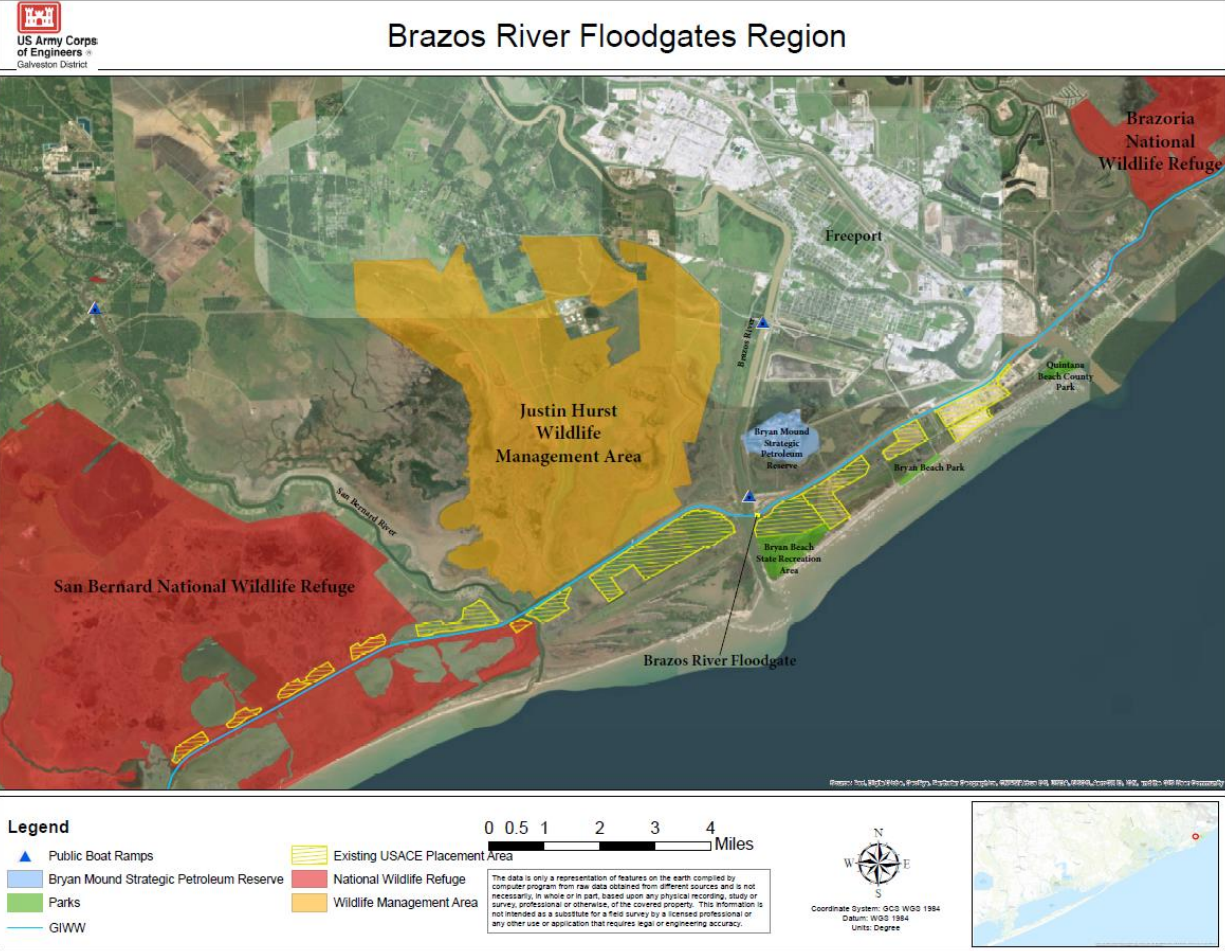


Figure 2: Brazos River Floodgates

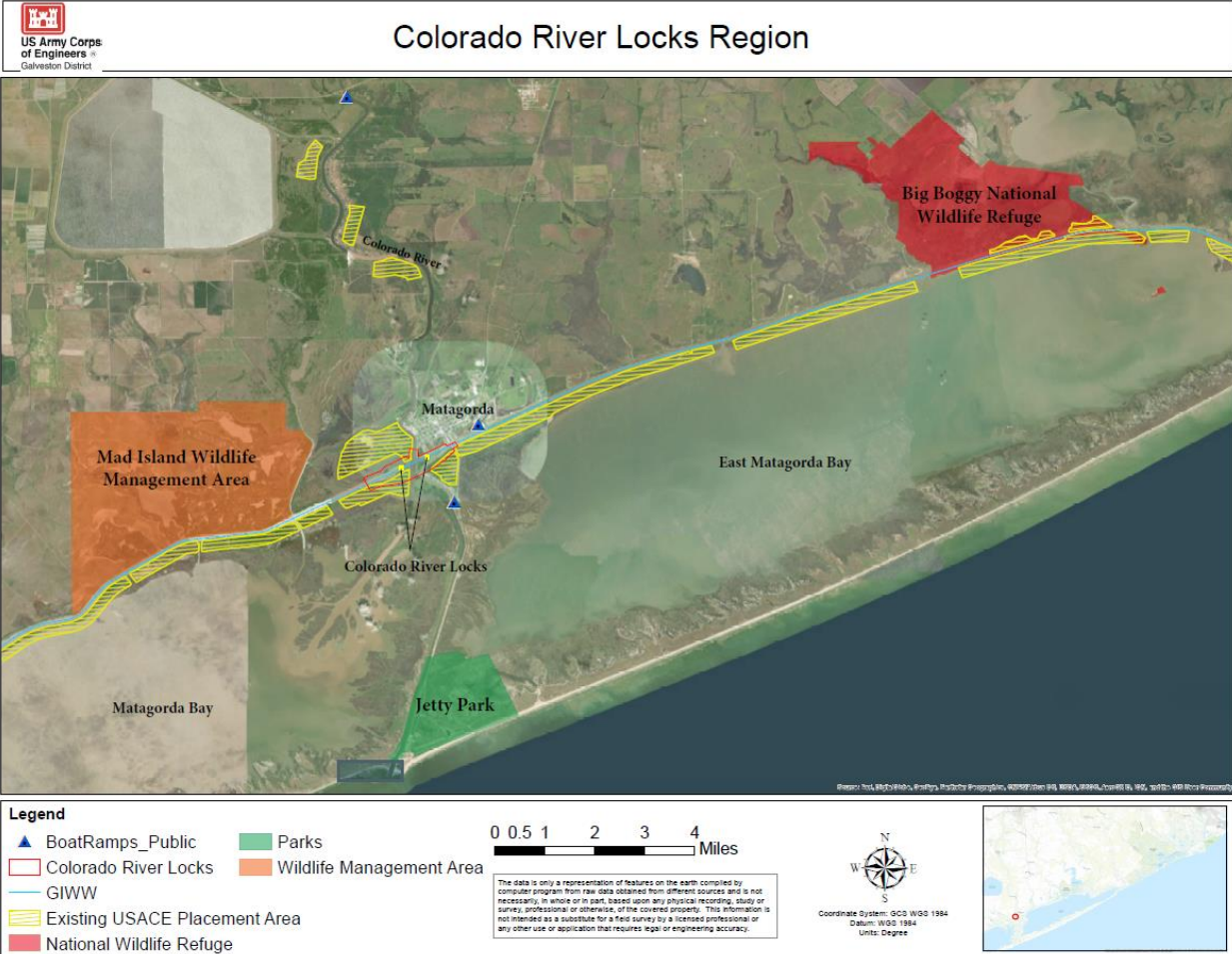


