

**Draft Mitigation Banking Instrument
Coastal Bend Wetland Mitigation Bank
Aransas County, Texas
SWG-2008-00922**

**Submitted for Approval to:
U.S. Army Corps of Engineers
Galveston District
and
Interagency Review Team**

October 31, 2023

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I. INTRODUCTION

A. BANK PURPOSE

All mitigation banks require a banking instrument. The Mitigation Banking Instrument (MBI) is the legal document for the establishment, use, operation, and maintenance of the proposed mitigation bank. The proposed mitigation bank will be used for compensatory mitigation for unavoidable impacts to waters of the United States, including wetlands, that result from activities authorized under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, provided such activities have met all applicable requirements and are authorized by the U.S. Army Corps of Engineers (USACE). All mitigation banks must comply with 33 CFR Part 332 if they are to be used to provide compensatory mitigation for Department of the Army (DA) permits. The Sponsor is responsible for developing, operating, and maintaining CBWMB subject to the requirements of this MBI; and the Sponsor agrees to satisfy and assume the legal responsibility for the mitigation requirements assigned to a respective permit by USACE.

The Coastal Bend Wetland Mitigation Bank (CBWMB) is a bank sited on private lands. Credits for compensatory mitigation projects on public land must be based solely on aquatic resource functions provided by the compensatory mitigation project, over and above those provided by public programs already planned or in place. Bank credits for DA permits may also be used to satisfy the requirements of other programs (e.g. tribal, state, or local wetlands regulatory programs, USACE civil works projects, and Department of Defense military construction projects, Endangered Species Act), consistent with the requirements of the programs, if the appropriate credits required by a DA permit is supplemental to such programs. Under no circumstances may the same credits be used to provide mitigation for more than one permitted activity.

This MBI serves to ensure compliance with Section 404 of the Clean Water Act 33 USC 1344 et seq, Section 10 of the Rivers and Harbors Act 33 USC 401 et seq and the implementing regulations found at 33 CFR 320-332, which are controlling in any conflict between the MBI and those laws and regulations. The Corps role is regulatory only; the MBI should not be construed as a contract with the Government enforceable at law by the applicant or any third party. The sponsor agrees to the extent allowed by the laws of the State of Texas to defend, indemnify and hold the United States harmless in any action where any party, including the sponsor, the beneficiary or any third party brings a claim, monetary or otherwise, against the United States that relates in any way to the Corps execution of mitigation banking documents for the establishment of this mitigation bank.

B. BANK CONTACT INFORMATION

Mitigation Bank Name: Coastal Bend Wetland Mitigation Bank (CBWMB)

Name of Sponsor: PBC Wetlands LLC
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Sugarland, Texas 77479

Phone Number: 713-906-2772

Email Address: eduvco@aol.com
Point of Contact (POC): Ed Duval

Name of Sponsor's Agent(s): Berg-Oliver
Associates
Mailing Address: 14701 St. Mary's Lane, Suite
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Phone Number: 281-589-0898
Email Address: salford@bergoliver.com
POC: Susan Alford

Name of Property Owner(s): PBC Wetlands,
LLC
Mailing Address: Same as above

Name of Mineral Owner(s): N/A

Name of Conservation Easement Holder:
Texas Ag Land Trust
Mailing Address: 1919 Oakwell Farms
Pkwy; Ste 100 San Antonio, Texas
78218

Phone Number: 254-223-3056
Email Address: AJames@TxAgLandTrust.org
POC: Andy James

Name of Long-term Steward: Texas Ag Land
Trust
Mailing Address: Same as above

Name of Endowment Fund Managing Entity:
Mailing Address: Same as above

C. REGULATORY AUTHORITIES

The establishment, use, and operation of the CBWMB Mitigation Bank will be carried out in accordance with the following authorities:

- Clean Water Act (33 USC 1251 et seq.)
- Rivers and Harbors Act (33 USC 403)
- Fish and Wildlife Coordination Act (16 USC 661 et seq.)
- Regulatory Programs of the U.S. Army Corps of Engineers, Final Rule (33 CFR 320-332)
- Guidelines for Specification of Disposal Sites for Dredged and Fill Material (40 CFR 230)
- Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army Concerning Determination of Mitigation Under the Clean Water Act, Section 404(b)1 Guidelines (February 6, 1990)
- Final Rule for the Compensatory Mitigation for Losses of Aquatic Resources issued by the U.S. Army Corps of Engineers and the Environmental Protection Agency (April 10, 2008)
- Water Resources Development Act of 2007-Section 2036: Mitigation for Fish and Wildlife and Wetlands Losses
- Section 7 of the Endangered Species Act
- Section 106 of the National Historic Preservation Act"
- Food Security Act of 1985, as amended
- Texas State Water Quality Certification [30 Tex. Admin. Code §279.12 (2001)]
- Texas State Water Quality Standards [30 Tex. Admin. Code § 307 (2000)]
- Texas Parks and Wildlife Code Chapter 14 Powers and Duties Concerning Wetlands

D. INTERAGENCY REVIEW TEAM

The Interagency Review Team (IRT) for the CBWMB Mitigation Bank is composed of the individuals representing the agencies listed below:

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Galveston, TX 77550

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E. LEGAL RESPONSIBILITY STATEMENT

The Sponsor assumes all legal responsibility for satisfying all mitigation requirements of Department of the Army (DA) permits for which CBWMB has been utilized, or fees have been accepted (i.e. the implementation, performance, and long-term management of the compensatory mitigation project approved under this agreement). The transfer of liability from permittee to the Sponsor is established by the following: 1) the approval of this MBI by the Sponsor and District Engineer (DE), 2) receipt of a credit transaction report by the DE that is signed and dated by the Sponsor and the Permittee, and 3) the transfer of fees required from the Permittee to the Sponsor.

The responsibility for financial success and risk to the investment initiated by CBWMB Sponsor rests solely with CBWMB Sponsor. The IRT agencies administer their regulatory programs to best protect and serve the public's interest, and not to guarantee the financial success of banks, specific individuals, or entities. Accordingly, there is no guarantee of profitability for any individual mitigation bank. Bank sponsors should not construe the MBI as a guarantee in any way that the IRT agencies will ensure sale of credits or that the IRT agencies will forgo other mitigation options that may also serve the public interest. Since the IRT agencies do not control the number of banks proposed or the resulting market impacts upon success or failure of individual banks, in depth market studies of the potential and future demand for bank credits are the sole responsibility of the Sponsor.

USACE approval of this Instrument constitutes the regulatory approval required for the CBWMB Mitigation Bank to be used to provide compensatory mitigation for Department of the Army permits pursuant to 33 C.F.R. 332.8(a)(1). This Instrument is not a contract between the Sponsor or Property Owner and USACE or any other agency of the federal government. Any dispute arising under this Instrument will not give rise to any claim by the Sponsor or Property Owner for monetary damages. This provision is controlling notwithstanding any other provision or statement in the Instrument to the contrary.

F. OWNERSHIP DOCUMENTATION

Neither this MBI nor any Department of the Army (DA) permit convey any property rights, either in real estate or material, or any exclusive privileges. Furthermore, this MBI or DA permit does not authorize any injury to property, or invasion of rights or any infringement of Federal, state or local laws or regulations. The Sponsor's signature on the MBI is an affirmation that the Sponsor possesses or will possess the requisite property interest to undertake all activities discussed and required in the MBI (33CFR320.4(g)6).

Sponsor agrees that there are no encumbrances on the property that have not been identified and fully disclosed to USACE and the IRT.

The CBWMB Mitigation Bank shall protect 115.77 acres in the required ecological condition in perpetuity which is to be guaranteed by the execution of a legally binding conservation easement. There are no liens, mortgages, or security interests on the property. To ensure

that the conservation easement is conveyed without encumbrances that would affect the viability of CBWMB, Sponsor has provided the following:

II. MITIGATION PLAN

A. OBJECTIVES

The goal of the CBWMB is to restore, enhance, establish, and protect tidal marsh, and coastal tidal fringe wetland habitats throughout CBWMB property in order to satisfy the needs of the watershed. As verified and approved by the USACE, CBWMB contains 57.22 acres of jurisdictional aquatic resources, labeled as special aquatic sites (SWG-2008-00922 dated July 5, 2017). CBWMB proposes to enhance a total of 25.51 acres of existing high marsh wetlands, enhance a total of 14.85 acres of existing low marsh, and establish a total of 22.43 acres of adjacent wetland. The enhancement and establishment will be separated into two (2) phases: Phase 1- establish 13.00 acres of high marsh tidal fringe wetlands; enhance 3.35 acres of low marsh tidal fringe wetlands; and enhance 5.95 acres of high marsh tidal fringe wetlands. Phase II will consist of establishing 9.43 acres of high marsh tidal fringe wetlands; enhancing 11.50 acres of low marsh tidal fringe wetlands; and enhancing 19.56 acres of high marsh tidal fringe wetlands. Additionally, improvements to the subject property include removing a man-made barrier to increase tidal flux to the enhanced wetlands and removing a man-made ditch to further improve hydrology to the area. No construction is planned within the existing sand flat areas. All construction adjacent to these sand flat areas will occur from May 15th through July 15th.

B. SITE SELECTION

The CBWMB site was chosen because of its potential to offset unavoidable impacts along the Coastal Bend Bay area, as there are no mitigation banks in this region that can offset unavoidable impacts associated with USACE permits in compliance with the hierarchy established in the Final Mitigation Rule (2008). CBWMB is located adjacent to Port Bay and adjacent to a major drainage system of the Live Oak Peninsula that drains into Port Bay through CBWMB property. CBWMB property is located in an area that is within the Texas Coastal Bend watershed (Pulich, Jr., W.M., 2007 Texas coastal bend). The threat of habitat impacts within the selected service area have been identified with the further expansion of the oil and gas industry, increased shipping traffic and industrial growth through the Port of Victoria, Corpus Christi, Portland, and Ingleside. Currently, a new harbor bridge is under construction to allow larger shipping vessels into the Port of Corpus Christi (<http://www.harborbridgeproject.com/>). The proposed service areas all include tidally functioning wetlands that are important to this region of the coastal bend of Texas. There are tidally influenced wetland areas located in the estuarine areas of Nueces Bay and north Corpus Christi Bay systems, therefore, these watershed areas were included in the secondary service areas of the CBWMB. The overall health of these bay systems is vitally important for the coastal region of Texas to support the wildlife and vegetation in the area and will be protected by the proposed CBWMB.

CBWMB, due to its location along the shoreline of Port Bay and the presence of two unnamed tributaries running through the property, is eligible for certain inherent water rights to store and use water. However, the selection of CBWMB site is not dependent upon these rights. The Water Budget included in this document indicates the site, its contributing watershed, and periodic flood waters will sustain CBWMB and the proposed construction of wetlands. Analysis of FEMA mapping published in 2007, indicates the entirety of the tract is located within the 100-year floodplain of Port Bay. Farm-to-Market Road (FM) 1069 borders the southern boundary of the tract while the adjoining roadside ditch on the northern side of FM 1069 provides storm water runoff into the tract via two (2) drainage ditches. These drainages flow from both the north and south roadside drainage ditches along FM 1069, northwest into CBWMB property by way of two (2) culverts placed within a historic drainage feature bisected by FM 1069, located northeast of the intersection of FM 1069 and Port Bay Road. Drainage ditches along Port Bay Road also provide storm water runoff from the adjoining property located directly across Port Bay Road.

The included water budget analysis conducted by CLR, Inc. in 2010 describes the upstream/off-site drainage area as delineated using topographic maps and field reconnaissance purchased from the Aransas County Surveyor's Office. All drainage channels, ditches, and sloughs in this area are owned and maintained by Aransas County, and no private water rights (pumping or irrigation) for adjacent landowners exist. The Sponsor has had numerous conversations with Aransas County regarding the importance of this storm water runoff and future development of this area. Aransas County is currently proposing to increase the amount of storm water runoff collected within the above described drainage and partner with the Sponsor to allow this water to flow onto CBWMB's property. A letter from Aransas County is also included that summarizes the County's 2012 study and survey of the drainage area of the proposed Bank. It also includes important documentation regarding private water rights upstream of CBWMB, wherein none currently exist.

The existing and proposed-to-be-established wetlands will not be dependent upon additional storm-water conveyance proposed by Aransas County. As described in detail within the Water Budget Analysis, CBWMB property currently receives enough rainfall to provide the proposed acreage of wetlands with enough water to meet the current performance standards. "Normal" rainfall for this area is approximately 36.95 inches of annual precipitation. Between the years 2000 and 2011 CBWMB property has received five (5) years of "normal" or average annual rainfall, and three (3) additional years of rainfall within three (3) inches of the average total. A total average amount of rainfall for Aransas County in 2014 was 34.59 inches. Hydrology on the proposed CBWMB site has not been altered since the hydrologic study occurred. Site history, in regards to the alteration of any on-site sheet flow does not affect the success of the proposed CBWMB.

In order to not disrupt tidal exchange, no construction activities are proposed to impede tidal flow. Some proposed construction within CBWMB property is proposed to expand tidal areas and allow for the establishment of new tidal estuarine marsh. Therefore, tidal areas were not included within the original scope of the Water Budget Analysis. High marsh tidal fringe wetlands with no direct connection to the bay system will be constructed in such a fashion that facilitates normal freshwater flushing through them and into the estuarine marsh, in order to prohibit the establishment of hyper-salinity levels within the marsh.

C. SERVICE AREA

The service area is the watershed, ecoregion, physiographic province, and/or other geographic areas within which the mitigation bank is authorized to provide compensatory mitigation required by DA permits. Service areas must be appropriately sized for each credit type to ensure that the aquatic resources provided will effectively compensate for adverse environmental impacts across the entire service area respectively.

CBWMB site is located near the juncture of three (3) eight-digit HUCs (12100405- Aransas Bay, 12100406- Mission, and 12100407- Aransas) specifically located in the center of the eight-digit HUC 12100405- Aransas Bay. The CBWMB Service Area is composed of a primary and secondary service area. This service area was evaluated using 1) the watershed approach; and 2) the West Gulf Coastal Plain Level III Ecoregion boundary. Due to the overall connectivity of the bay systems within the service area, the proposed mitigation bank will provide a protected resource for potential biological or ecological impacts within the ecoregion. The ecoregion boundary has been clearly defined as the Western Gulf Coast Plain and the service area does not extend past this boundary. Impacts to wetlands within the Primary Service Area that are evaluated using the Interim Tidal Fringe Hydrogeomorphic Model (iHGM) will be debited according to their Functional Credit Unit (FCU) value.

The primary service area for the CBWMB is identified as the Aransas Bay, Mission, and Aransas USGS 8-digit Hydrologic Unit Codes (HUC) 12100405, 12100406, and 12100407. The primary service area includes portions of (Aransas list County(s)) Counties. Impacts occurring within the primary service area shall be debited on a 1 : 1 basis.

The secondary service area includes a portion of the immediately adjacent eight-digit HUC 12110201 (North Corpus Christi Bay) within the West Gulf Coastal Plain Level III Ecoregion. The secondary service area for the CBWMB is identified as the North Corpus Christi Bay USGS 8-digit HUC 12110201. The secondary service area includes portions of Aransas and Nueces Counties. Impacts occurring within the secondary service area shall be debited on a 1.5 : 1 basis (see map attached as Fig (1)).

The service area is based on eight-digit HUCs within the same West Gulf Coastal Plain Level III Ecoregion, excluding barrier islands. The CBWMB shall not be used to compensate for impacts to non-vegetated waters of the U.S. classified as "streams", any wetlands which are assessed using a Riverine Hydrogeomorphic Model, dune swale wetlands, and non-vegetated Section 10 deep-water habitats. State parks and federally owned lands within both the primary and secondary service areas are excluded from the service area.

D. SITE PROTECTION INSTRUMENT

The Sponsor shall record a conservation easement with the Aransas County Clerk that has been approved by USACE, in coordination with the IRT, and provide a copy of the recorded conservation easement to the USACE Galveston District.

The conservation easement must be approved by the USACE and shall be recorded in the Official Records of Aransas County, Texas. The conservation easement shall be placed in perpetuity¹ and shall not be removed or modified without the prior written approval of the USACE. The conservation easement agreement will prohibit activities that would be inconsistent with the establishment and operation of CBWMB. Furthermore, the conservation easement shall provide that all structures, facilities, and improvements with the CBWMB, including roads, that are incidental to the functionality of CBWMB but are also necessary to CBWMB management and access, shall be maintained by the Sponsor for as long as it is necessary to serve the needs of long-term management and maintenance. The conservation easement agreement will provide for the long-term protection of the functions of the existing wetlands, the enhanced and established wetlands, and the surrounding upland buffer.

Prior to the release of any credits, a conservation easement will be placed on the 115.77. The third party conservation easement holder must be approved by the USACE and the IRT. The easement language and a letter of intent from Texas Agricultural Land Trust (TALT), as a conservation easement holder.

The Sponsor has executed a contract with TALT, to establish the conservation easement agreement which will be incorporated by replacing the draft conservation easement agreement. Funding for this obligation will be paid by the Sponsor prior to initial credit release.

E. BASELINE INFORMATION

The CBWMB is entirely within the 100-year floodplain of Port Bay as published by FEMA in 2007. According to historic aerial photography, coastal wetland depressions (high marsh tidal fringe) were scattered extensively throughout CBWMB property. Over time, natural weather-related occurrences, as well as anthropogenic manipulation (oil and gas exploration, pipeline activities, road construction, and ranching activities), have altered the landscape. As a result of these activities, hydrological patterns through CBWMB property have been altered by the construction of restricted pipes for road crossings and pipelines. Noxious species such as broad leaf cattail (*Typha latifolia*) have been established and the native vegetation has been altered.

The goal of the CBWMB is to restore degraded wetlands, establish new wetlands, and enhance existing wetland habitats.

Based on a wetland delineation conducted by Berg ♦ Oliver Associates (BOA) and verified in 2012 and again in 2016 by the USACE, Galveston District, Corpus Christi Office under permit number SWG-2008-00922, CBWMB property proposed for wetland enhancement, establishment, and restoration under this agreement does not contain lands considered “state owned land” by the GLO. Vegetation communities were evaluated and documented to delineate wetland and upland boundaries. In upland areas, CBWMB property is dominated by a cover of Gulf cord grass (*Spartina spartinae*), Bermuda grass (*Cynodon dactylon*), and erect prickly-pear (*Opuntia stricta*). In wetland areas, CBWMB property is dominated by a cover of smooth cord grass (*Spartina alterniflora*), seashore saltgrass (*Distichlis spicata*), sand spikerush (*Eleocharis montevidensis*), Gulf cord grass (*Spartina spartinae*), and broadleaf cattail (*Typha latifolia*).

Interim Tidal Fringe Wetland Hydrogeomorphic Model (iHGM) assessments were performed in 2008, August 2010, August 2013 and again in October 2015 in order to assess the functionality of the existing aquatic resources within CBWMB property.

According to the USDA Web Soil Survey of Aransas and San Patricio Counties the dominant soils located on CBWMB site are of the Barrada-Tatton association (BT). Specifically, these soils were identified as Dietrich fine sand (Dt) and Narta fine sandy loam (Na), which are all mapped as hydric soil types within Aransas and San Patricio Counties. The natural soils on CBWMB property allow for the proposed shallow depressional wetlands to function in the same way as the existing wetlands on CBWMB property. Topsoil within the proposed establishment areas will be temporarily side-cast and evenly redistributed across the bottom of the establishment area, upon completion of the achieved excavated depth. The topsoil will be protected from erosion through the use of BMP's, including silt fencing.

F. DETERMINATION OF CREDITS

Due to the location of CBWMB property on Port Bay all existing wetlands within CBWMB property were evaluated using the iHGM. Credits will be established as Functional Capacity Units (FCUs) and traded as a suite of wetland functions. Credits will be released to CBWMB once the USACE verifies the increase of FCUs in each functional category, from either the Initial baseline assessment or a subsequent credit release amount. The Sponsor agrees to only sell credits that are available. Table 1 indicates the verified baseline iHGM FCUs.

Table 1: Summary Interim Tidal iHGM Values

Summary
Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
Coastal Bend Wetland Mitigation Bank

Natural Existing Conditions - Year 0

WAA	WAA Acreage	Functional Capacity Units (FCU)			
		Biological	Botanical	Physical	Chemical
A1	0.15	0.09	0.15	0.06	0.05
A3-A	4.02	3.38	4.02	2.61	3.11
A3-B	5.34	3.74	5.34	3.31	2.92
AA	1.16	0.49	0.70	0.65	0.28
A-A	2.34	1.61	2.34	1.17	1.28
A-B	1.14	0.79	1.14	0.57	0.62
A-C	0.16	0.10	0.16	0.06	0.05
BB	0.11	0.07	0.11	0.06	0.03
B-A	12.63	5.30	7.58	8.84	3.09
B-B	1.55	0.96	1.55	0.90	0.49
B-C	4.07	2.47	4.07	2.36	1.29
B-D	1.11	0.67	1.11	0.58	0.35
CC	0.17	0.06	0.09	0.10	0.04
DD	0.37	0.06	0.04	0.27	0.04
EE-A	2.43	1.51	2.43	1.63	0.77
EE-B	1.23	0.76	1.23	0.76	0.39
EE-C	0.47	0.29	0.47	0.28	0.15
F	0.15	0.02	0.02	0.10	0.02
H	0.07	0.01	0.01	0.04	0.01
Total	38.67	22.39	32.53	24.36	14.98

The iHGM is designed to quantify coastal wetland functions within the regional watershed and will be used to determine the associated functional lift for all tidal fringe wetlands, including high and low marsh. All wetland impacts within the primary service area evaluated using the iHGM, regardless of their high or low marsh classification, will have FCUs sold at a 1:1 ratio.