Figure 3: Colorado River Locks Region

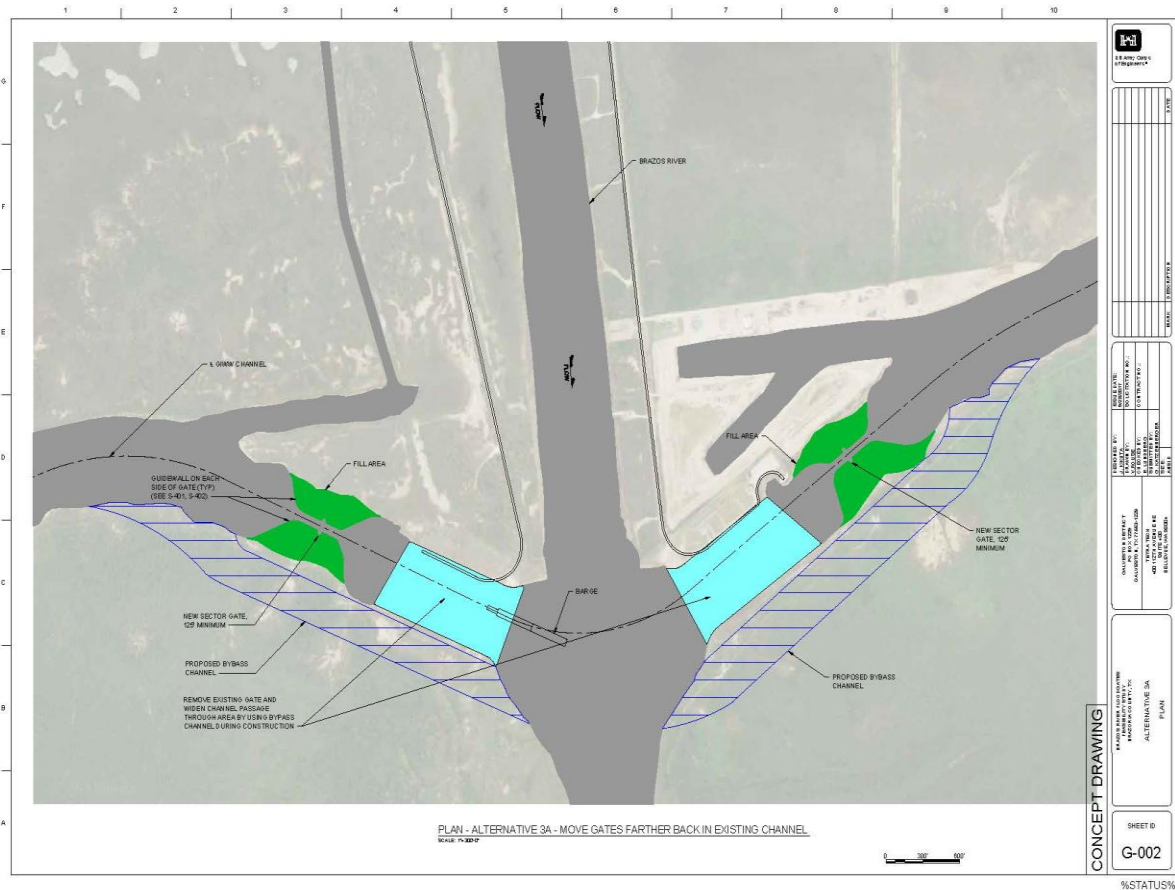


Figure 4: Brazos River Floodgates – Alternative 3A Hybrid



# Brazos River Floodgates Alternative 3A1

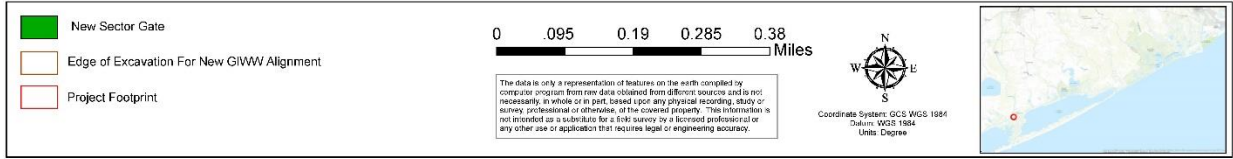
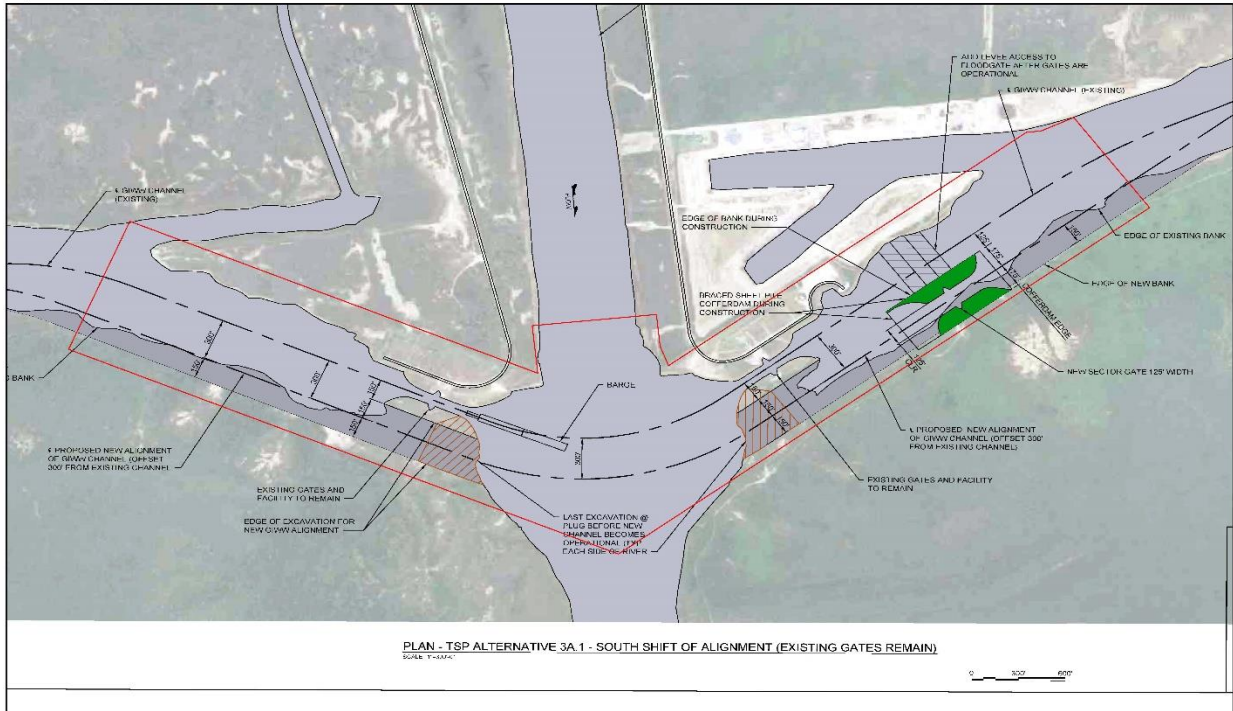