Should a permit Applicant propose to use the CBWMB, the permit Applicant will contact the Sponsor and arrange with the Sponsor to purchase the necessary credits based upon the functional assessment approved by the USACE. Credits will be sold as a suite and at a 1:1 FCU ratio within the primary service area for in-kind impacts, and a 1.5:1 FCU ratio within the secondary service area for in-kind impacts. Out-of-kind impacts will not be permitted to purchase FCUs through the CBWMB.

Credits will be sold based on a minimum of 0.1 FCU per assessment parameter (Biological, Botanical, Chemical, and Physical). The iHGM will be used to establish the Functional Capacity Index (FCI) and FCU. Applicants may have the option to assume a 1.0 surrogate FCI value for each functional category if they choose not to conduct a HGM functional assessment. Credits will be sold by the tenth value.

Upon reaching an agreement, the Sponsor will execute a contract for sale of credits with the permit Applicant to provide the necessary credits and submit to the USACE an executed copy of the contract within fifteen (15) working days of transaction. The contract will stipulate the date of the contract, the permit Applicant's name as it appears on the USACE permit, the USACE permit number, and the amount of credits sold to the Applicant.

At the time the Sponsor determines that the CBWMB has met the Performance Standards and functional lift has been calculated, the Sponsor shall notify the USACE in writing with supporting documentation, and request verification. The USACE shall, within a reasonable timeframe, respond in writing (notification letter) to the Sponsor with verification or rejection of the Sponsor's credit release request. The USACE will not unduly withhold determination of the Sponsor's request but will notify the Sponsor if a lengthy delay is expected, as well as the reason for the delay. If the Sponsor's request is not granted, the USACE will inform the Sponsor in writing as to the reasons for denial, and any actions that may be required, including meeting with the IRT to discuss possible remedial actions that can be taken at the CBWMB site.

G. MITIGATION WORK PLAN

The success of CBWMB relies upon the enhancement and restoration of existing aquatic resources as well as the establishment of new aquatic resources. Enhancement and restoration will be undertaken in separate phases through a multi-year process. Currently, the proposed phased construction activities are designed to have no impact to existing or future established jurisdictional areas. Each Phase will be designed and constructed for specific hydrologic and topographic requirements as necessary.

No roads, pipeline right-of-ways (ROW), or berms are included in the acreages listed for mitigation credit. No new roads will be constructed within the limits of CBWMB property. All existing roads that are proposed to remain will be graded and re-worked to match existing site elevations and will not prevent natural sheet flow from CBWMB property towards Port Bay. A map has been included depicting ROW easements for oil and gas as well as electrical lines that are currently on CBWMB property. Any work performed by the pipeline company or utility company will be required to restore any damaged habitat to the pre-existing conditions, as per the conservation easement agreement.

The initial Bank work plan is proposed to be established in two (2) distinct phases of construction consisting of the total 115.77 acres (Phase I: 60.08 acres & Phase II: 55.69 acres). This methodology will allow construction activities to be conducted in specific areas which will prevent re-disturbance of completed Phases.

Modifications to existing wetlands will only occur as enhancement activities, no impacts which would decrease wetland function will transpire. Any and all work performed will be documented through as-built drawings. These as-built drawings will be submitted to the USACE Compliance Chair within 90 days after the completion of construction. Additionally, the annual compliance report will be submitted to the USACE Compliance Chair before March 31st of each year until Bank construction is completed. An updated schedule for completion of work will be provided with the annual report. Any deviations from MBI-approved Phase work will be documented at that time.

Phase I

Phase I lies in the northeastern most portion of CBWMB property. Construction is proposed to commence immediately upon execution of the MBI, more specifically no earlier than May 15th to avoid conflict with protected species. Construction start date would be contingent upon existing lease agreements, current weather conditions, and presence/absence of protected species as later described in this assessment. Construction would commence no later than two years upon execution of the MBI and would follow the same construction schedule in any calendar year. Weather permitting, construction is anticipated to be completed within 60-90 days with planting to be completed within one (1) calendar year from the construction start date. Coordination efforts with USFWS would occur for endangered species if any portion of construction, including planting, is proposed to commence outside the May 15th through July 15th work window.

Phase I is proposed to consist of approximately 13.00 acres of established high marsh tidal fringe wetlands, 5.95 acres of enhanced high marsh tidal fringe wetlands, and 3.35 acres of enhanced low marsh tidal fringe wetlands.

a. Tidal fringe wetlands to be enhanced will be created by mechanically removing the hydrological barriers presented by existing berms and roadway restrictions that inhibit tidal exchange in these habitats. Tidal fringe wetlands proposed to be established will be created by the excavation of earthen material, ranging between six (6) and twelve (12) inches. These elevations are based on LIDAR and will be verified prior to work commencing. Established tidal fringe wetlands will be planted with up to 5,600 plants per acre on three (3) foot centers, depending upon the specific hydrology and seed source and/or transplant species availability. It is a goal of CBWMB to utilize on-site native vegetation by transplanting select species from within CBWMB property to the establishment and enhanced areas. If on-site sources are insufficient, additional transplant resources from adjacent properties may be utilized. A regionally specific plant list has been created through the review of representative wetlands both on CBWMB property and throughout the immediate Texas gulf coast region. No work is proposed directly within the sand flats. Enhancement of these areas is anticipated by the removal of the hydrologic barriers and the increased plant diversity of the adjacent habitat.

b. High marsh wetlands will be established through the removal of existing earthen material in order to create a concave topographic shape which will allow for various water depths within the established wetlands. Approximately three (3) to six (6) inches of the top soil will be removed and redistributed within the established wetlands in order to utilize the valuable organic matter, nutrients, and seed source. Topsoil within the proposed establishment areas will be temporarily side-cast and evenly redistributed across the bottom of the establishment area, upon completion of the achieved excavated depth. All other excavated side-cast material not to be redistributed back in the establishment areas will be moved off of CBWMB property and disposed of properly. Additionally, any existing high marsh wetlands proposed for enhancement that will require cattail removal efforts to be performed throughout the wetland boundary will be planted with shrubs, including but not limited to *Baccharis sp.* and *Iva frutescens*.

- c. Low marsh enhancement may include reestablishment of hydrology by the removal of portions of the abandoned oil and gas roadway access points.

Phase II

Phase II is located immediately adjacent and northwest of Phase I. Phase II is proposed to consist of the establishment of 9.43 acres of high marsh tidal fringe wetland, 19.56 acres of high marsh tidal fringe enhancement, and 11.50 acres of low marsh tidal fringe wetland enhancement. Phase II construction will begin once it is determined that Phase I performance standards have been adequately met and the Sponsor has had the opportunity to implement corrective measures with any issues that may arise with Phase I success. Weather permitting, Phase II construction is anticipated to be completed within one (1) calendar year from the construction start date of this specific Phase. Similar to Phase I construction, all earth work is proposed to commence no earlier than May 15th and would be completed within 60-90 days. Coordination efforts with USFWS would occur for endangered species if construction is proposed outside the May 15th through July 15th window.

- a. Tidal fringe wetlands proposed to be enhanced will be created by mechanically removing the hydrological barriers presented by existing berms and roadway restrictions. Further enhancement will be accomplished by shallow excavation to a maximum depth of six (6) inches to model coastal depressions. These elevations are based on LIDAR and will be verified prior to work commencing. Established tidal fringe wetlands will be planted with up to 5,600 plants per acre on three (3) foot centers, depending upon the specific hydrology and seed source and/or transplant species availability. It is a goal of CBWMB to utilize the existing plant species composition currently on CBWMB property. A regionally specific plant list has been created through the review of representative wetlands both on CBWMB property and throughout the immediate Texas gulf coast region.

- b. High marsh wetlands will be established through the same methodology as depicted in Phase I. High marsh wetlands will be established through material being removed in order to create a concave topographic shape which will allow for various water depths within the wetland re-established by the removal of abandoned oil and gas access and other man-induced alterations. Approximately three (3) to six (6) inches of the top soil will be removed and redistributed within the newly excavated areas in order to utilize the valuable organic matter, nutrients, and seed source. All other excavated side-cast material not to be redistributed back in the establishment areas will be moved off of CBWMB property and disposed of properly. Additionally, any existing high marsh wetlands proposed for enhancement that will require cattail removal efforts to be performed throughout the wetland boundary will be planted with shrubs, including but not limited to *Baccharis sp.* and *Iva frutescens*.

- c. Low marsh wetland enhancement will be accomplished by removing the roadway access barrier as noted in Phase I, which will provide the necessary establishment of hydrology to the area.

Please reference **Table 2** below for a detailed analysis for the establishment and enhancement of the Phase I and Phase II areas.

Table 2: Mitigation Work Plan Acreages

PHASE	ESTIMATED ACREAGE
Phase I	13.00 acres – High marsh tidal fringe wetland establishment
	3.35 acres – Low marsh tidal fringe wetland enhancement
	5.95 acres – High marsh tidal fringe wetland enhancement
Phase II	9.43 acres – High marsh tidal fringe wetland establishment
	11.50 acres – Low marsh tidal fringe wetland enhancement
	19.56 acres – High marsh tidal fringe wetland enhancement

Enhancement: The Sponsor proposes to enhance a total of 25.51 acres of high marsh tidal fringe wetlands, and 14.85 acres of low marsh tidal fringe wetlands. The high marsh wetlands will be enhanced through the physical and chemical removal of any present broad leaf cattails (*Typha latifolia*). Cattails will be treated with herbicide, applied by hand to ensure that there is only target vegetation kill. In areas where cattails are the majority of the vegetation, the cattails will be mowed and the exposed stems will be treated with herbicide. After the initial removal effort, cattails will be monitored and kept below 5% areal vegetation percentage of all wetlands. After the initial noxious species removal efforts are complete, the Sponsor will plant or seed the wetlands with desirable native coastal prairie wetland species where necessary to meet Performance Standards and achieve the highest potential wetland function. No work is proposed directly within the sand flats. Enhancement of sand flat areas is anticipated by the removal of the hydrologic barriers and the increased plant diversity of the adjacent habitat.

The amount and type of desirable seedlings/seeds planted will vary and commensurate with the targeted hydrological regime and associated plant community within each wetland assessment area respectively. The Sponsor agrees to enhance existing low marsh tidal fringe wetlands that have been degraded through the years by sedimentation and road construction, which negatively affected the hydrology of the area resulting in the invasion of noxious species, specifically cattail. These low marsh wetlands will be enhanced through chemical (herbicide) and physical removal of cattails to 5% areal coverage, followed by re-establishing the native species specific to this region.

Establishment: The Sponsor proposes to establish a total of 22.43 acres of high marsh tidal fringe wetlands. The functional lift resulting from these established wetlands will be used as compensatory mitigation for the USACE approved permitted impacts within the CBWMB Primary and Secondary Service Areas. Due to the existing topography elevations, all wetlands will be established by excavating existing uplands four (4) inches to thirty-six (36) inches below the existing elevation. This excavation will match the existing wetland elevations on-site. The established wetlands will then be planted or seeded with desirable coastal wetland species immediately following construction. The established and restored wetland areas within the CBWMB will be completed and in compliance with performance standards prior to any perspective credit release. The functional replacement will be known in advance of all permitted project impacts, thus eliminating the potential for temporal loss.

Use of herbicides will be conducted in accordance with applicable federal/state/local rules to ensure application will not harm human health and the environment. Further, the Sponsor assumes and maintains all legal responsibility associated with herbicide application and use.

All excavated material proposed to be removed will be stockpiled on-site within designated locations as noted on the overview map. The top layer of the soil will be retained and utilized in the establishment and restoration of wetlands where appropriate. No credits will be released for sale until the USACE Compliance Chief verifies minimum success has been reached and the appropriate iHGM assessment shows a net increase in FCUs, thereby providing a functional lift.

H. MAINTENANCE PLAN

Maintenance of the CBWMB will be performed by the Sponsor, the Sponsor's representative, or successor. General maintenance will be performed throughout the year to address conditions that may limit the success of the CBWMB and attainment of performance standards. The Sponsor assumes and maintains all legal responsibility for satisfying the mitigation requirements of the USACE permits for which fees have been accepted including implementation of mitigation work, achievement and long-term maintenance of credited functional lift, long-term site management measures, and protection of the site in perpetuity² in conformance with the conservation easement agreement. Maintenance activities include, but are not limited to: 1) vegetative maintenance (specifically control of invasive species); 2) general maintenance such as trash cleanup or roadway access; and 3) maintenance of existing wetland functions. Control of noxious species within all areas and maintenance of the credited functions will also be required. Release of all credits will be based on the approved increase in function and meeting the Performance Standards including maintaining the level of approved function.

Performance Standards

1. The Sponsor shall record a conservation easement with the Aransas County Clerk that has been approved by the USACE in coordination with the IRT and provide a copy of the recorded conservation easement to the USACE SWG Regulatory Division Chief, prior to initial credit release.
2. The Sponsor shall establish and execute financial assurances, approved by the USACE in coordination with the IRT, and provide respective documentation to the USACE SWG Regulatory Division Chief prior to initial credit release.
3. The Sponsor shall establish and execute the long-term management fund prior to initial credit release and shall fully fund the long-term management endowment within 8 years of the date the MBI is signed by the USACE.
4. Within four (4) calendar months of the date the phase construction is completed, the Sponsor must provide the USACE and IRT an as-built report with plan drawings (to scale) that include elevations and horizontal distances, and a signed statement demonstrating that construction and planting is complete for Phase I and compliant

with the MBI.

5. In order for the CBWMB to be considered acceptable for mitigating wetland impacts associated with USACE permits, the vegetation, soils, and hydrology within CBWMB must meet the wetland parameters described in the 2010 Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, Version 2.0. Credits will be established as Functional Capacity Units (FCUs) and released to CBWMB once the USACE verifies the increase of FCUs from either the initial baseline assessment, or a subsequent credit release amount. FCUs will be added or, if necessary, subtracted from the ledger accordingly. The Sponsor shall maintain the wetland parameters described in the Supplement and the iHGM functional assessment of baseline conditions, or the subsequent approved assessment, for each WAA respectively.
6. All wetland areas must contain less than 15% un-vegetated open water at any time.
7. Within two (2) years of USACE receipt of the as-built report, the Sponsor must achieve and maintain a minimum of 50 percent areal cover of native hydrophytic herbaceous plant species throughout all wetland areas; with at least 60 percent of the cover present consisting of facultative wetland (FACW) or obligate (OBL) species.
8. Within four (4) years of USACE receipt of the as-built report, the Sponsor must achieve and maintain a minimum of 70 percent areal cover of herbaceous plant species throughout all wetland areas; with at least 60 percent of the cover present consisting of facultative wetland (FACW) or obligate (OBL) species.
9. After four (4) years of USACE receipt of the as-built report, ALL wetlands across each completed phase must consist of a minimum of 4 herbaceous plant species each with at least 5% areal cover.
10. All noxious and invasive species currently listed by the Texas Department of Agriculture (TDA 2007) (Texas Register. Volume 32, Number 23. June 8, 2007. Pages 3077-3422) must comprise no more than five percent (5%) actual cover of the herbaceous or other strata.
11. The Sponsor shall conduct the hydrologic improvements in accordance with the specifications of the MBI. To assess hydrologic improvements, the Sponsor will install, maintain, and monitor continuous water level recorders at locations indicated in the MBI. Hydrographs produced from data collected will be correlated to the field indicators sampled and be provided in all monitoring and credit release reports. This will include documentation of precipitation conditions (normal, wet, dry) during annual monitoring periods using a National Food Security Act Manual WETS analysis, the Palmer Drought Severity Index, or other suitable metric.
12. Sponsor shall submit all monitoring, transaction, and other reports on time in accordance with the requirements of this MBI.

J. MONITORING REQUIREMENTS

A monitoring program will be implemented to determine the success of the CBWMB and demonstrate to the USACE/IRT that functional performance has been achieved and continues to be maintained. Monitoring and reporting requirements are to be in accordance with USACE Regulatory Guidance Letter (RGL) 08-03 "Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources". Reports presenting documentation of monitoring findings will be submitted to the USACE by March 31 of each year, for the first 7 years following signature of the MBI by the Sponsor and the USACE, or until all Performance Standards are met, whichever is later.

Monitoring requirements must be implemented upon initial credit release for each wetland area credited within the CBWMB. The seven (7) year monitoring period will begin following the completion of construction. Year "0" will be submitted on March 31st the year after construction is completed in order to document post-construction conditions. Year "1" will be submitted the following March 31st. In total, eight (8) reports will be submitted over the course of seven (7) years.

The primary purpose of the monitoring program is to determine whether the performance standards are being met. The monitoring reports will provide scientifically sound, quantifiable data to support the designated performance standards.

To assess hydrologic improvements, the Sponsor will install and monitor two (2) continuous water level recorders at the approximate locations shown on the Site Development Plan Map. The hydrographs produced will be correlated to the field indicators sampled. This will include documentation of precipitation conditions (normal, wet, dry) during the monitoring period using a National Food Security Act Manual WETS analysis, the Palmer Drought Severity Index, or other suitable metric.

Monitoring reports submitted to the USACE/IRT must include a summary of the credit transactions for the reporting period, total number of available credits, and financial assurance statement as required by this MBI. Sponsor shall submit all monitoring, transaction, and other reports on time in accordance with the requirements of this MBI. Reports must be submitted to the USACE by March 31st of each year. If adverse conditions or other unforeseen/unavoidable situations affecting monitoring activities occur, it will be requested that an extension of the reporting deadline date be granted by USACE on a case by case basis.

Within one growing season, after each wetland has been constructed, the wetlands will be assessed using the iHGM for all restored, established, and enhanced tidal fringe wetlands. The Sponsor shall establish the appropriate number of monitoring stations within the CBWMB necessary to reliably evaluate the ecological processes and document CBWMB's success according to the timing of events and required Performance Standards. The Sponsor shall survey each wetland assessment area using USACE sampling methods for delineation (i.e. Supplement) and functional assessments (i.e. iHGM) necessary to show if CBWMB is meeting the Performance Standards. These surveys will include: 1) data and hydrographs from continuous water level recorders; 2) observed hydrology field indicators; 3) documentation of

precipitation conditions (normal, wet, or dry) during the monitoring period; and 4) scientific sampling methods to include quadrat and line intercept methodology to accurately determine areal coverage. Results may also serve to indicate potential adjustments through adaptive management if deemed necessary and approved by the USACE/IRT.

The Sponsor shall conduct the hydrologic improvements in accordance with the specifications of the Mitigation Work Plan.

Monitoring reports may serve to support a credit release request submitted by the Sponsor once approved by USACE. A credit release request submitted by the Sponsor for USACE approval, that meets monitoring requirements, may also serve as an annual monitoring report. The Sponsor may submit a functional assessment and credit release request at any time at the Sponsor's discretion, but must not exceed more than one (1) per calendar year. No restoration credits will be released until the wetlands are established, enhanced, or restored and a functional lift as indicated within the iHGM model.

The Sponsor must also provide a Financial Assurance Statement (FAS) to the USACE for each monitoring year. The FAS will assess the adequacy of the financial assurance to reasonably ensure that funds will be available to meet maintenance requirements of the MBI consistent with the USACE-approved Financial Assurance document.

When no credits remain available in the CBWMB, a final report will be submitted to the IRT documenting the history of the CBWMB, its development, its successes, and any potential areas where the CBWMB may not have performed according to expectations. One reference copy of the final report will be prepared for permanent filing by each member of the IRT. Items that will be addressed in the monitoring reports include, but are not limited to, the following:

1. Project Overview

- Mitigation Bank Name;
- Name of the party responsible for conducting the monitoring and the dates(s) conducted;
- A description of the location, any identifiable landmarks of CBWMB including information to locate the site perimeters, and coordinates of the mitigation site in a usable coordinate system;
- Dates the compensatory mitigation project commenced and/or was completed;
- A brief statement as to whether or not the performance standards are being met;
- Dates of any recent corrective or maintenance activities conducted since the previous report submission; and
- Specific recommendations for additional corrective or remedial actions, as needed.

2. Requirements

- List of the approved monitoring requirements and performance standards;
- Evaluation of whether or not the compensatory mitigation project is successively achieving the approved performance standards or trending toward success and
- A table for comparing the performance standards to conditions and statuses of the mitigation site.
- Both quadrat plots and line-intercept sampling methods will be implemented in order to

collect

- sufficient data to assess the areal coverage requirements defined in the performance standards.

3. Summary Data

- Photo documentation to support the findings in the report; and
- Photos clearly labeled with the date and direction from which the photo was taken.

4. Maps and Plans

- Maps or plans that show the location of the mitigation project relative to other landscape features
- (Aerial photos, topographic maps, etc.);
- Maps with location of photographs indicated, transects, sampling data points, etc;
- Maps that clearly depict the perimeter of the mitigation site; and
- As built plans as required.