Figure 5: Brazos River Floodgates – Alternative 3A1



Figure 6: Colorado River Locks – Alternative 4A



## Colorado River Locks - Alternative 4B1

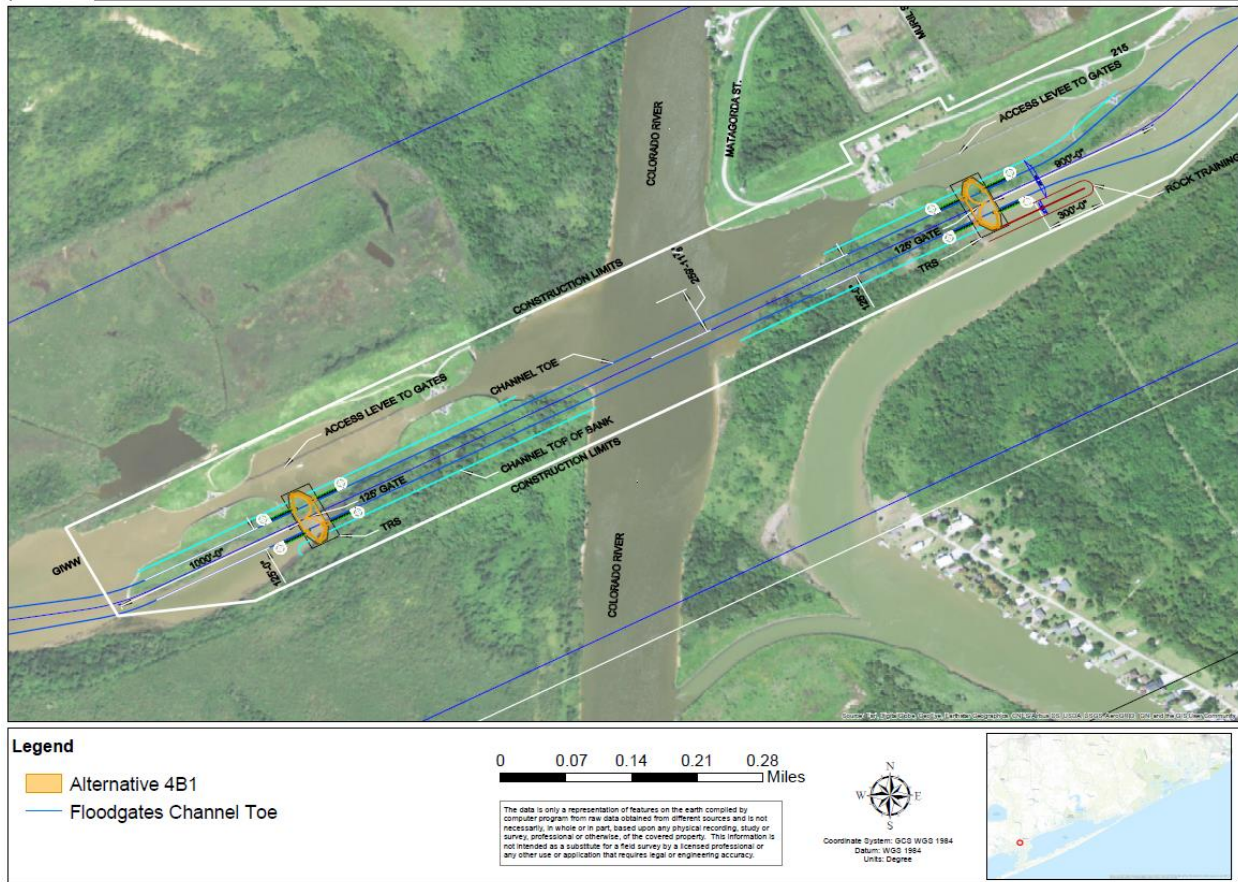


Figure 7: Colorado River Locks – Alternative 4B1

## TSP Refinement for Brazos River Floodgates

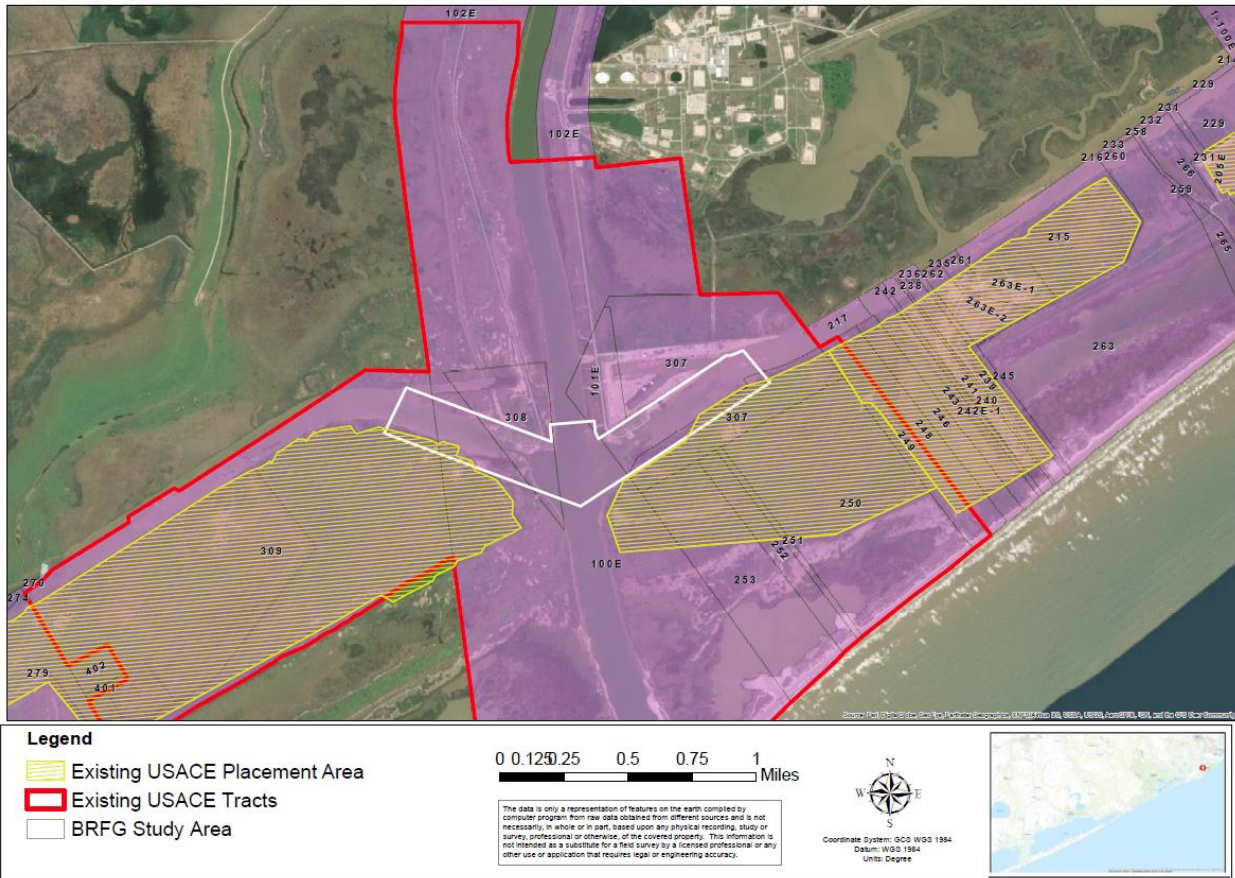


Figure 8: USACE-SWG Real Estate Interest along BRFG Project Footprint