5. Conclusion

- Summary statement of the overall performance of the compensatory mitigation project as it relates to the performance standards of the approved project.

K. LONG-TERM MANAGEMENT & FUNDING PLAN

PBC Wetlands, L.L.C., will provide for long-term stewardship and management (maintenance and operation) unless transferred to a third party, approved by the USACE. The Sponsor shall retain ownership and be responsible for management, maintenance, and operation of the CBWMB.

In the event the Sponsor wishes to sell, lease, or transfer maintenance, operation, and/or stewardship responsibility of all or a portion of CBWMB with approval of the USACE in coordination with IRT, this third party will be considered the Sponsor's successor and will be required to fulfill all commitments of the Sponsor set forth pursuant to the terms of this MBI. All obligations of the original Sponsor, PBC Wetlands L.L.C., for future performance, including maintenance obligations, shall be terminated.

The party responsible for long-term management (maintenance and operation) and stewardship, will be allowed to use the interest accrued from the account for these purposes. All unused funds in the account (and the right to draw against the account for maintenance) will be transferred to a third party at the time maintenance responsibility is transferred and/or CBWMB property is deeded to the designated third party.

The Sponsor proposes establishing a long-term management fund held by the TALT Foundation meeting USACE requirements prior to initial credit release. The expectation is that long term management will easily be funded, and cash value will accumulate in the account to offset annual inflation and provide cash for Adaptive Management, if necessary. After the principal endowment is fully funded, it will generate an annual capitalized growth. The principal in the account will never be diminished because only the capitalized interest earned on the account will be utilized for long-term management costs. This will fund the invasive species control required under the approved MBI in perpetuity².

Maintenance cost for both Phase I and II of CBWMB were estimated on a yearly basis. The proposed capitalization of the escrow account for each Phase is noted in the estimated maintenance costs. The proposal also provides the limited liability company formation document for PBC Wetlands, LLC, the certificate of insurance held by CBWMB, a copy of the Title Insurance CBWMB will acquire once the USACE approves this MBI, and the hunting lease agreement.

Annual financial statements will be submitted to the USACE along with the annual monitoring reports by March 31st of each year. The financial statements will show that the principal endowment deposited in the account is being maintained at the agreed-upon level and that interest earned on the account is sufficient to cover the annual operating costs. Should the interest earned on the account not be sufficient to cover the annual operating costs, the Sponsor will cover the operating costs for that year for which the interest earned was insufficient by depositing the necessary funds to equal the two percent (2%) growth rate described above.

L. ADAPTIVE MANAGEMENT PLAN

Adaptive management necessitates stated management objectives to guide decisions about what to try and explicit assumptions about expected outcomes to compare against actual outcomes. The linkages among management objectives, learning about the system, and adjusting direction based on what is learned distinguish adaptive management from a simple trial and error process. Therefore, success in adaptive management ultimately depends on effectively linking monitoring and assessment to objective-driven decision making. During the operational phase of CBWMB. Prior to and during long-term management, adaptive management is not a short-term fix, an assumed resolution to non-compliance or failure to meet a performance standard(s), or responding to single events or short-term problems caused by weather, normal cyclical fluctuations in plant and animal populations, or human interruptions. Accordingly, the conditions and components of adaptive management will be a product of analyzing whether CBWMB is currently progressing toward desired outcomes; whether new or improved methods are available to prescribe; and predicting the expected effects of the plan.

M. FINANCIAL ASSURANCES

Per 33CFR332, the Sponsor must provide sufficient financial assurances to ensure a high level of confidence that the compensatory mitigation project will be successfully completed and maintained in accordance with applicable performance standards. The Sponsor will secure sufficient financial resources, taking into account inflation, to ensure compliance with the requirements of the MBI in the event that the Sponsor is no longer able or willing to operate CBWMB in compliance with the MBI. This financial assurance should be sufficient to provide for maintenance and operation of CBWMB's activities, monitoring, reporting, and any remedial actions that might be necessary. Site-specific considerations, such as the position of CBWMB within the watershed, normal hydrology, soils, type and extent of site development activities proposed, and expected relative ease or difficulty of achieving the performance standards,

may affect the size of the financial assurance. Failure to maintain an adequate financial assurance shall constitute good cause for suspending or terminating operation of CBWMB.

The Sponsor has access to sufficient capital to successfully fulfill the requirements of the MBI and has multiple years of combined experience planning, managing, and completing capital projects. The Sponsor is able to fund the entire project; it is the intent and plan to do so in the two (2) phases of construction. In the event the Sponsor conveys ownership of CBWMB to a successor, the FA may be modified, transferred, or replaced by another FA, upon the written approval of the USACE.

Short-term (years 1-5): The business plan is to pay for costs upfront and request the release of credits per the schedule noted in section V above. The Sponsor is committed to establishing a Line of Credit, in accordance with 33 CFR 332.3(n)(2), with the Texas Capital Bank. Title to the principal in the account will remain with the Sponsor unless a claim is made by the USACE and it is determined the Sponsor has not fulfilled their obligations under the approved mitigation plan. The funds and control of the account will be designated to a third party approved by the USACE should the Sponsor be unwilling to or unable to fulfill the obligations of the approved mitigation plan. The principal in the account cannot be returned to the Sponsor unless the USACE notifies the Depositary that the Sponsor has fulfilled their obligations. In case the Sponsor has not met the obligations, the principal will be left in the account in perpetuity¹ to generate the necessary annual yield required to maintain the baseline of the conservation easement and the other credited areas.

Long-term: The Sponsor proposes establishing a long-term management fund held by the TALT Foundation meeting USACE requirements prior to initial credit release. The expectation is that long term management will easily be funded, and cash value will accumulate in the account to offset annual inflation and provide cash for Adaptive Management, if necessary. After the principal endowment is fully funded, it will generate an annual capitalized growth. The principal in the account will never be diminished because only the capitalized interest earned on the account will be utilized for long-term management costs. This will fund the invasive species control required under the approved MBI in perpetuity².

Maintenance cost for both Phase I and II of CBWMB were estimated on a yearly basis. The proposed capitalization of the escrow account for each Phase is noted in the estimated maintenance costs.

Annual financial statements will be submitted to the USACE along with the annual monitoring reports by March 31st of each year addressing the FA for the previous year, as required under the proposed mitigation plan. The financial statements will show that the principal endowment deposited in the account is being maintained at the agreed upon level and that interest earned on the account is sufficient to cover the annual operating costs. Should the interest earned on the account not be sufficient to cover the annual operating costs, the Sponsor will cover the operating costs for that year for which the interest earned was insufficient by depositing the necessary funds to equal the two percent (2%) growth rate described above.

III. BANK OPERATIONS

A. ACCOUNTING PROCEDURES

Sponsor will establish and maintain a system for tracking the production of credits, credit transactions, and financial transactions between Sponsor and permittee. Credit production, credit transactions, and financial transactions must be tracked on a bank basis and separately for each individual permit. Credits will be debited from the ledger once a financial transaction has occurred. The Sponsor will notify the USACE of each transaction and provide the USACE a copy of the ledger entry within 15 days of each transaction. Sponsor will inform the IRT of the status of credits reserved on an independent submittal.

Each ledger entry will include the following information: Date of submittal.
USACE-permit applicant's name, address, and telephone number,

1. USACE-permit and/or other identification number,
2. Brief description of the location and type of the authorized work (8-dHUC),
3. Brief description of the nature and extent of adverse project impacts,
4. Sponsor assumes legal responsibility for the mitigation requirements,
5. Account balance before transaction,
6. Date of transaction,
7. Number of credits currently available,
8. Number of credits debited from the credit availability account, and
9. Account balance after transaction.

The Sponsor shall also provide an annual statement of the account to USACE by (date) of each year until all credits have been withdrawn and bank closed.”

The Sponsor shall be responsible for maintaining CBWMB's credit ledger in the Regulatory In-lieu Fee and Bank Information Tracking System (RIBITS). All credit transactions shall be entered into the database no later than seven calendar days after the transaction has occurred or the USACE reserves the right to suspend credit sales until sales transactions are deemed current and compliant. RIBITS mandatory information fields include the following:

1. Jurisdiction Type
2. Transaction Date
3. Credits Debited
4. USACE Permit Number (Format: SWG/Yr/Permit # (e.g.SWG-2000-00150)
5. Name of Permittee
6. Credit Classification (if applicable, with functional assessment subcategories identified; (e.g. iHGM identify amounts within each functional category TSSW/RSEC/MPAC, etc.)

Compliance with RIBITS reporting does not supersede the requirement of the sponsor to submit individual transaction reports.

B. REPORTING PROTOCOLS

Annual financial statements will be submitted to the USACE along with the annual monitoring reports by March 31st of each year addressing the FA for the previous year, as required under the proposed mitigation plan. The financial statements will show that the principal endowment deposited in the account is being maintained at the agreed upon level and that interest earned on the account is sufficient to cover the annual operating costs. Should the interest earned on the account not be sufficient to cover the annual operating costs, the Sponsor will cover the operating costs for that year for which the interest earned was insufficient by depositing the necessary funds to equal the two percent (2%) growth rate described above.

C. CREDIT RELEASE SCHEDULE

Credits will be established as FUCs and traded as a suite of wetland functions. Credits will be released to CBWMB once the USACE verifies the increase of FCUs in each functional category, from either the initial baseline assessment or a subsequent credit release amount. The Sponsor agrees to only sell credits that are available. Credits are planned for release as construction and planting is completed within and after the USACE verifies the increase in FCUs. Due to the location of CBWMB property on Port Bay all existing wetlands within CBWMB property were evaluated using the iHGM.

At the time the Sponsor determines that the CBWMB has met the Performance Standards and functional lift has been calculated, the Sponsor shall notify the USACE in writing with supporting documentation, and request verification. The USACE shall, within a reasonable timeframe, respond in writing (notification letter) to the Sponsor with verification or rejection of the Sponsor's credit release request. The USACE will not unduly withhold determination of the Sponsor's request but will notify the Sponsor if a lengthy delay is expected, as well as the reason for the delay. If the Sponsor's request is not granted, the USACE will inform the Sponsor in writing as to the reasons for denial, and any actions that may be required, including meeting with the IRT to discuss possible remedial actions that can be taken at the CBWMB site.

Credits will only be released for sale by CBWMB when:

- 1) At year 0 Grant 5% of baseline iHGM - verified in 2017 upon execution of:
 - a. The Sponsor shall record a conservation easement with the Aransas County Clerk that has been approved by the USACE in coordination with the IRT and provide a copy of the recorded conservation easement to the USACE SWG Regulatory Division Chief, prior to initial credit release.
 - b. The Sponsor shall establish and execute financial assurances, approved by the USACE in coordination with the IRT, and provide respective documentation to the USACE SWG Regulatory Division Chief prior to initial credit release.
 - c. The Sponsor shall establish and execute the long-term management fund prior to initial credit release and shall provide respective documentation to the USACE prior to initial credit release.

- 2) At Year 1 Grant additional 10% of baseline iHGM - verified in 2017 upon execution of
 - a. Within four (4) calendar months of the date the phase construction is completed, the Sponsor must provide the USACE and IRT an as-built report with plan drawings (to scale) that include elevations and horizontal distances, and a signed statement demonstrating that construction and planting is complete for Phase I and compliant with the MBI.
- 3) At year 2 Grant additional 10% of baseline iHGM - verified in 2017 upon construction.
 - a. Within two (2) years of USACE receipt of the as-built report, the Sponsor must achieve and maintain a minimum of 50 percent areal cover of herbaceous plant species either identified in Appendix I or other native hydrophytic species naturally recruited throughout all wetland areas; with at least 60 percent of the cover present consisting of facultative wetland (FACW) or obligate (OBL) species.
- 4) At Year 4 Grant any additional credits based on submittal of updated iHGM data verified by the USACE
 - a. Within four (4) years of USACE receipt of the as-built report, the Sponsor must achieve and maintain a minimum of 70 percent areal cover of herbaceous plant species either identified in Appendix I or other native hydrophytic species naturally recruited throughout all wetland areas; with at least 60 percent of the cover present consisting of facultative wetland (FACW) or obligate (OBL) species.
 - b. After four (4) years of USACE receipt of the as-built report, ALL wetlands across each completed phase must consist of a minimum of 4 herbaceous plant species each with at least 5% areal cover.

Following USACE receipt of each individual listed above, a subsequent credit release will be issued per the schedule and added to the CBWMB's ledger for sale.

All wetland impacts within the primary service area evaluated using the iHGM, regardless of their high or low marsh classification, will have FCUs sold at a 1:1 ratio. The iHGM is designed to quantify coastal wetland functions within the regional watershed and will be used to determine the associated functional lift for all tidal fringe wetlands, including high and low marsh.

Should a permit Applicant propose to use the CBWMB, the permit Applicant will contact the Sponsor and arrange with the Sponsor to purchase the necessary credits based upon the functional assessment approved by the USACE. Credits will be sold as a suite and at a 1:1 FCU ratio within the primary service area for in-kind impacts, and a 1.5:1 FCU ratio within the secondary service area for in-kind impacts. Out-of-kind impacts will not be permitted to purchase FCUs through the CBWMB.

Credits will be sold based on a minimum of 0.1 FCU per assessment parameter (Biological, Botanical, Chemical, and Physical). iHGM will be used to establish FCI and FCU. Applicants may have the option to assume a 1.0 surrogate FCI value for each functional category if they choose not to conduct an iHGM functional assessment. Credits will be sold by the tenth value.

D. CONTINGENCY PLANS/REMEDIAL ACTIONS

In the event the mitigation bank or a specific phase of CBWMB fails to achieve success criteria as specified in this MBI, the sponsor shall notify the USACE immediately, and develop necessary contingency plans to implement appropriate remedial actions for CBWMB or that phase in coordination with the IRT. In the event the sponsor fails to implement necessary remedial actions within one growing season after notification by the USACE of the necessary remedial action to address any failure in meeting the ecological success criteria, the IRT (acting through USACE), will notify the appropriate authorizing agencies and recommend appropriate remedial actions.

If the authorizing agencies determine that CBWMB is operating at a deficit, debiting by the sponsor of deposited credits shall immediately cease, and the authorizing agencies, in consultation with the IRT and the sponsor, will determine what remedial actions are necessary to correct the situation.

E. APPROVED CREDIT QUANTITIES

Upon signature of the document, the USACE, in consultation with the IRT, grants the sponsor the proposed quantities of wetland/ stream credits, as described in VI.C. The release of these credits shall follow the schedule described in Part IV. In accordance with the Final Rule for the Compensatory Mitigation for Losses of Aquatic Resources issued by the USACE and the EPA, dated April 10, 2008, these quantities can be adjusted downward if ecological performance standards are not met or adjusted upward if the ecological performance standards are significantly exceeded.

F. FORCE MAJEURE

Any delay or failure of the Sponsor to comply with the terms of the MBI shall not constitute a default if and to the extent that such delay or failure is primarily caused by any force majeure event, as determined by the USACE, resulting in conditions beyond the Sponsor's reasonable control and significantly adversely affects its ability to perform its obligations hereunder. The Sponsor shall give written notice to the USACE and IRT if affected by any such event within 60 days in order to restore compliance. Following a force majeure event the Sponsor should not expect CBWMB to be in compliance with the MBI, therefore, CBWMB may be suspended, terminated or closed. Because of a force majeure event, CBWMB may not be in compliance or meet performance standards. If the Corps agrees that a force majeure event, CBWMB will be suspended until remedial actions and remaining mitigation obligations are approved. In the event that CBWMB is not in compliance, not meeting performance standards, and ultimately if the result of the force majeure event is that CBWMB is suspended, terminated or closed, the Sponsor remains liable for fulfilling all remaining mitigation obligations including maintenance, monitoring, reporting, and long-term management requirements.

G. VALIDITY, MODIFICATION, OR TERMINATION OF THE MITIGATION BANK

This MBI will become valid upon signature by the U.S. Army Corps of Engineers and bank sponsor. This MBI may be amended, altered, released, or revoked only by written approval by USACE to the parties hereto or their heirs, assigns or successors-in-interest. The amendment must follow the appropriate procedures listed in 33 CFR 332.8 unless the district engineer determines that the streamlined review process described in 33 CFR 332.8(g)(2) is warranted. Any of the IRT members may terminate their participation upon written notification to all signatory parties. Participation of IRT members will terminate 30 days after written notification.

H. CONTROLLING LANGUAGE

To the extent that specific language in this document or appendices changes, modifies, or deletes terms and conditions contained in those documents that are incorporated into the MBI by reference, and are not legally binding, the specific language within the Department of the Army Permit SWG-2008-00922 and MBI shall be controlling.

I. DEFAULT/CLOSURE PROVISIONS

If the USACE/IRT determines that the Sponsor has failed to provide the required compensatory mitigation performance standards, submit monitoring reports on time, establish and maintain ledgers and reports in accordance with the provisions in Sections xx, and/or otherwise comply with the terms of the MBI, the USACE will take appropriate action to enforce compliance with the terms of the MBI. Such actions may include suspending credits sales, decreasing available credits, requiring adaptive management measures, utilizing financial assurances or contingency funds, terminating the MBI, or referring the non-compliance with the terms of the instrument to the Department of Justice. The Sponsor shall remain responsible for fulfilling these obligations until such time as the long-term financial obligations have been met and the long-term liability of all mitigation has been transferred to a party approved by USACE, in coordination with the IRT.

Bank closure shall be the first date that all of the following have occurred:

- 1) all performance standards have been achieved and verified by USACE,
- 2) all monitoring requirements have been met and verified by USACE,
- 3) all financial responsibilities have been met, including 100% of long-term management funding in place for not less than one year, and
- 4) USACE approval, in coordination with the IRT, of either the sponsor's written request for bank closure or otherwise determined closed by discretion of the District Engineer.

IV. SIGNATURE PAGES

SPONSOR: PBC Wetlands, LLC

(Name of Signatory/Representative)
(w/proof of authority to sign)

Date

U.S. ARMY CORPS OF ENGINEERS, GALVESTON DISTRICT

Joe McMahan
Chief, Regulatory Division

Date

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 6

Paul Kaspar
Environmental Engineer

Date

U.S. FISH AND WILDLIFE SERVICE

Mary Kay Skoruppa
Fish & Wildlife Biologist, Corpus Christi Field Office

Date

USDA-Natural Resources Conservation Service

Salvador Salinas
State Conservationist

Date

TEXAS PARKS AND WILDLIFE DEPARTMENT

Carter Smith
Executive Director

Date

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Charles Maguire
Director, Water Quality Division

Date

TEXAS GENERAL LAND OFFICE

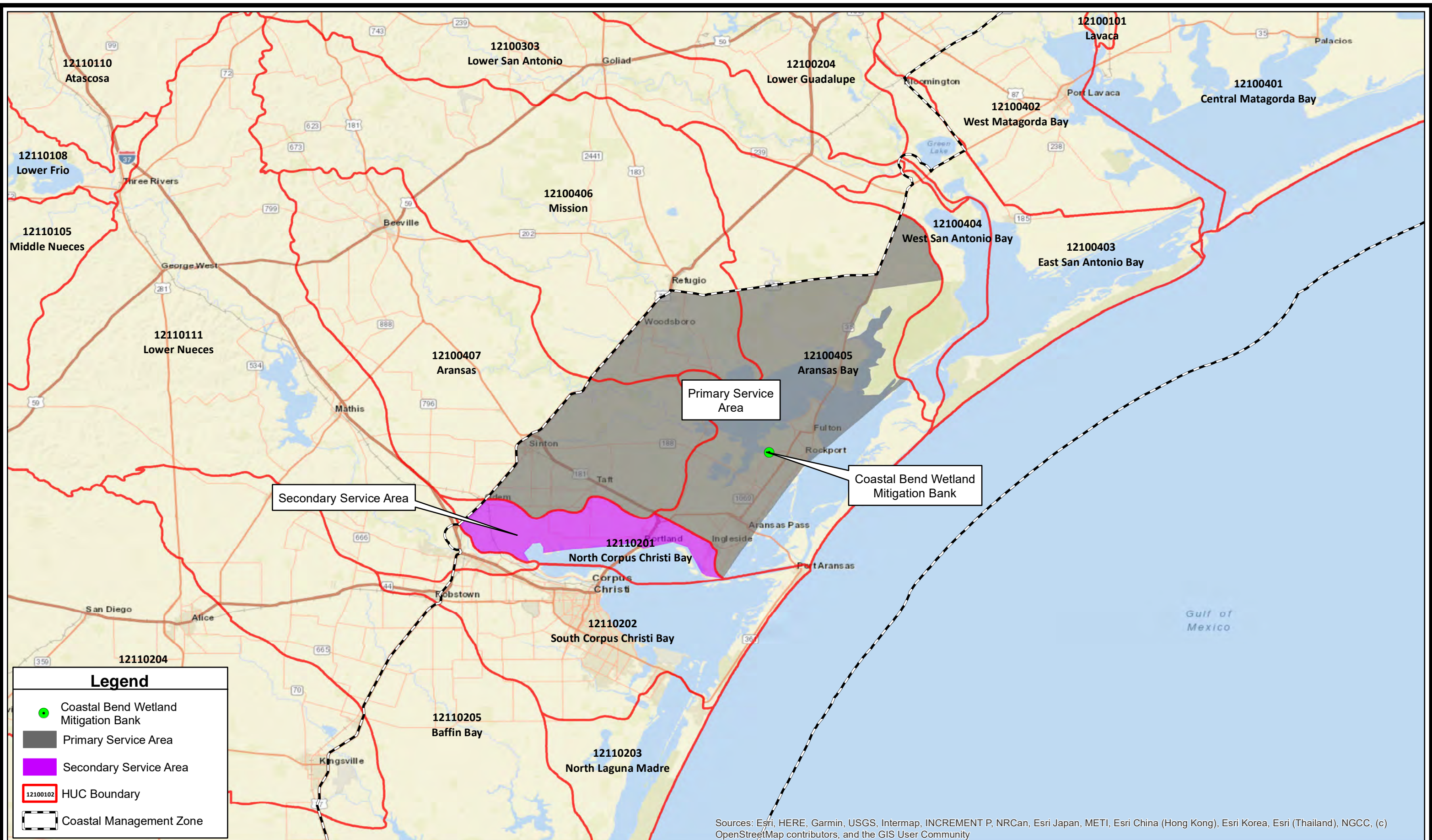
Dawn Buckingham
Land Commissioner

Date

V. ATTACHMENTS

A. Figures

- Figure 1: CBWMB Service Areas
- Figure 2: Site Vicinity Map
- Figure 3: Site Location Map
- Figure 4: USGS Topographic Map
- Figure 5: FEMA 100-Year Floodplain
- Figure 6: LiDAR Map
- Figure 7: NRCS County Soils Map