# TSP Refinement for Colorado River Locks

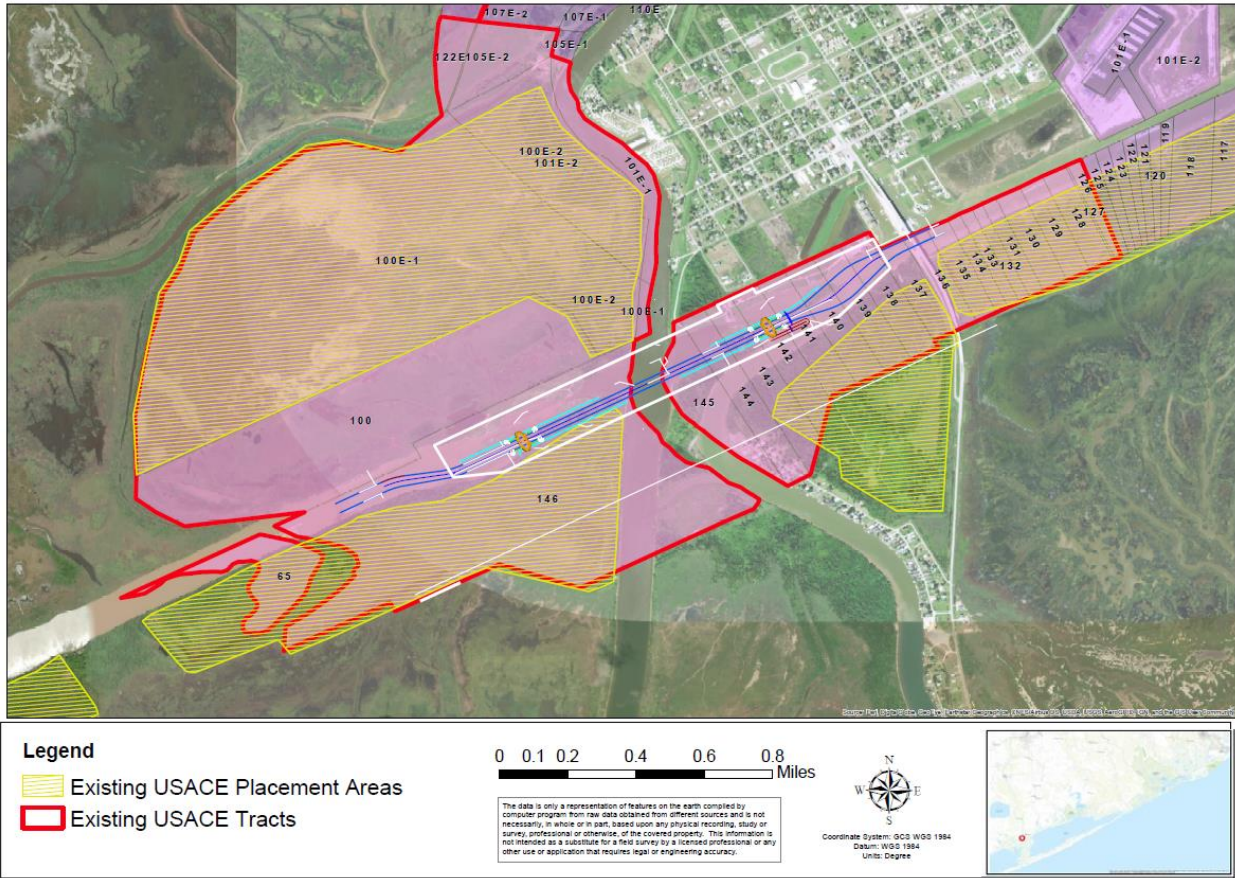


Figure 9: USACE-SWG Real Estate Interest along CRL Project Footprint



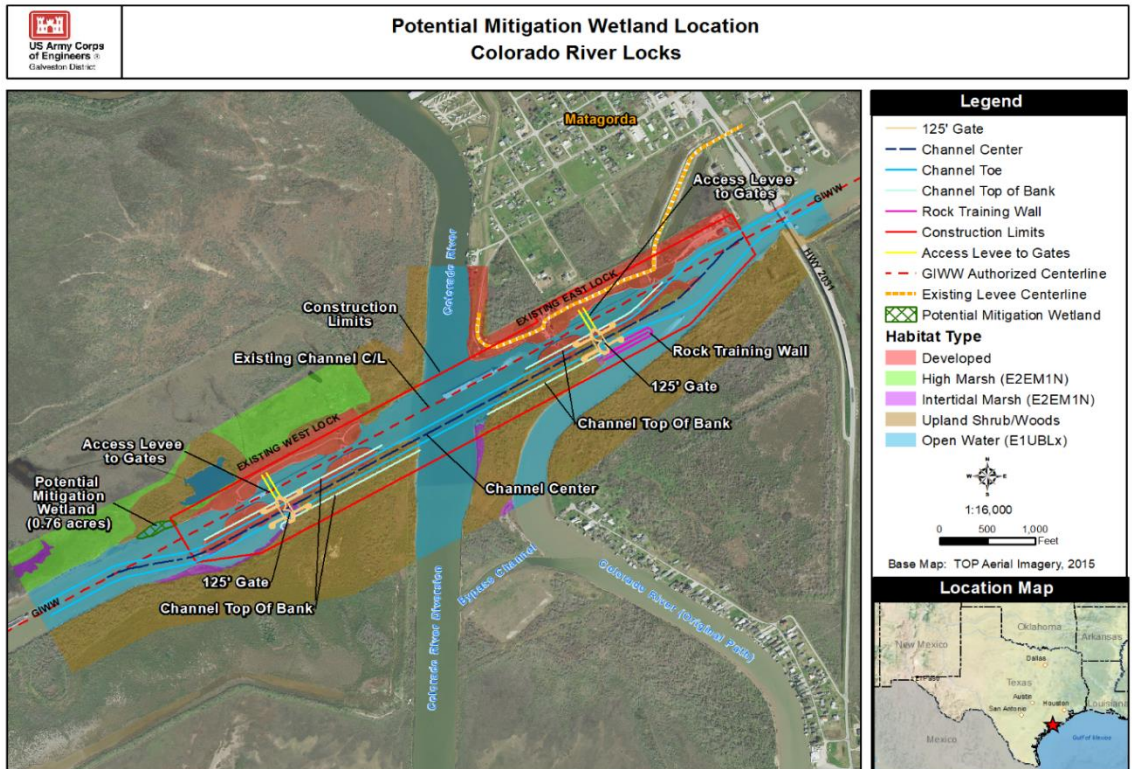
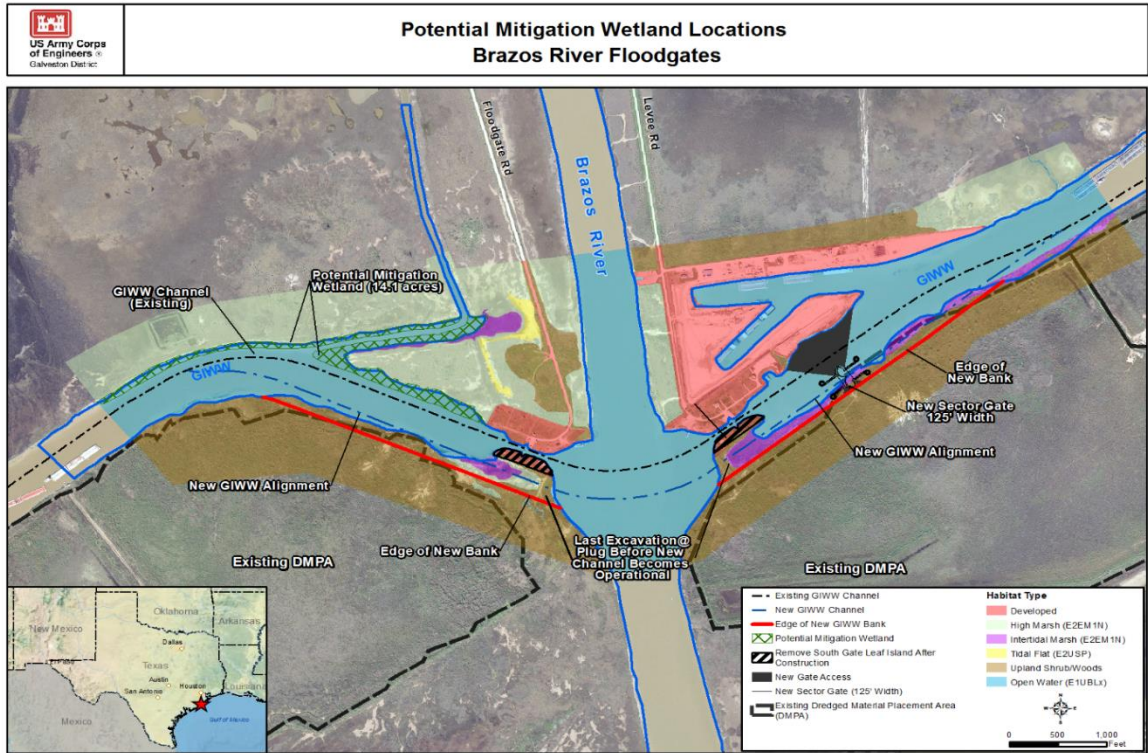