**FIGURE 1:
COASTAL BEND WETLAND MITIGATION BANK SERVICE AREAS**

Projection: NAD 83, UTM Zone 15N
 GIS Contact: NDavis@bergoliver.com

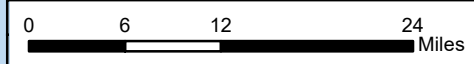
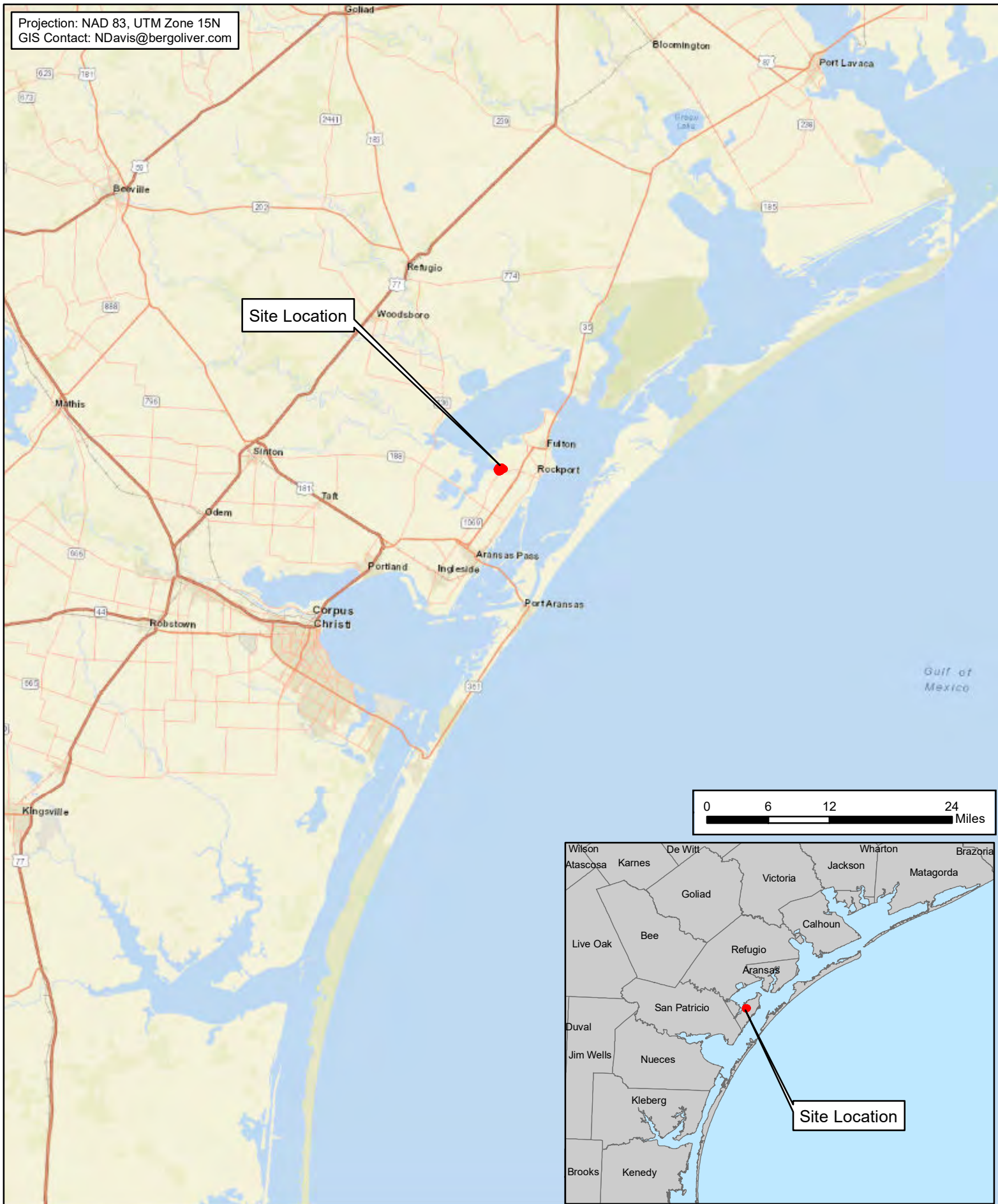


FIGURE 2: SITE VICINITY MAP

	<p>Project #: 6931 For: PBC Wetlands, LLC Location: SH 35, between Fulton and Gregory Texas Aransas County, Texas</p>	<p>Project Boundary 115.77 acres</p>	<p>BERG ♦ OLIVER ASSOCIATES ENVIRONMENTAL SCIENCE & LAND USE CONSULTANTS 14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TEXAS 77079 PHONE (281)589-0898 http://www.bergoliver.com</p>	
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Image Source: ESRI Base
Projection: NAD 83, UTM Zone 14N
GIS Contact: NDavis@bergoliver.com



FIGURE 3: SITE LOCATION MAP

	Project #: 6931	Project Boundary 115.77 acres	BERG ♦ OLIVER ASSOCIATES ENVIRONMENTAL SCIENCE & LAND USE CONSULTANTS 14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TEXAS 77079 PHONE (281)589-0898 http://www.bergoliver.com	
	For: PBC Wetlands, LLC			
	Location: SH 35, between Fulton and Gregory Texas Aransas County, Texas			

Image Source: USGS
Projection: NAD 83, UTM Zone 15N
GIS Contact: NDavis@bergoliver.com



FIGURE 4: USGS TOPOGRAPHIC MAP



Project #: 6931
For: PBC Wetlands, LLC
Location: SH 35, between Fulton and Gregory Texas
Aransas County, Texas

Project Boundary
115.77 acres

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PHONE (281)589-0898 <http://www.bergoliver.com>





FIGURE 5: FEMA 100-YEAR FLOODPLAIN MAP ON 2022 NEARMAP

Image Source: Neapmap 10/21/2022; TNRIS LiDAR
 Projection: NAD 83, UTM Zone 14N
 GIS Contact: NDavis@bergoliver.com



FIGURE 6: LiDAR MAP ON 2022 NEARMAP AERIAL

	<p>Project #: 6931 For: PBC Wetlands, LLC Location: SH 35, between Fulton and Gregory Texas Aransas County, Texas</p>	<p>Project Boundary 115.77 acres</p>	<p>BERG ♦ OLIVER ASSOCIATES ENVIRONMENTAL SCIENCE & LAND USE CONSULTANTS 14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TEXAS 77079 PHONE (281)589-0898 http://www.bergoliver.com</p>	
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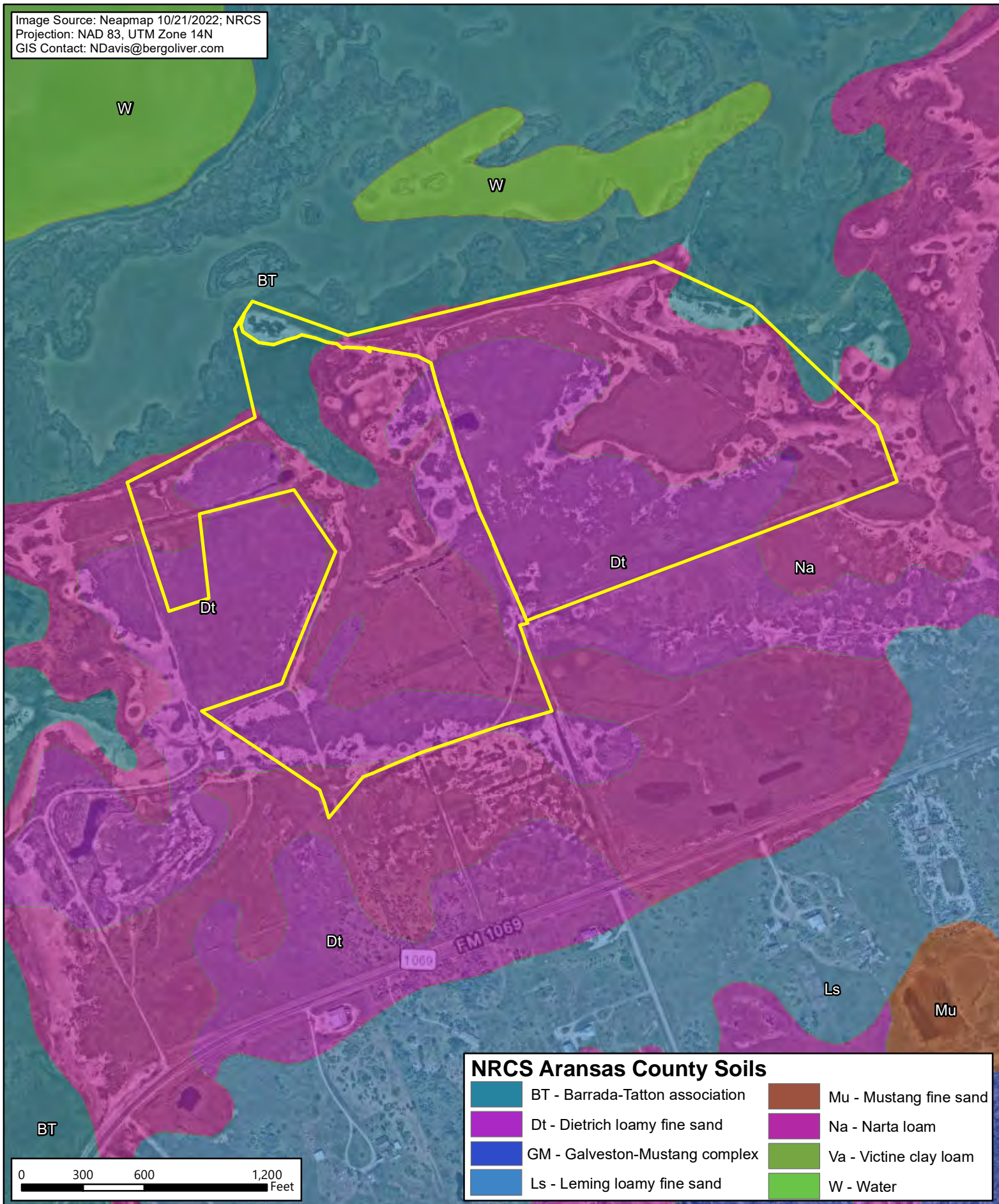


FIGURE 7: NRCS COUNTY SOILS MAP ON 2022 NEARMAP AERIAL

B. Imagery

Figure 8: 2016 NAIP Aerial

Figure 9: 2014 NAIP Aerial

Figure 10: 2009 NAIP Infrared Aerial

Figure 11: 2015 TXDOQQ Infrared Aerial

Figure 12: Overall Work Plan

Figure 13: Work Plan – Phase 1

Figure 14: Work Plan – Phase 2

Image Source: Neapmap 10/21/2022
Projection: NAD 83, UTM Zone 14N
GIS Contact: NDavis@bergoliver.com



FIGURE 8: 2022 NEARMAP AERIAL



Project #: 6931
For: PBC Wetlands, LLC
Location: SH 35, between Fulton and Gregory Texas
Aransas County, Texas

Project Boundary
115.77 acres

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PHONE (281)589-0898 <http://www.bergoliver.com>



Image Source: TNRIS NAIP 2016
Projection: NAD 83, UTM Zone 14N
GIS Contact: NDavis@bergoliver.com



FIGURE 9: 2016 NAIP AERIAL


	<p>Project #: 6931 For: PBC Wetlands, LLC Location: SH 35, between Fulton and Gregory Texas Aransas County, Texas</p>	<p>Project Boundary  115.77 acres</p>	<p>BERG ♦ OLIVER ASSOCIATES ENVIRONMENTAL SCIENCE & LAND USE CONSULTANTS 14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TEXAS 77079 PHONE (281)589-0898 http://www.bergoliver.com</p>	
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Image Source: TNRIS TOP NAIP 2009
Projection: NAD 83, UTM Zone 14N
GIS Contact: NDavis@bergoliver.com

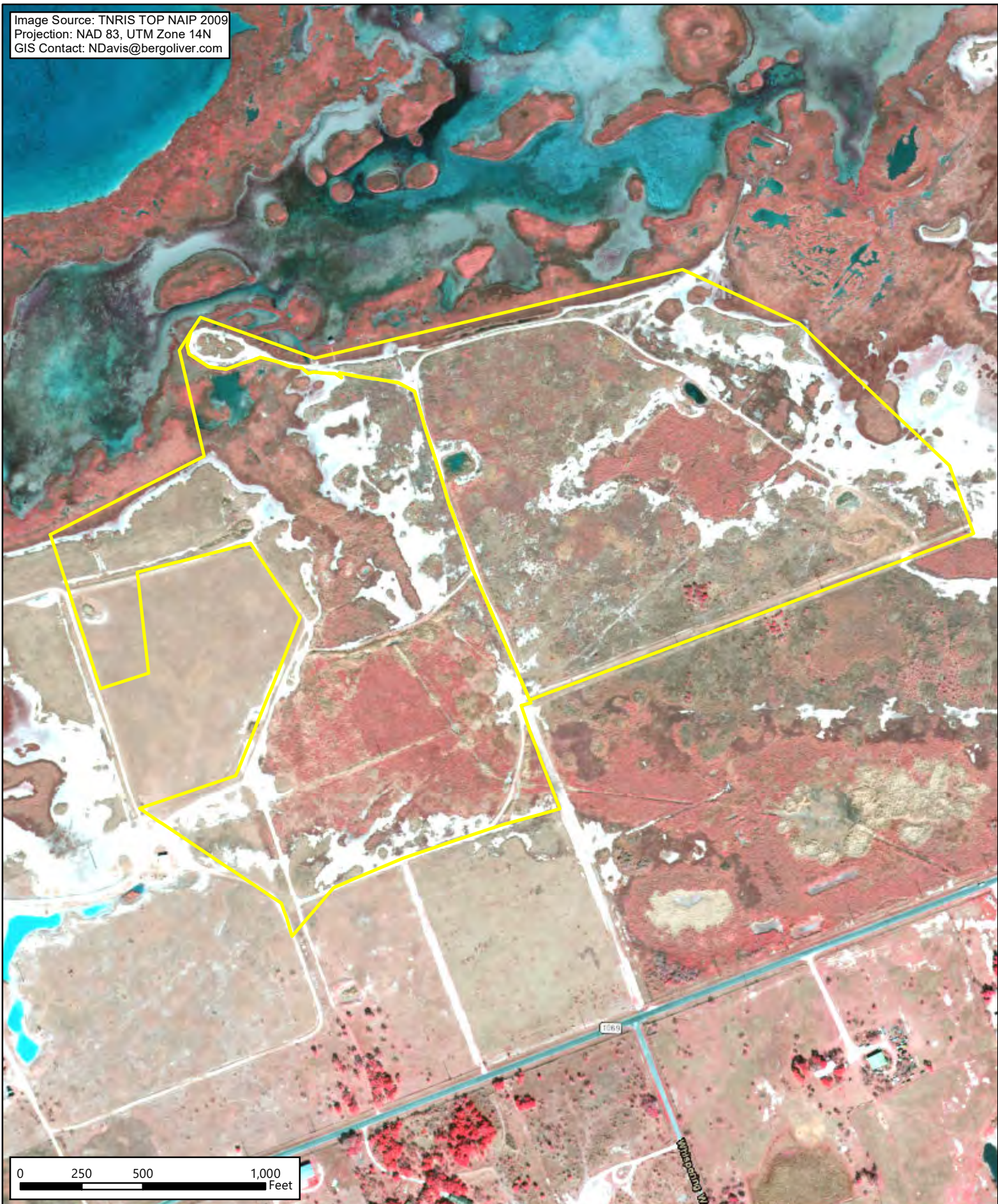


FIGURE 10: 2009 NAIP TOP INFRARED AERIAL



Project #: 6931
For: PBC Wetlands, LLC
Location: SH 35, between Fulton and Gregory Texas
Aransas County, Texas

Project Boundary
115.77 acres


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PHONE (281)589-0898 <http://www.bergoliver.com>

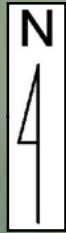


Image Source: TNRIS TOP NAIP 1995
Projection: NAD 83, UTM Zone 14N
GIS Contact: NDavis@bergoliver.com



FIGURE 11: 1995 NAIP TOP INFRARED AERIAL

	<p>Project #: 6931 For: <u>PBC Wetlands, LLC</u> Location: <u>SH 35, between Fulton and Gregory Texas</u> <u>Aransas County, Texas</u></p>	<p>Project Boundary  115.77 acres</p>	<p>BERG ♦ OLIVER ASSOCIATES ENVIRONMENTAL SCIENCE & LAND USE CONSULTANTS 14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TEXAS 77079 PHONE (281)589-0898 http://www.bergoliver.com</p>	
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Port Bay

Proposed/Potential Removal of Road Access

See Detail View
for LIDAR Contours

Proposed/Potential Removal of Road Access

See Detail View
for LIDAR Contours

Archeological Site

Man-Made Ditch
to be Filled

See Detail View
for LIDAR Contours














PHASE I

Proposed/Potential Removal of Road Access

PHASE II

Proposed/Potential Removal of Road Access

Proposed/Potential Removal of Road Access

Mitigation Bank Legend		Acres
	Existing High Marsh Wetlands -To Be Enhanced	25.51
	Existing Low Marsh Wetlands -To Be Enhanced	14.85
	High Marsh Wetlands -To Be Created	16.16
	Sand Flats -To Be Avoided	2.07
	Sand Flats -To Be Enhanced	1.78
	Other Sandy Foraging Areas for Protected Species	6.27
	Pipeline	
	Phase Boundary	
	Barrier to be Removed	
	Man-Made Ditch to be Filled	
	Water Recorder	
	Spoil Depository Area	6.33
	Mitigation Bank Boundary	115.77

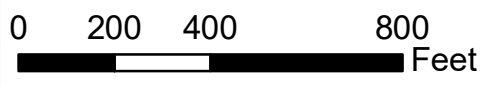


FIGURE 12: CBWMB OVERALL WORK PLAN - PHASE I & II



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HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>

Project #: 6931

For: PBC Wetlands, LLC

Location: SH 35 between Fulton and Gregory, Texas
Aransas County, Texas



Port Bay

Archeological Site

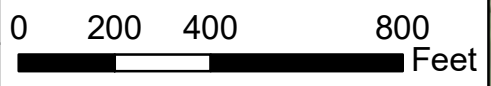
Proposed/Potential Removal of Road Access

Proposed/Potential Removal of Road Access

Proposed/Potential Removal of Road Access


PHASE I

Mitigation Bank Legend	Acres
Existing High Marsh Wetlands -To Be Enhanced	5.95
Existing Low Marsh Wetlands -To Be Enhanced	3.35
High Marsh Wetlands -To Be Created	9.96
Sand Flats -To Be Avoided	2.07
Sand Flats -To Be Enhanced	0.48
Other Sandy Foraging Areas for Protected Species	3.04
Pipeline	
Barrier to be Removed	
Water Recorder	
Spoil Depository Area	
Phase I Boundary	60.08



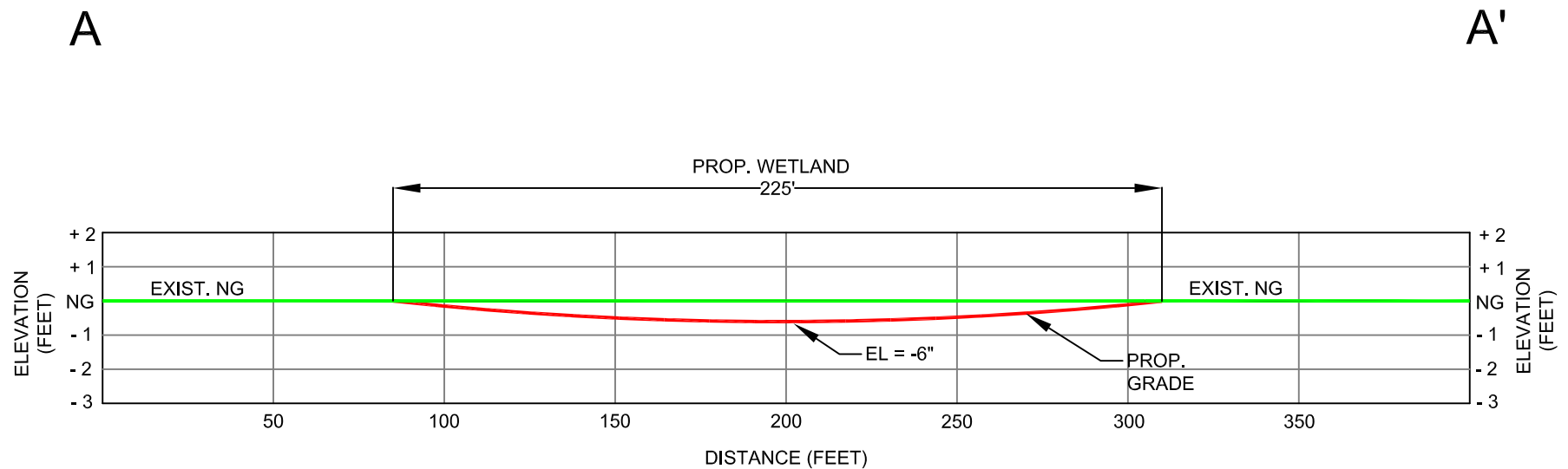
Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

FIGURE 13: CBWMB WORK PLAN - PHASE I



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HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>

Project #: 6931
For: PBC Wetlands, LLC
Location: SH 35 between Fulton and Gregory, Texas
Aransas County, Texas



NOTE: The elevations shown are for illustration purposes only. Actual excavation depth relative to Natural Ground will be field verified prior to construction based on the elevations of existing representative wetlands.

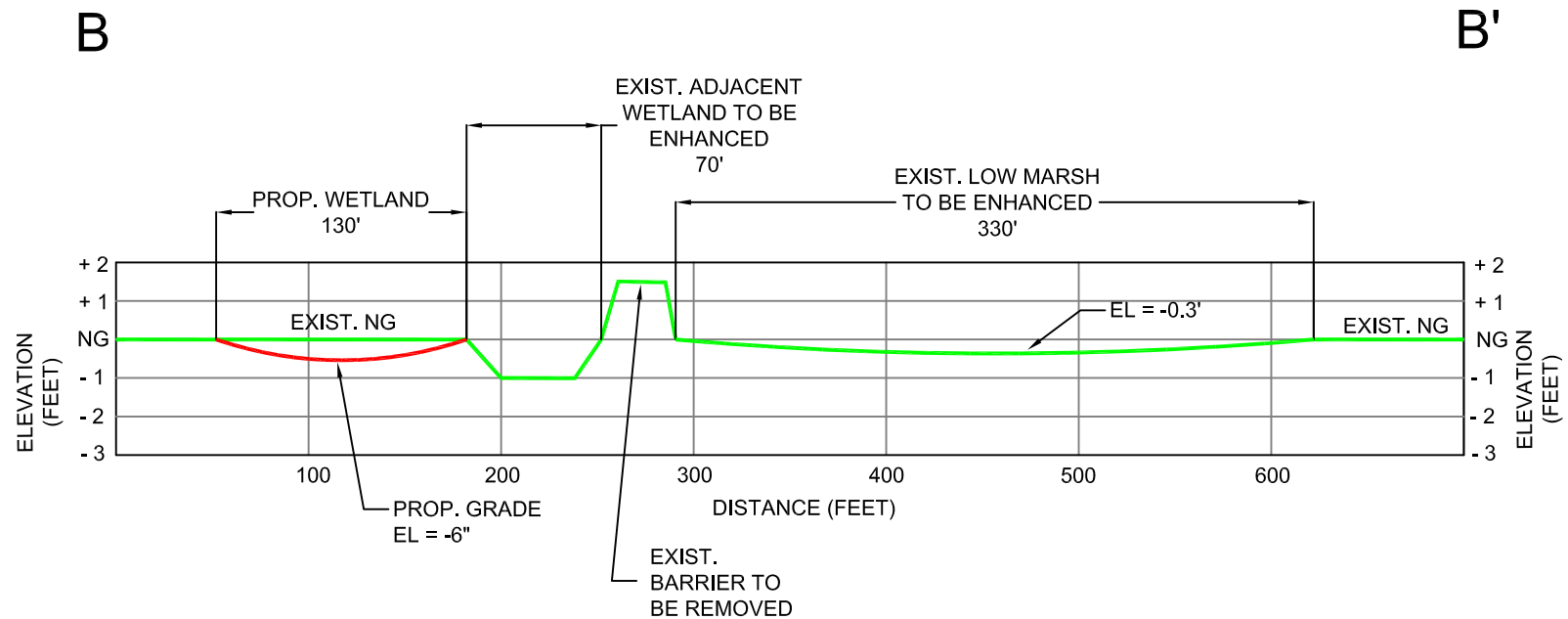
CROSS SECTION A-A'

PROJECT #: 6931
 FOR: PBC Wetlands, LLC
 LOCATION: SH 35 between Fulton and Gregory
Aransas County, Texas

REVISIONS:
 April 9, 2015 by MDB
 Jan. 2, 2018 by MDB

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 ENVIRONMENTAL SCIENCE &
 LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TX 77079
 PHONE (281) 589-0898 <http://www.bergoliver.com>





NOTE: The elevations shown are for illustration purposes only. Actual excavation depth relative to Natural Ground will be field verified prior to construction based on the elevations of existing representative wetlands.

CROSS SECTION B-B'

PROJECT #: 6931

FOR: PBC Wetlands, LLC

LOCATION: SH 35 between Fulton and Gregory
Aransas County, Texas

REVISIONS:












April 9, 2015 by MDB
Jan. 2, 2018 by MDB

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LAND USE CONSULTANTS
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PHONE (281) 589-0898 <http://www.bergoliver.com>





Port Bay

Mitigation Bank Legend		Acres
 Existing High Marsh Wetlands -To Be Enhanced		19.56
 Existing Low Marsh Wetlands -To Be Enhanced		11.50
 High Marsh Wetlands -To Be Created		6.20
 Sand Flats -To Be Enhanced		1.30
 Other Sandy Foraging Areas for Protected Species		3.23
 Pipeline		
 Man-Made Ditch to be Filled		
 Barrier to be Removed		
 Water Recorder		
 Spoil Depository Area		
 Phase I Boundary		60.08

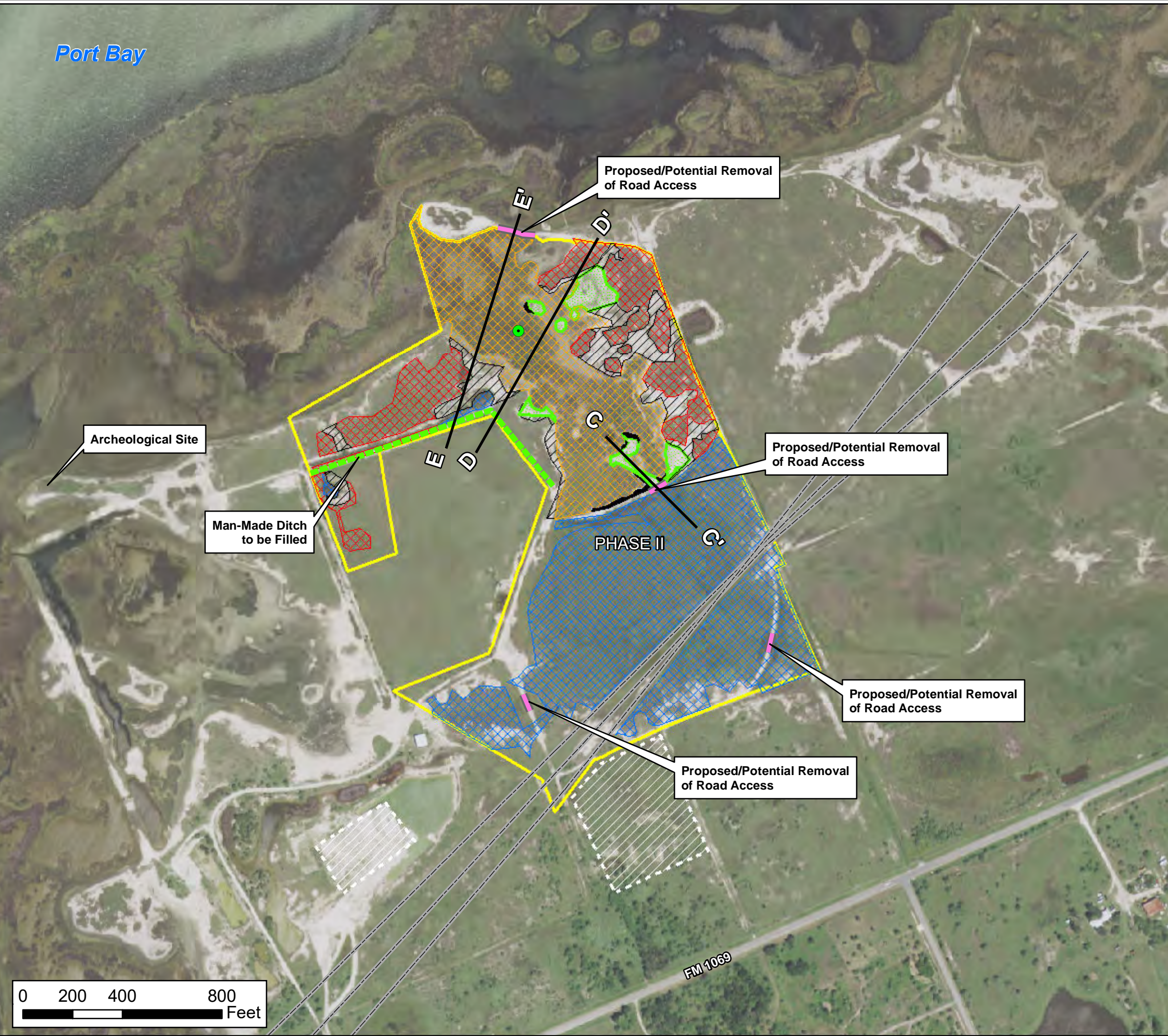
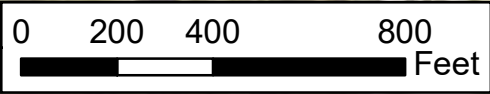


FIGURE 14: CBWMB WORK PLAN - PHASE II



BERG & OLIVER ASSOCIATES

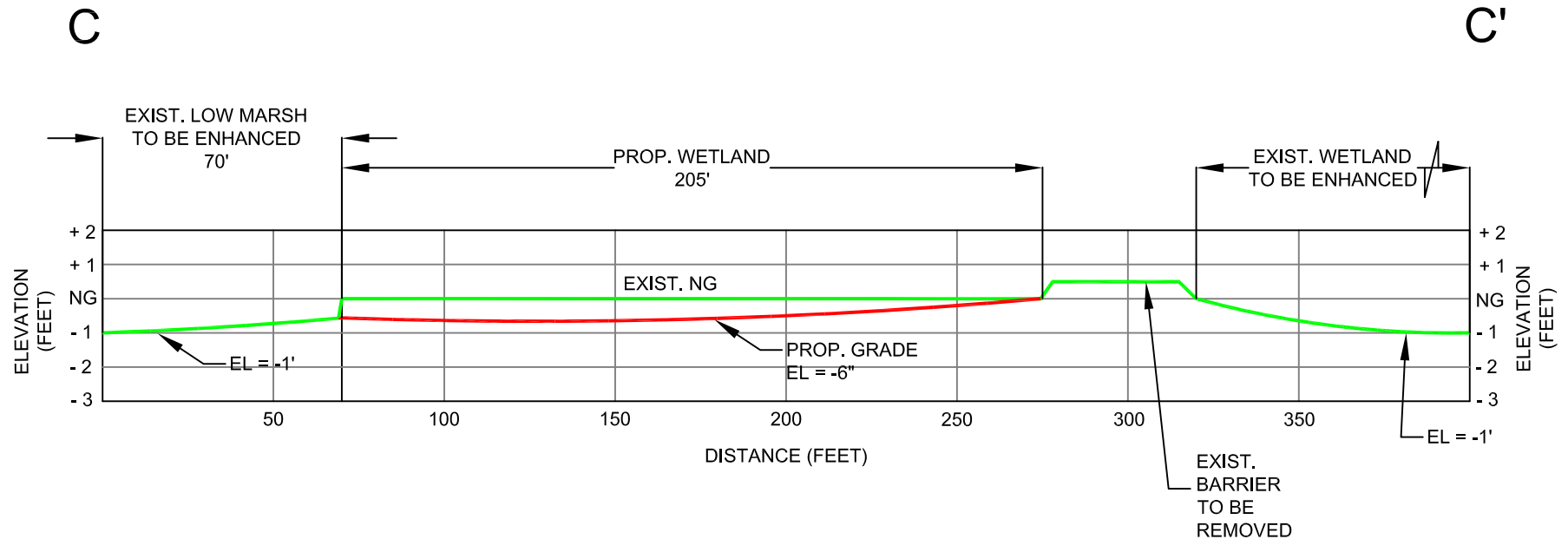
ENVIRONMENTAL SCIENCE & LAND USE CONSULTANTS
14701 ST. MARY'S LANE, SUITE 400
HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>

Project #: 6931

For: PBC Wetlands, LLC

Location: SH 35 between Fulton and Gregory, Texas
Aransas County, Texas

NOTE: NO WORK WILL BE DONE
WITHIN PIPELINE EASEMENTS



NOTE: The elevations shown are for illustration purposes only. Actual excavation depth relative to Natural Ground will be field verified prior to construction based on the elevations of existing representative wetlands.

CROSS SECTION C-C'

PROJECT #: 6931
 FOR: PBC Wetlands, LLC
 LOCATION: SH 35 between Fulton and Gregory
Aransas County, Texas

REVISIONS:

April 9, 2015 by MDB
 Jan. 2, 2018 by MDB

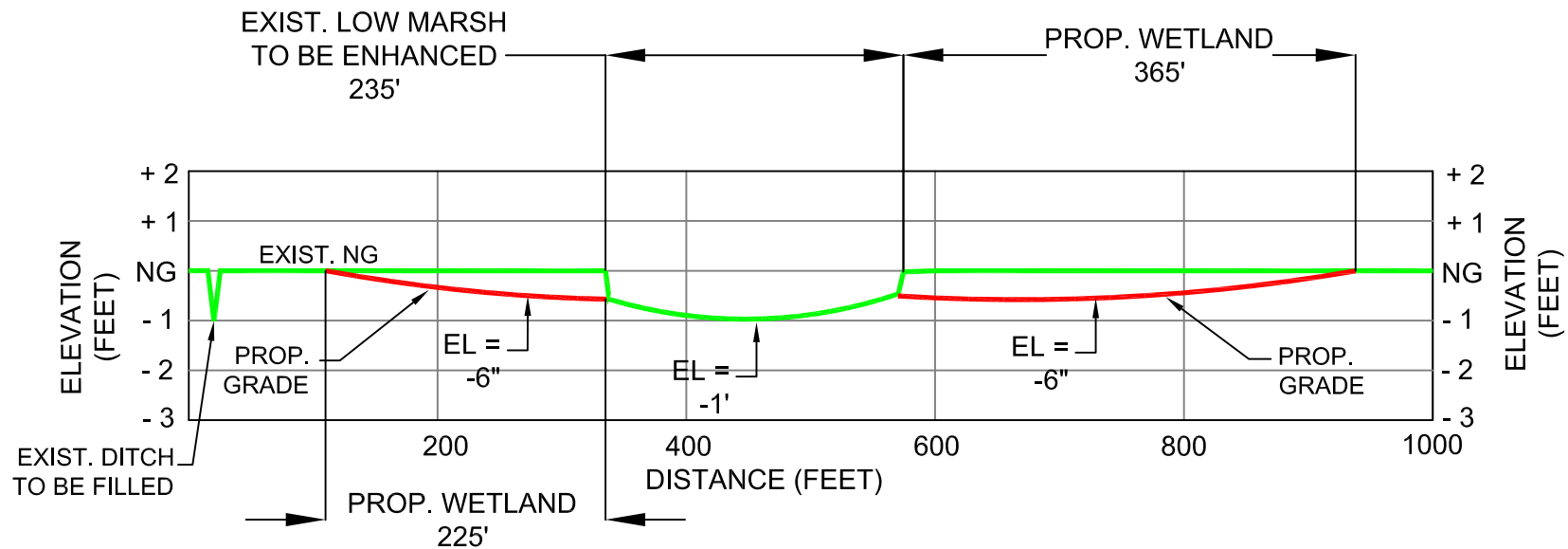
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 ENVIRONMENTAL SCIENCE &
 LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TX 77079
 PHONE (281) 589-0898 <http://www.bergoliver.com>



NOTE: NO WORK WILL BE DONE
WITHIN PIPELINE EASEMENTS

D

D'



NOTE: The elevations shown are for illustration purposes only. Actual excavation depth relative to Natural Ground will be field verified prior to construction based on the elevations of existing representative wetlands.

CROSS SECTION D-D'

PROJECT #: 6931
FOR: PBC Wetlands, LLC
LOCATION: SH 35 between Fulton and Gregory
Aransas County, Texas

REVISIONS:

April 9, 2015 by MDB
Jan. 2, 2018 by MDB

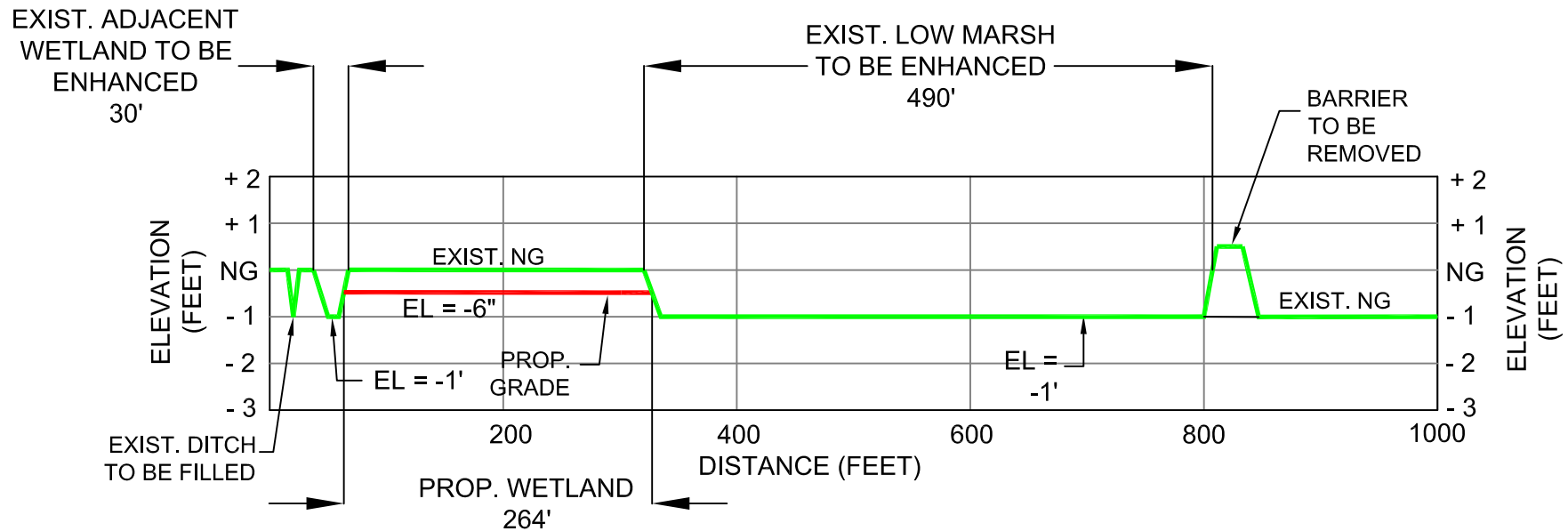
BERG•OLIVER ASSOCIATES, INC.
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LAND USE CONSULTANTS
14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TX 77079
PHONE (281) 589-0898 <http://www.bergoliver.com>



NOTE: NO WORK WILL BE DONE
WITHIN PIPELINE EASEMENTS

E

E'



NOTE: The elevations shown are for illustration purposes only. Actual excavation depth relative to Natural Ground will be field verified prior to construction based on the elevations of existing representative wetlands.