Figure 10: Potential Mitigation Locations at BRFG and CRL

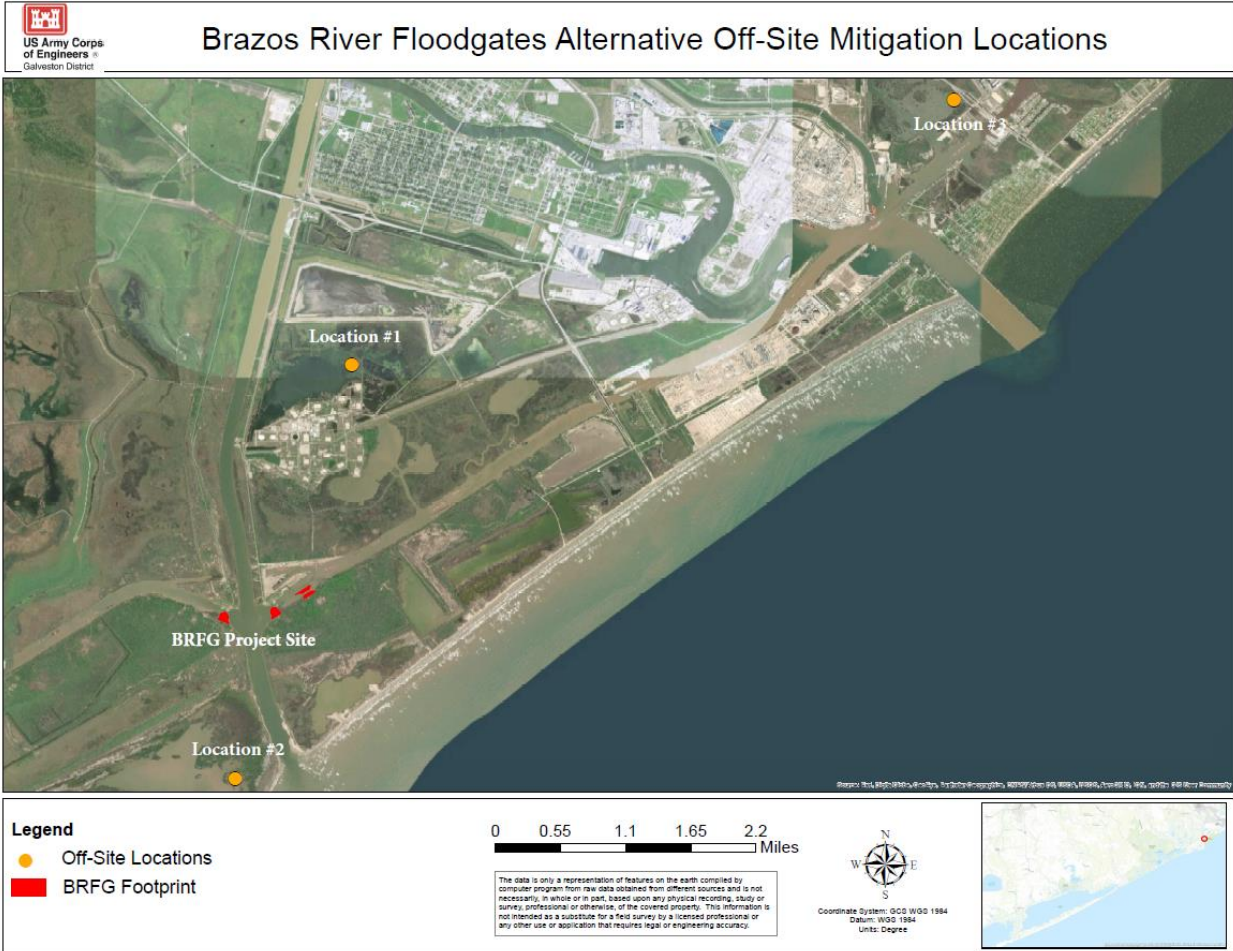


Figure 11: Alternate Off-Site Mitigation Locations



## Ocean Dredged Material Disposal Sites



Figure 12: Ocean Dredged Material Disposal Sites