CROSS SECTION E-E'

PROJECT #: 6931
FOR: PBC Wetlands, LLC
LOCATION: SH 35 between Fulton and Gregory
Aransas County, Texas

REVISIONS:

April 9, 2015 by MDB
Jan. 2, 2018 by MDB

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LAND USE CONSULTANTS
14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TX 77079
PHONE (281) 589-0898 <http://www.bergoliver.com>



C. Environmental Baseline Report

Jurisdictional Delineation & Functional Assessment

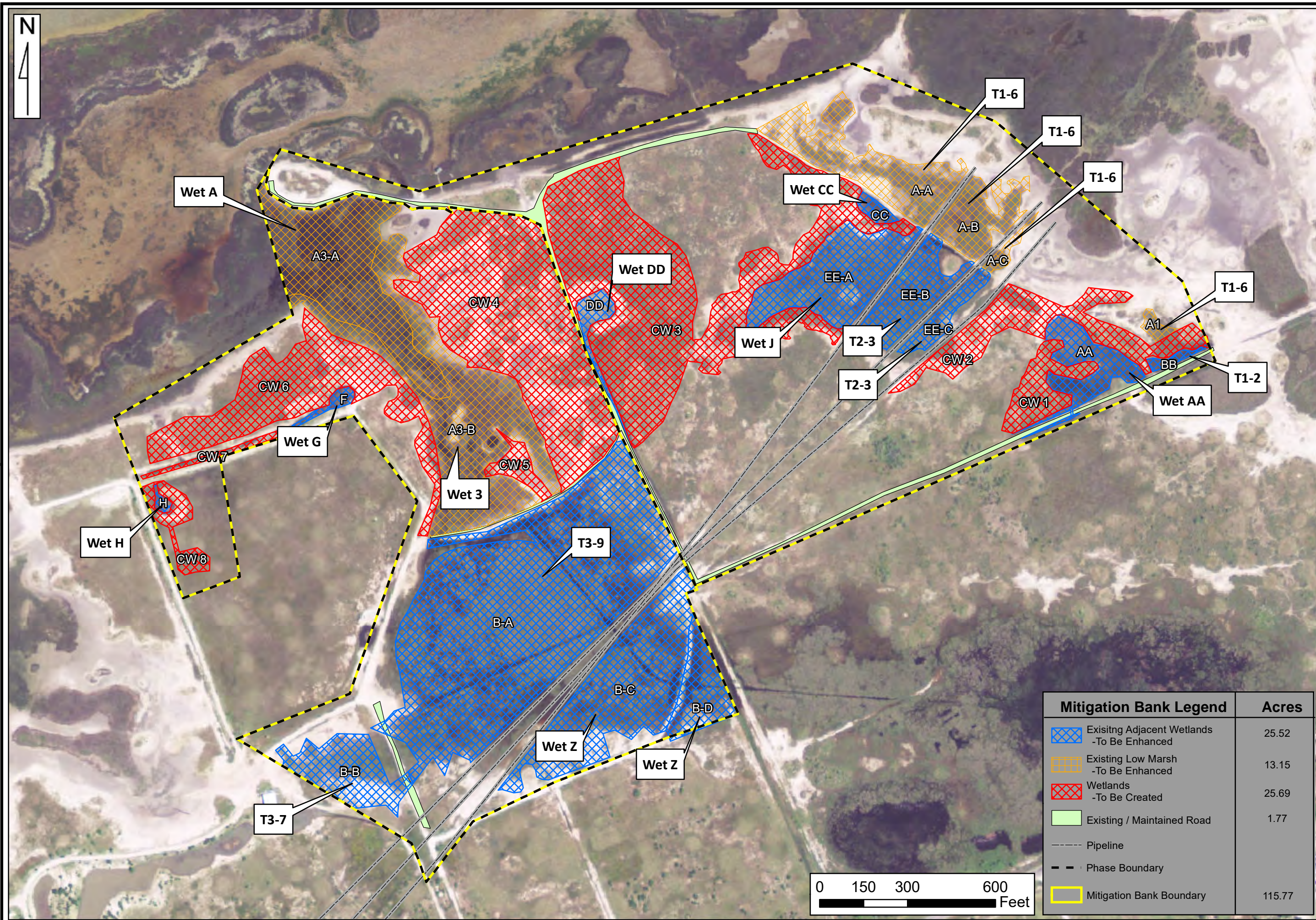
HYDROGEOMORPHIC ASSESSMENT








**115.77 ± ACRES
COASTAL BEND WETLAND MITIGATION BANK
ARANSAS COUNTY, TEXAS**




**PREPARED FOR
USACE-GALVESTON DISTRICT**

**BERG & OLIVER ASSOCIATES, INC.
ENVIRONMENTAL SCIENCE & LAND USE CONSULTANTS
HOUSTON, TEXAS
REPORT NO: 6931N-MIT
FEBRUARY 2017 (UPDATED)**



Mitigation Bank Legend		Acres
	Existing Adjacent Wetlands -To Be Enhanced	25.52
	Existing Low Marsh -To Be Enhanced	13.15
	Wetlands -To Be Created	25.69
	Existing / Maintained Road	1.77
	Pipeline	
	Phase Boundary	
	Mitigation Bank Boundary	115.77

HGM FIGURE 1: WAA MAP OVERVIEW

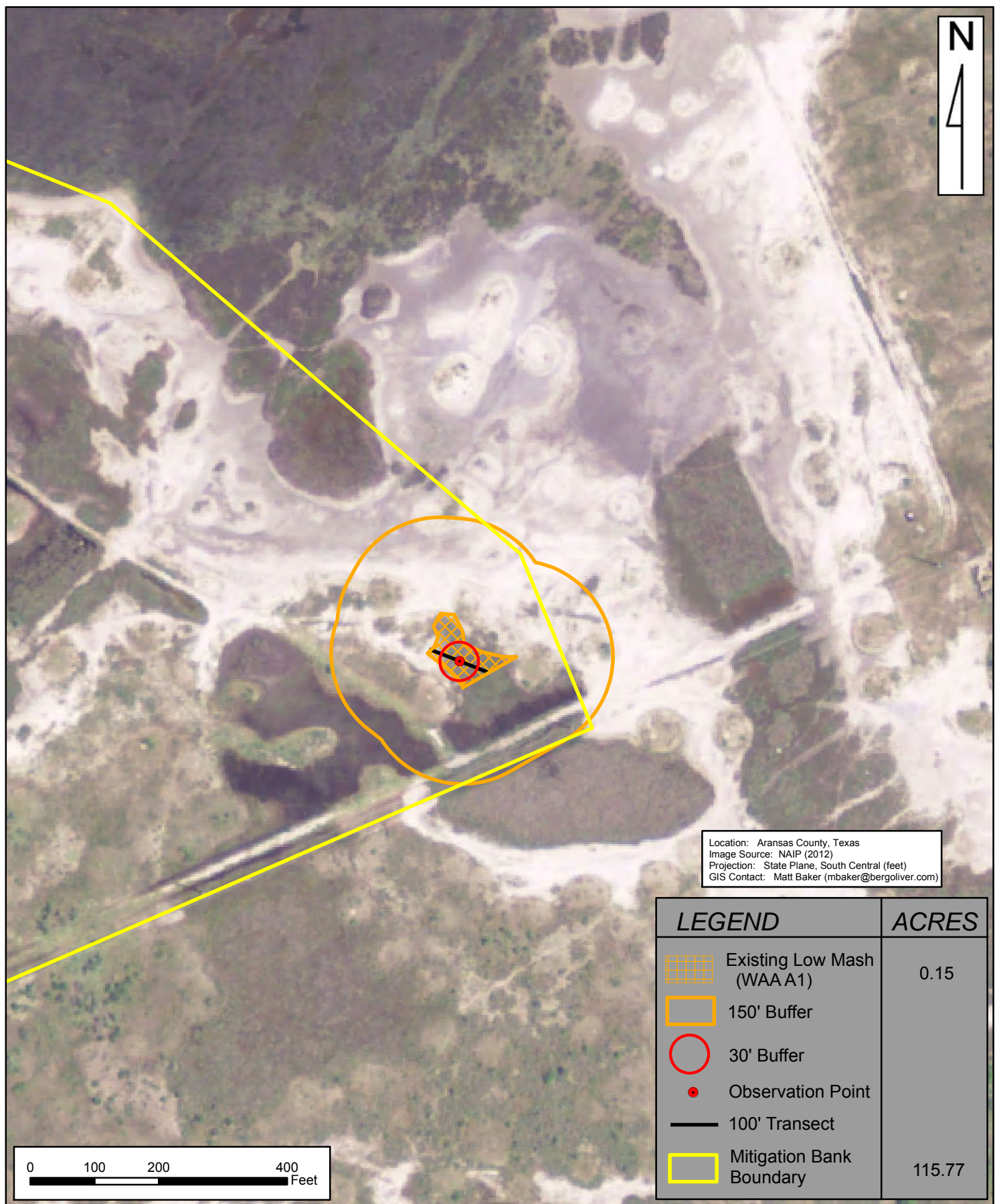


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ENVIRONMENTAL SCIENCE & LAND USE CONSULTANTS
14701 ST. MARY'S LANE, SUITE 400
HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>

Project #: 6931
For: PBC Wetlands, LLC
Location: SH 35 between Fulton and Gregory, Texas
Aransas County, Texas

Summary & Averages
Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
Coastal Bend Wetland Mitigation Bank - BOA# 6931N-MBI
Natural Existing Conditions - Year 0

WAA	WAA Acreage	Functional Capacity Units (FCU)			
		Biological	Botanical	Physical	Chemical
A1	0.15	0.09	0.15	0.06	0.05
A3-A	4.02	3.38	4.02	2.61	3.11
A3-B	5.34	3.74	5.34	3.31	2.92
AA	1.16	0.49	0.70	0.65	0.28
A-A	2.34	1.61	2.34	1.17	1.28
A-B	1.14	0.79	1.14	0.57	0.62
A-C	0.16	0.10	0.16	0.06	0.05
BB	0.11	0.07	0.11	0.06	0.03
B-A	12.63	5.30	7.58	8.84	3.09
B-B	1.55	0.96	1.55	0.90	0.49
B-C	4.07	2.47	4.07	2.36	1.29
B-D	1.11	0.67	1.11	0.58	0.35
CC	0.17	0.06	0.09	0.10	0.04
DD	0.37	0.06	0.04	0.27	0.04
EE-A	2.43	1.51	2.43	1.63	0.77
EE-B	1.23	0.76	1.23	0.76	0.39
EE-C	0.47	0.29	0.47	0.28	0.15
F	0.15	0.02	0.02	0.10	0.02
H	0.07	0.01	0.01	0.04	0.01
Total	38.67	22.39	32.53	24.36	14.98



Location: Aransas County, Texas
 Image Source: NAIP (2012)
 Projection: State Plane, South Central (feet)
 GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND		ACRES
	Existing Low Marsh (WAA A1)	0.15
	150' Buffer	
	30' Buffer	
	Observation Point	
	100' Transect	
	Mitigation Bank Boundary	115.77

WAA A1

Project #: 6931
 For: PBC Wetlands, LLC
 Location: SH 35 between Fulton, TX & Gregory, TX
 Aransas County, Texas

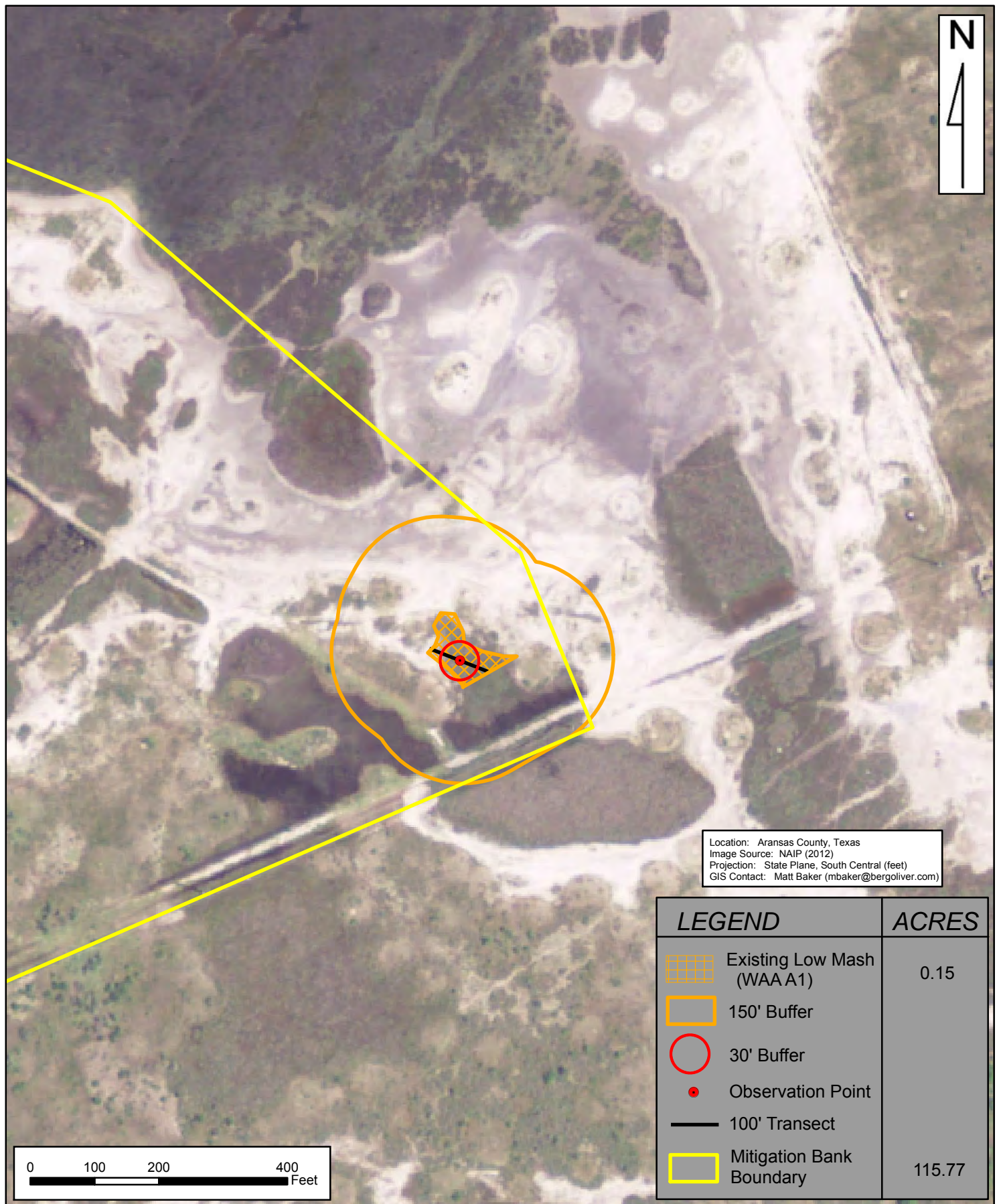
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Summary & Averages
Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
Coastal Bend Wetland Mitigation Bank - BOA# 6931N-MBI
Natural Existing Conditions - Year 0

WAA	WAA Acreage	Functional Capacity Units (FCU)			
		Biological	Botanical	Physical	Chemical
A1	0.15	0.09	0.15	0.06	0.05
A3-A	4.02	3.38	4.02	2.61	3.11
A3-B	5.34	3.74	5.34	3.31	2.92
AA	1.16	0.49	0.70	0.65	0.28
A-A	2.34	1.61	2.34	1.17	1.28
A-B	1.14	0.79	1.14	0.57	0.62
A-C	0.16	0.10	0.16	0.06	0.05
BB	0.11	0.07	0.11	0.06	0.03
B-A	12.63	5.30	7.58	8.84	3.09
B-B	1.55	0.96	1.55	0.90	0.49
B-C	4.07	2.47	4.07	2.36	1.29
B-D	1.11	0.67	1.11	0.58	0.35
CC	0.17	0.06	0.09	0.10	0.04
DD	0.37	0.06	0.04	0.27	0.04
EE-A	2.43	1.51	2.43	1.63	0.77
EE-B	1.23	0.76	1.23	0.76	0.39
EE-C	0.47	0.29	0.47	0.28	0.15
F	0.15	0.02	0.02	0.10	0.02
H	0.07	0.01	0.01	0.04	0.01
Total	38.67	22.39	32.53	24.36	14.98



Location: Aransas County, Texas
 Image Source: NAIP (2012)
 Projection: State Plane, South Central (feet)
 GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND		ACRES
	Existing Low Marsh (WAA A1)	0.15
	150' Buffer	
	30' Buffer	
	Observation Point	
	100' Transect	
	Mitigation Bank Boundary	115.77

WAA A1

Project #: 6931
 For: PBC Wetlands, LLC
 Location: SH 35 between Fulton, TX & Gregory, TX
 Aransas County, Texas

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA A1
Natural Conditions - Year 0
Acreage = 0.15

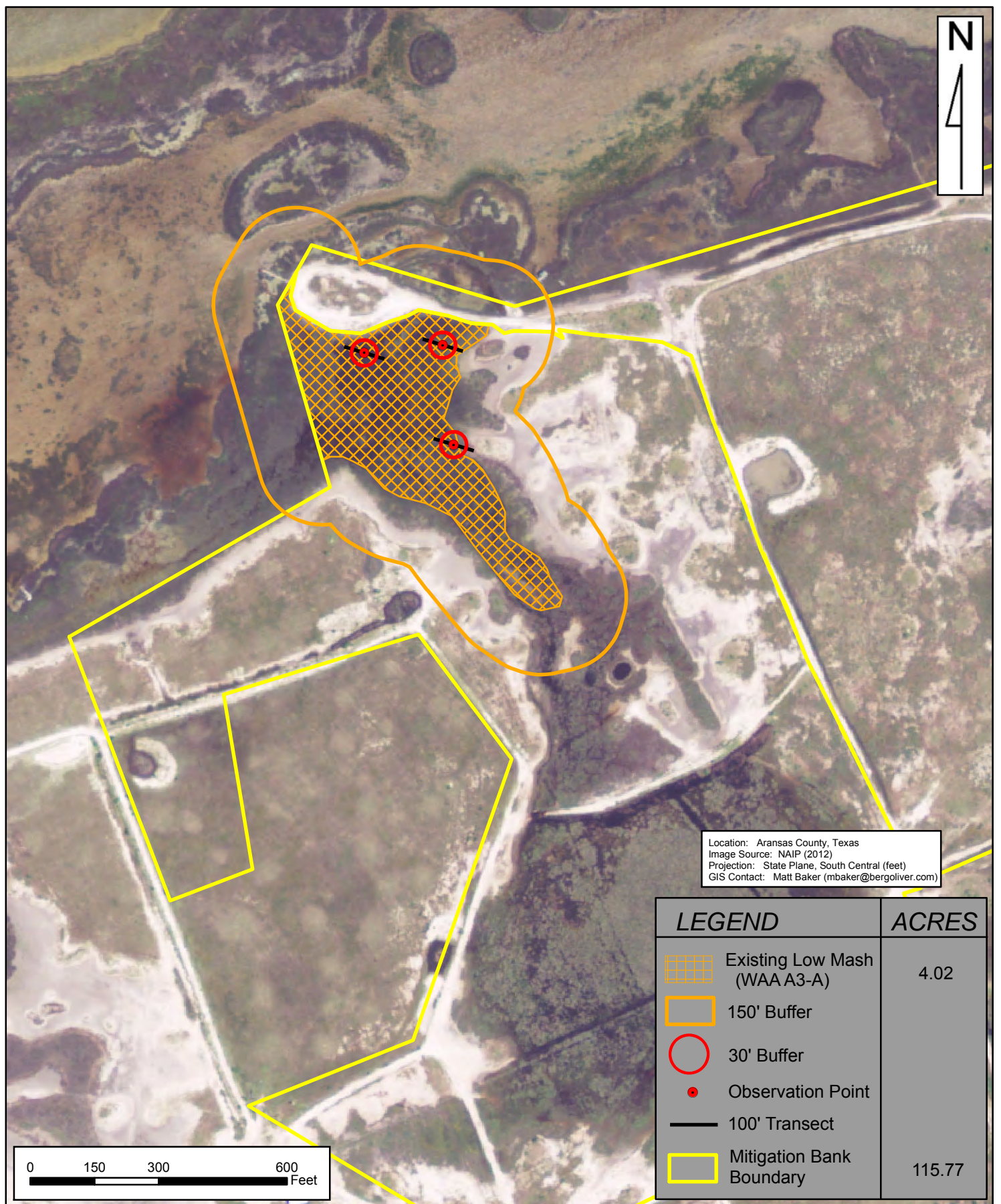
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.50	3 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.25	Average WAA width is 31-75 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	0.20	Sandy

Functional Capacity Index (FCI)

Biological	0.62
Botanical	1.00
Physical	0.39
Chemical	0.32

Functional Capacity Units (FCU)

Biological	0.09
Botanical	0.15
Physical	0.06
Chemical	0.05



WAA A3-A

Project #: 6931
 For: PBC Wetlands, LLC
 Location: SH 35 between Fulton, TX & Gregory, TX
 Aransas County, Texas

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA A3-A pt31
Natural Conditions - Year 0
Acreage = 4.02

Variable	Sub-Index	Notes:
V_{edge}	0.70	Simple tidal drainage network... isolated ponds and depression are few and lacking
V_{hydro}	0.60	Moderate hydrologic restriction (low level berms that overtop by waves or multiple breeches)
V_{nhc}	1.00	6 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater than 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.85	Average WAA width is 301-375 feet
V_{rough}	0.60	FCI is 0.07
V_{soil}	0.20	Sandy

Functional Capacity Index (FCI)

Biological	0.84
Botanical	1.00
Physical	0.65
Chemical	0.77

Functional Capacity Units (FCU)

Biological	3.38
Botanical	4.02
Physical	2.61
Chemical	3.11

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA A3-A pt32
Natural Conditions - Year 0
Acreage = 4.02

Variable	Sub-Index	Notes:
V_{edge}	0.70	Simple tidal drainage network... isolated ponds and depression are few and lacking
V_{hydro}	0.60	Moderate hydrologic restriction (low level berms that overtop by waves or multiple breeches)
V_{nhc}	1.00	6 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater than 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.85	Average WAA width is 301-375 feet
V_{rough}	0.60	FCI is 0.07
V_{soil}	0.20	Sandy

Functional Capacity Index (FCI)

Biological	0.84
Botanical	1.00
Physical	0.65
Chemical	0.77

Functional Capacity Units (FCU)

Biological	3.38
Botanical	4.02
Physical	2.61
Chemical	3.11

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA A3-A pt33
Natural Conditions - Year 0
Acreage = 4.02

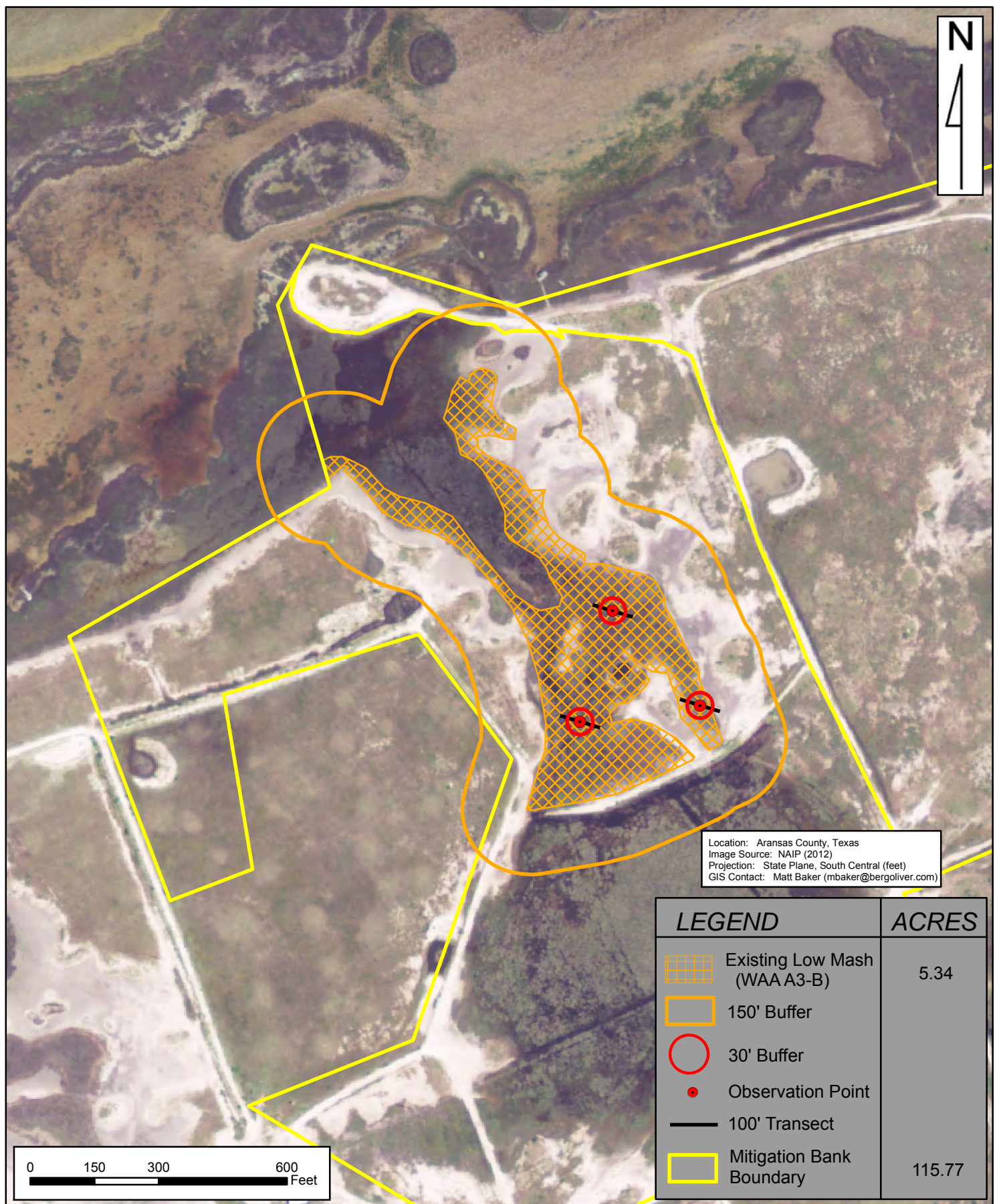
Variable	Sub-Index	Notes:
V_{edge}	0.70	Simple tidal drainage network... isolated ponds and depression are few and lacking
V_{hydro}	0.60	Moderate hydrologic restriction (low level berms that overtop by waves or multiple breeches)
V_{nhc}	1.00	6 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater than 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.85	Average WAA width is 301-375 feet
V_{rough}	0.60	FCI is 0.07
V_{soil}	0.20	Sandy

Functional Capacity Index (FCI)

Biological	0.84
Botanical	1.00
Physical	0.65
Chemical	0.77

Functional Capacity Units (FCU)

Biological	3.38
Botanical	4.02
Physical	2.61
Chemical	3.11



WAA A3-B

Project #: 6931
 For: PBC Wetlands, LLC
 Location: SH 35 between Fulton, TX & Gregory, TX
 Aransas County, Texas

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA A3-B pt 28
Natural Conditions - Year 0
Acreage = 5.34

Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.30	Severe hydrologic restriction (high elevation berm with a single connection/opening)
V_{nhc}	0.80	5 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.60	Average WAA width is 151-225 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	0.80	Clay loam

Functional Capacity Index (FCI)

Biological	0.70
Botanical	1.00
Physical	0.62
Chemical	0.55

Functional Capacity Units (FCU)

Biological	3.74
Botanical	5.34
Physical	3.31
Chemical	2.92

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA A3-B pt 29
Natural Conditions - Year 0
Acreage = 5.34

Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.30	Severe hydrologic restriction (high elevation berm with a single connection/opening)
V_{nhc}	0.80	5 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater than 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.60	Average WAA width is 151-225 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	0.80	Clay loam

Functional Capacity Index (FCI)

Biological	0.70
Botanical	1.00
Physical	0.62
Chemical	0.55

Functional Capacity Units (FCU)

Biological	3.74
Botanical	5.34
Physical	3.31
Chemical	2.92

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA A3-B pt30
Natural Conditions - Year 0
Acreage = 5.34

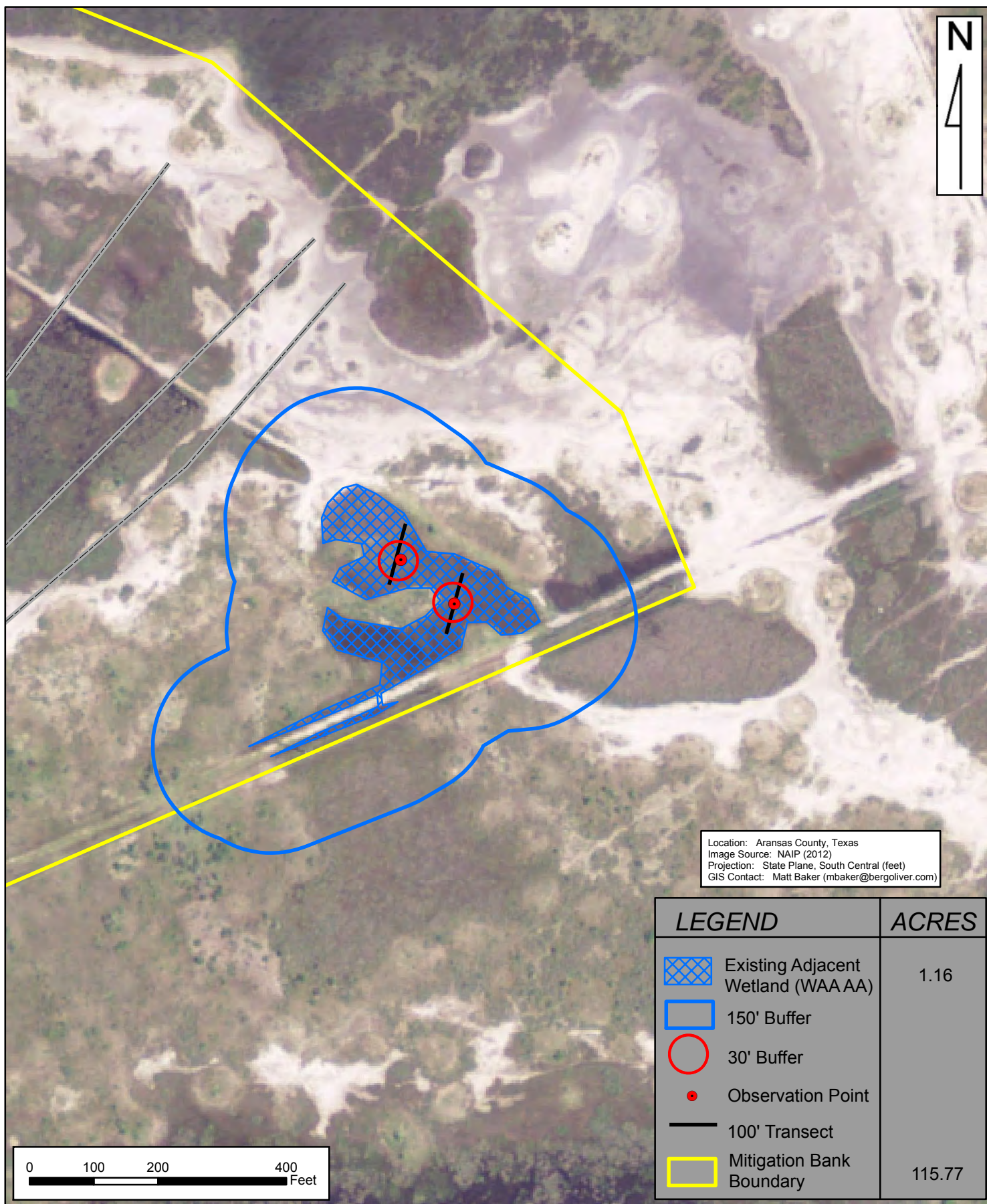
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.30	Severe hydrologic restriction (high elevation berm with a single connection/opening)
V_{nhc}	0.80	5 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater than 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.60	Average WAA width is 151-225 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	0.80	Clay loam

Functional Capacity Index (FCI)







Biological	0.70
Botanical	1.00
Physical	0.62
Chemical	0.55

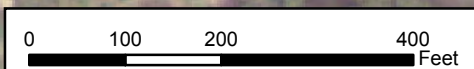
Functional Capacity Units (FCU)

Biological	3.74
Botanical	5.34
Physical	3.31
Chemical	2.92



Location: Aransas County, Texas
Image Source: NAIP (2012)
Projection: State Plane, South Central (feet)
GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND	ACRES
 Existing Adjacent Wetland (WAA AA)	1.16
 150' Buffer	
 30' Buffer	
 Observation Point	
 100' Transect	
 Mitigation Bank Boundary	115.77



WAA AA

Project #: 6931
For: PBC Wetlands, LLC
Location: SH 35 between Fulton, TX & Gregory, TX
Aransas County, Texas

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA AA pt 9
Natural Conditions - Year 0
Acreage = 1.16

Variable	Sub-Index	Notes:
V _{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V _{hydro}	0.10	Site receives water only during extreme storm events
V _{nhc}	0.50	3 habitat types within 150' of WAA edge
V _{typical}	0.60	60% of the WAA is covered by vegetation typical of the regional subclass
V _{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V _{width}	0.50	Average WAA width is 76-150 feet
V _{rough}	0.40	FCI is 0.06
V _{soil}	0.80	Clay loam

Functional Capacity Index (FCI)

Biological	0.42
Botanical	0.60
Physical	0.56
Chemical	0.24

Functional Capacity Units (FCU)

Biological	0.49
Botanical	0.70
Physical	0.65
Chemical	0.28

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA AA pt 10
Natural Conditions - Year 0
Acreage = 1.16

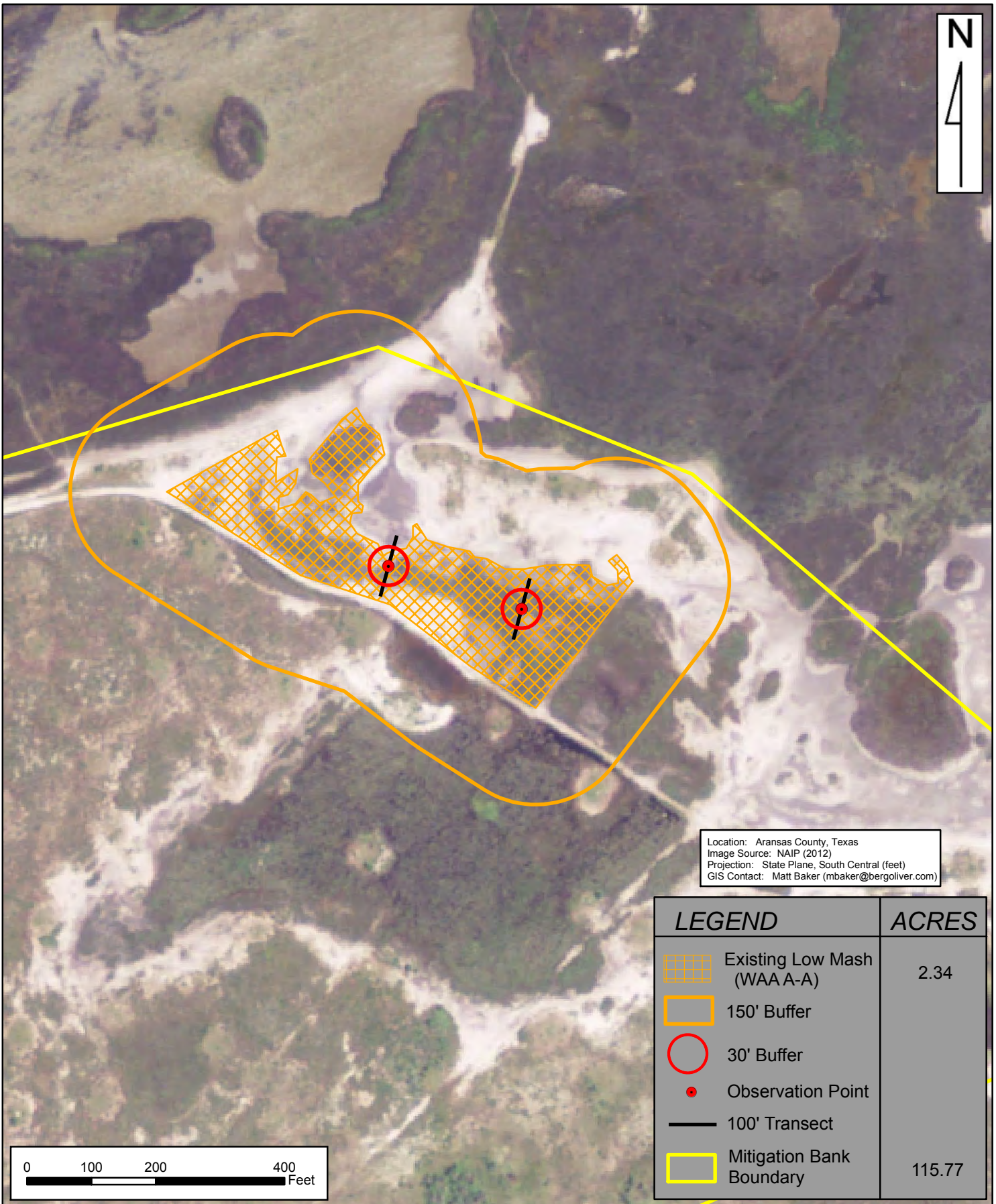
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.50	3 habitat types within 150' of WAA edge
V_{typical}	0.60	60% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.50	Average WAA width is 76-150 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	0.80	Clay loam

Functional Capacity Index (FCI)

Biological	0.42
Botanical	0.60
Physical	0.56
Chemical	0.24

Functional Capacity Units (FCU)

Biological	0.49
Botanical	0.70
Physical	0.65
Chemical	0.28



Location: Aransas County, Texas
 Image Source: NAIP (2012)
 Projection: State Plane, South Central (feet)
 GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND		ACRES
	Existing Low Mash (WAA A-A)	2.34
	150' Buffer	
	30' Buffer	
	Observation Point	
	100' Transect	
	Mitigation Bank Boundary	115.77

0 100 200 400 Feet

WAA A-A

Project #: 6931
 For: PBC Wetlands, LLC
 Location: SH 35 between Fulton, TX & Gregory, TX
 Aransas County, Texas

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA A-A pt2
Natural Conditions - Year 0
Acreage = 2.34

Variable	Sub-Index	Notes:
V _{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V _{hydro}	0.30	Severe hydrologic restriction (high elevation berm with a single connection/opening)
V _{nhc}	0.70	4 habitat types within 150' of WAA edge
V _{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V _{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V _{width}	0.60	Average WAA width is 151-225 feet
V _{rough}	0.40	FCI is 0.06
V _{soil}	0.20	Sandy

Functional Capacity Index (FCI)

Biological	0.69
Botanical	1.00
Physical	0.50
Chemical	0.55

Functional Capacity Units (FCU)

Biological	1.61
Botanical	2.34
Physical	1.17
Chemical	1.28

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA A-A pt3
Natural Conditions - Year 0
Acreage = 2.34

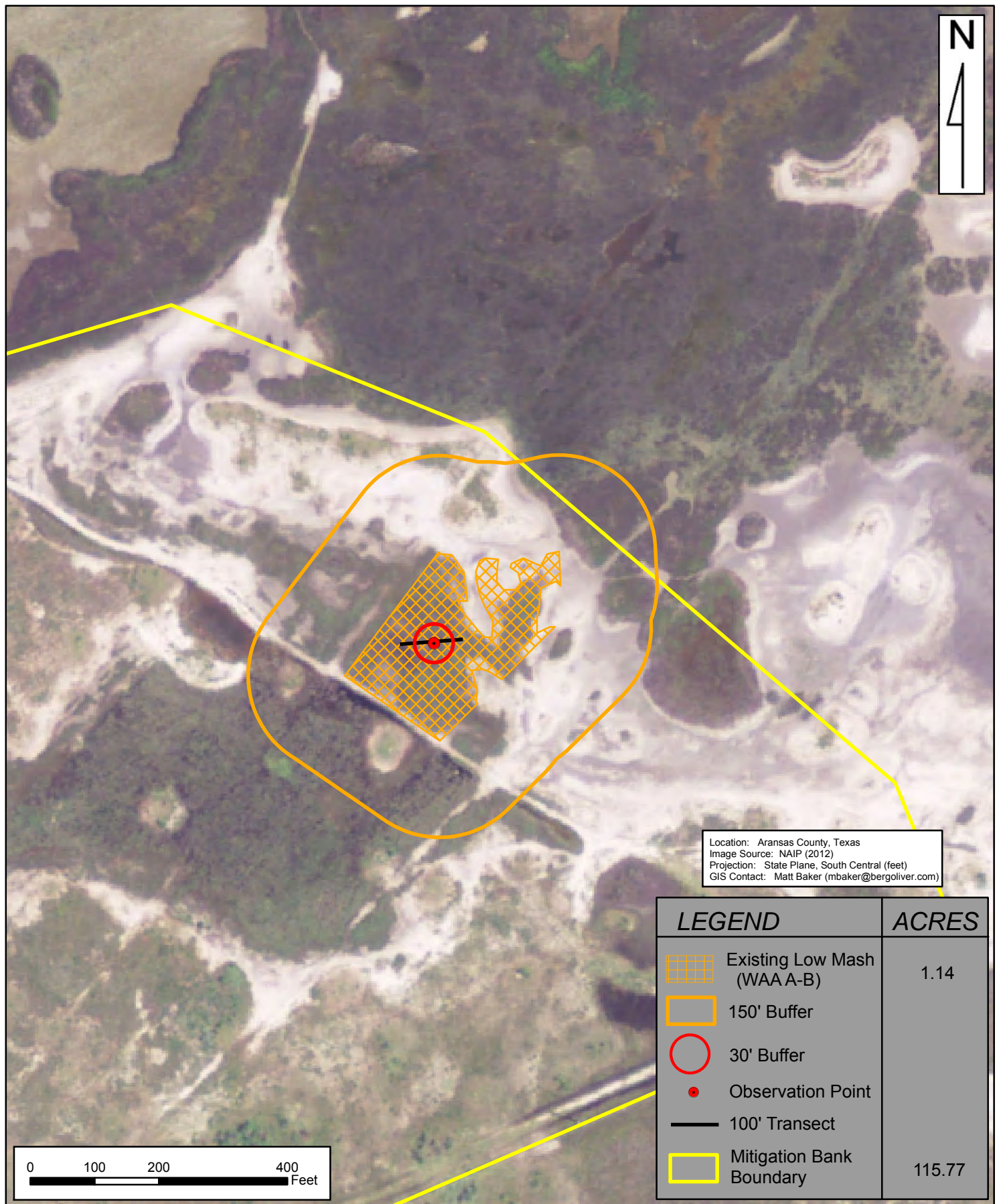
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.30	Severe hydrologic restriction (high elevation berm with a single connection/opening)
V_{nhc}	0.70	4 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater than 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.60	Average WAA width is 151-225 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	0.20	Sandy