## CBRS System Unit and Otherwise Protected Area Near BRFG

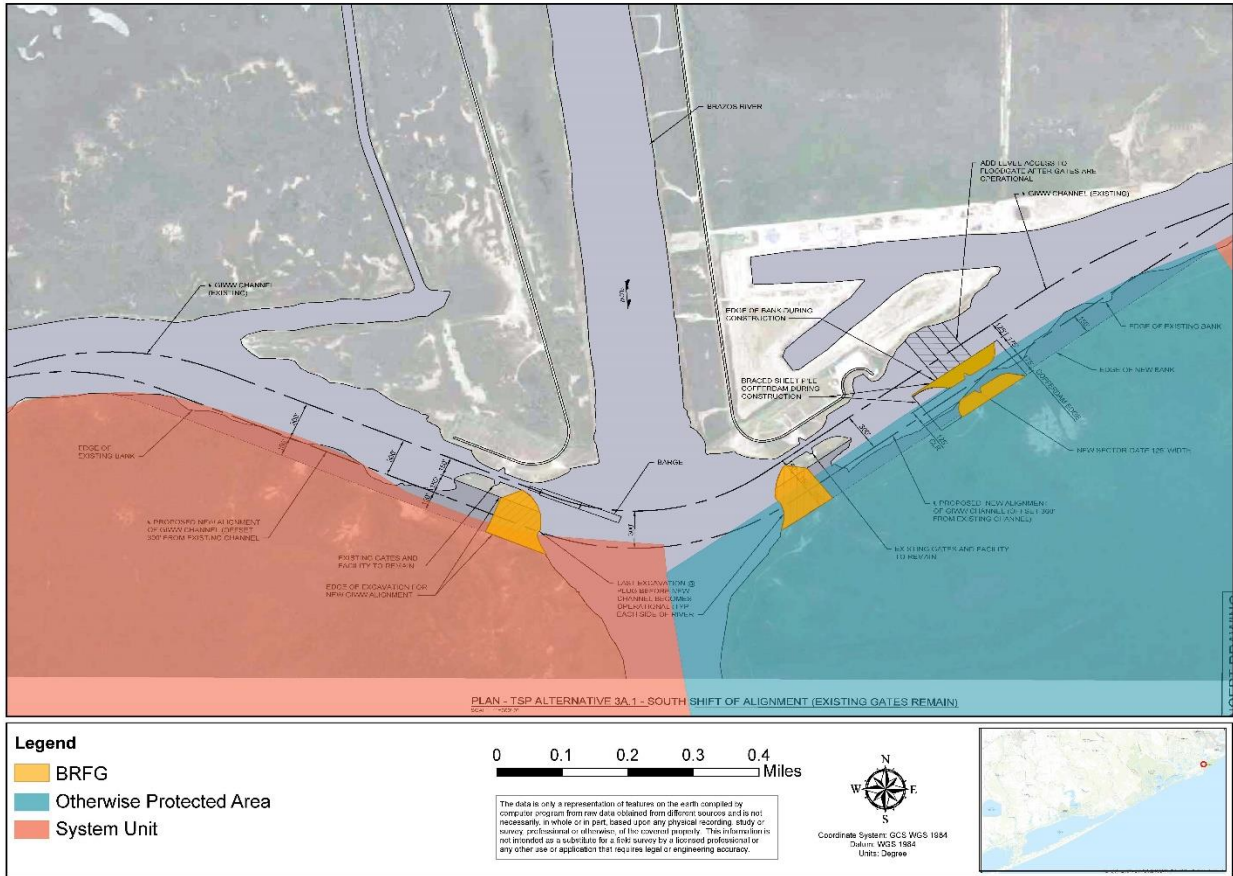


Figure 13: CBRS System Unit and Otherwise Protected Area in BRFG

## CBRS System Unit and Otherwise Protected Area Near CRL

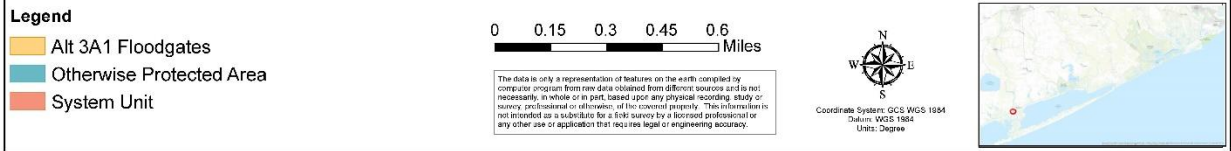


Figure 14: CBRS System Unit and Otherwise Protected Area Near CRL