Functional Capacity Index (FCI)

Biological	0.69
Botanical	1.00
Physical	0.50
Chemical	0.55

Functional Capacity Units (FCU)

Biological	1.61
Botanical	2.34
Physical	1.17
Chemical	1.28



Location: Aransas County, Texas
 Image Source: NAIP (2012)
 Projection: State Plane, South Central (feet)
 GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND		ACRES
	Existing Low Mash (WAA A-B)	1.14
	150' Buffer	
	30' Buffer	
	Observation Point	
	100' Transect	
	Mitigation Bank Boundary	115.77

WAA A-B

Project #: 6931
 For: PBC Wetlands, LLC
 Location: SH 35 between Fulton, TX & Gregory, TX
 Aransas County, Texas

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA A-B
Natural Conditions - Year 0
Acreage = 1.14

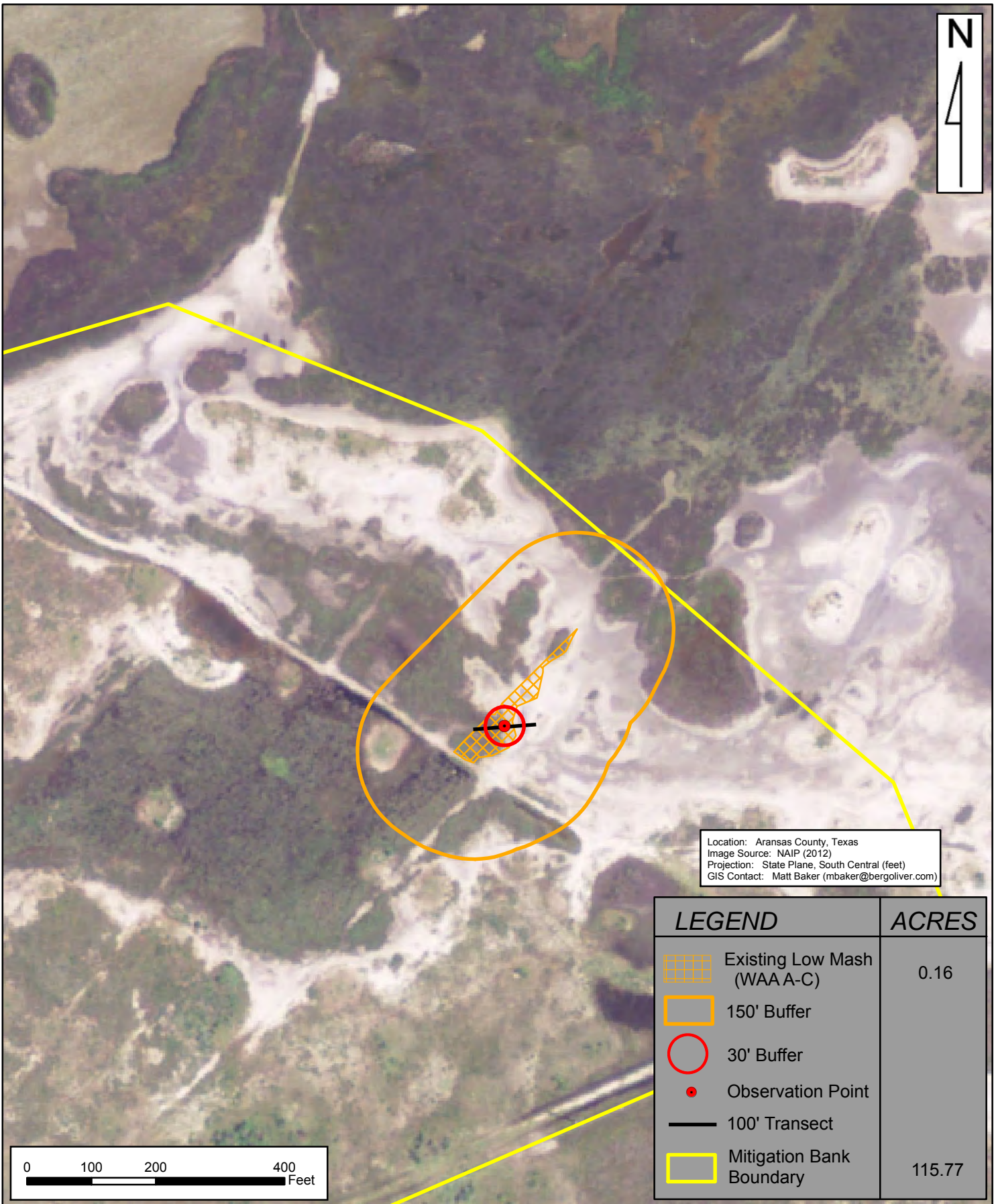
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.30	Severe hydrologic restriction (high elevation berm with a single connection/opening)
V_{nhc}	0.70	4 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater than 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.60	Average WAA width is 151-225 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	0.20	Sandy

Functional Capacity Index (FCI)







Biological	0.69
Botanical	1.00
Physical	0.50
Chemical	0.55

Functional Capacity Units (FCU)

Biological	0.79
Botanical	1.14
Physical	0.57
Chemical	0.62



Location: Aransas County, Texas
Image Source: NAIP (2012)
Projection: State Plane, South Central (feet)
GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND		ACRES
	Existing Low Mash (WAA A-C)	0.16
	150' Buffer	
	30' Buffer	
	Observation Point	
	100' Transect	
	Mitigation Bank Boundary	115.77

WAA A-C

Project #: 6931
For: PBC Wetlands, LLC
Location: SH 35 between Fulton, TX & Gregory, TX
Aransas County, Texas

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA A-C
Natural Conditions - Year 0
Acreage = 0.16

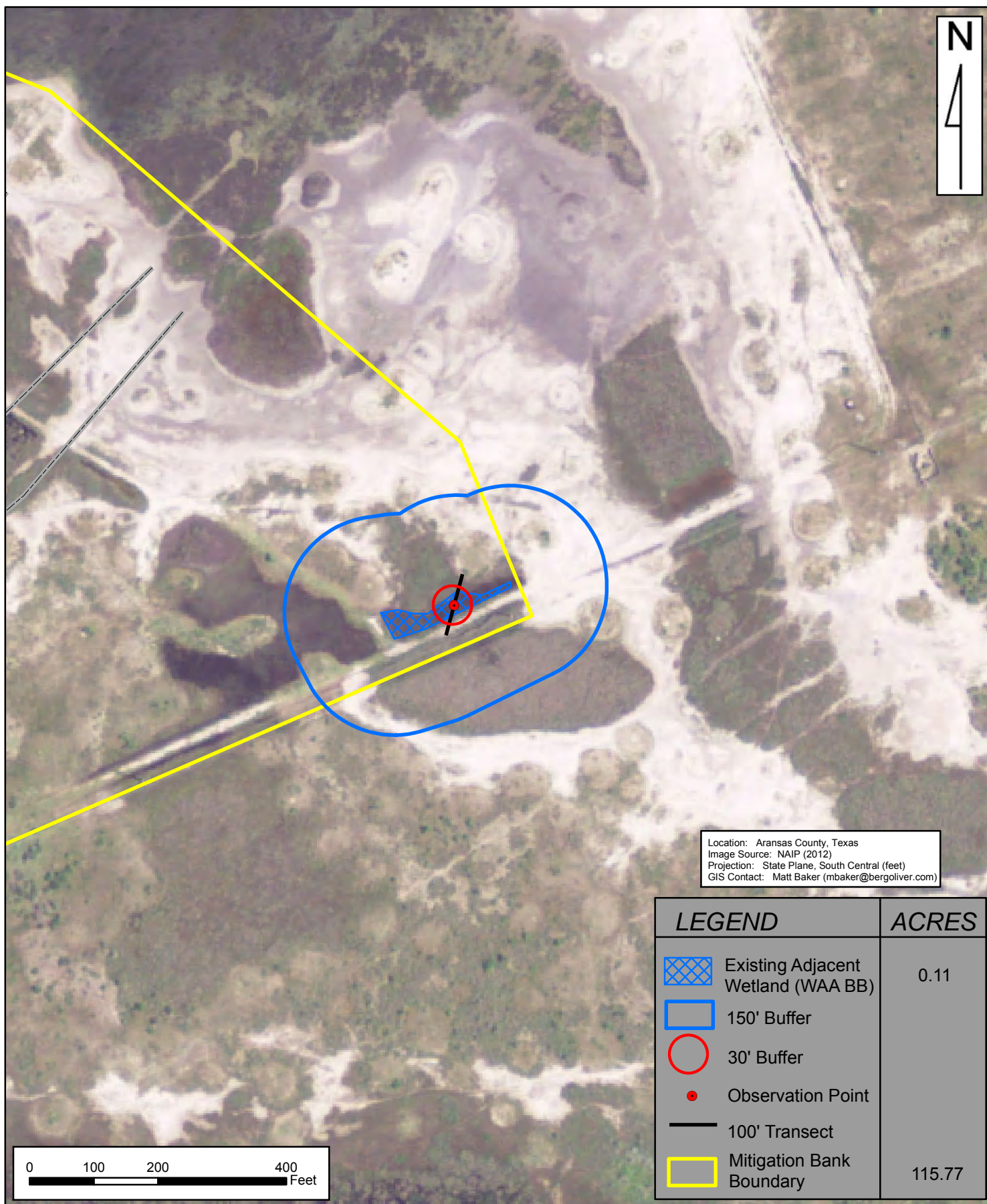
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.70	4 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater than 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.25	Average WAA width is 31-75 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	0.20	Sandy

Functional Capacity Index (FCI)







Biological	0.64
Botanical	1.00
Physical	0.39
Chemical	0.32

Functional Capacity Units (FCU)

Biological	0.10
Botanical	0.16
Physical	0.06
Chemical	0.05



Location: Aransas County, Texas
Image Source: NAIP (2012)
Projection: State Plane, South Central (feet)
GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND	ACRES
 Existing Adjacent Wetland (WAA BB)	0.11
 150' Buffer	
 30' Buffer	
 Observation Point	
 100' Transect	115.77
 Mitigation Bank Boundary	

WAA BB

Project #: 6931
For: PBC Wetlands, LLC
Location: SH 35 between Fulton, TX & Gregory, TX
Aransas County, Texas

REVISIONS
Oct. 13, 2015 by MDB

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA BB
Natural Conditions - Year 0
Acreage = 0.11

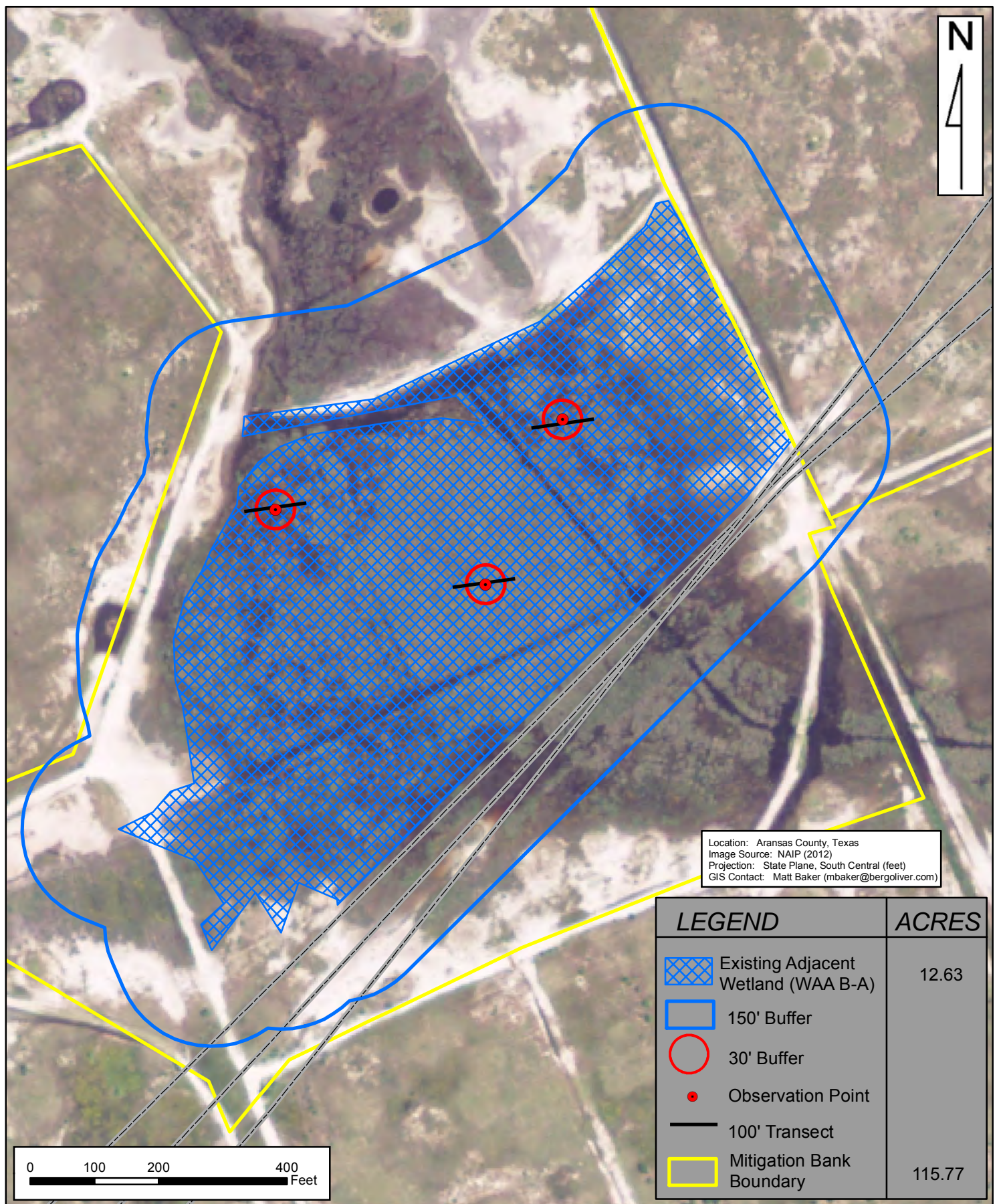
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.50	3 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater than 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.25	Average WAA width is 31-75 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	0.80	Clay loam

Functional Capacity Index (FCI)

Biological	0.62
Botanical	1.00
Physical	0.51
Chemical	0.32

Functional Capacity Units (FCU)

Biological	0.07
Botanical	0.11
Physical	0.06
Chemical	0.03



WAA B-A

Project #: 6931
 For: PBC Wetlands, LLC
 Location: SH 35 between Fulton, TX & Gregory, TX
 Aransas County, Texas

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA B-A pt 20
Natural Conditions - Year 0
Acreage = 12.63

Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.50	3 habitat types within 150' of WAA edge
V_{typical}	0.60	60% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	1.00	Average WAA width is greater than 526 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	1.00	Clay

Functional Capacity Index (FCI)

Biological	0.42
Botanical	0.60
Physical	0.70
Chemical	0.24

Functional Capacity Units (FCU)

Biological	5.30
Botanical	7.58
Physical	8.84
Chemical	3.09

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA B-A pt21
Natural Conditions - Year 0
Acreage = 12.63

Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.50	3 habitat types within 150' of WAA edge
V_{typical}	0.60	60% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	1.00	Average WAA width is greater than 526 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	1.00	Clay

Functional Capacity Index (FCI)

Biological	0.42
Botanical	0.60
Physical	0.70
Chemical	0.24

Functional Capacity Units (FCU)

Biological	5.30
Botanical	7.58
Physical	8.84
Chemical	3.09

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA B-A pt25
Natural Conditions - Year 0
Acreage = 12.63

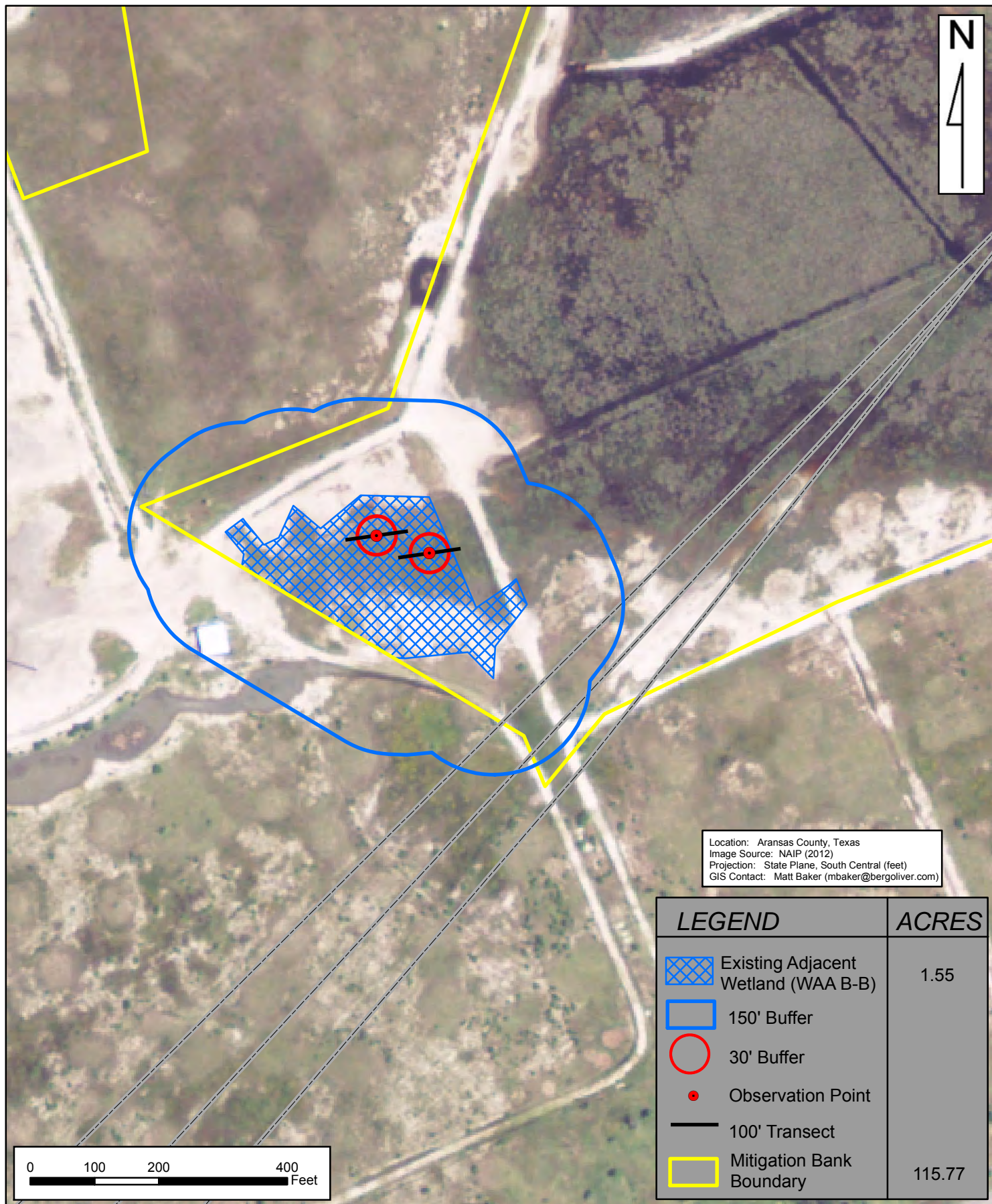
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.50	3 habitat types within 150' of WAA edge
V_{typical}	0.60	60% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	1.00	Average WAA width is greater than 526 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	1.00	Clay

Functional Capacity Index (FCI)

Biological	0.42
Botanical	0.60
Physical	0.70
Chemical	0.24

Functional Capacity Units (FCU)

Biological	5.30
Botanical	7.58
Physical	8.84
Chemical	3.09



Location: Aransas County, Texas
 Image Source: NAIP (2012)
 Projection: State Plane, South Central (feet)
 GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND		ACRES
	Existing Adjacent Wetland (WAA B-B)	1.55
	150' Buffer	
	30' Buffer	
	Observation Point	
	100' Transect	
	Mitigation Bank Boundary	115.77

WAA B-B

Project #: 6931 For: PBC Wetlands, LLC Location: SH 35 between Fulton, TX & Gregory, TX Aransas County, Texas	REVISIONS Oct. 13, 2015 by MDB	BERG•OLIVER ASSOCIATES, INC. ENVIRONMENTAL SCIENCE, ENGINEERING & LAND USE CONSULTANTS 14701 ST. MARY'S LANE, SUITE 400 HOUSTON, TEXAS 77079 PHONE (281)589-0898 http://www.bergoliver.com	

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA B-B pt23
Natural Conditions - Year 0
Acreage = 1.55

Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.50	3 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater than 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.60	Average WAA width is 151-225 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	0.80	Clay loam

Functional Capacity Index (FCI)

Biological	0.62
Botanical	1.00
Physical	0.58
Chemical	0.32

Functional Capacity Units (FCU)

Biological	0.96
Botanical	1.55
Physical	0.90
Chemical	0.49

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA B-B pt 24
Natural Conditions - Year 0
Acreage = 1.55

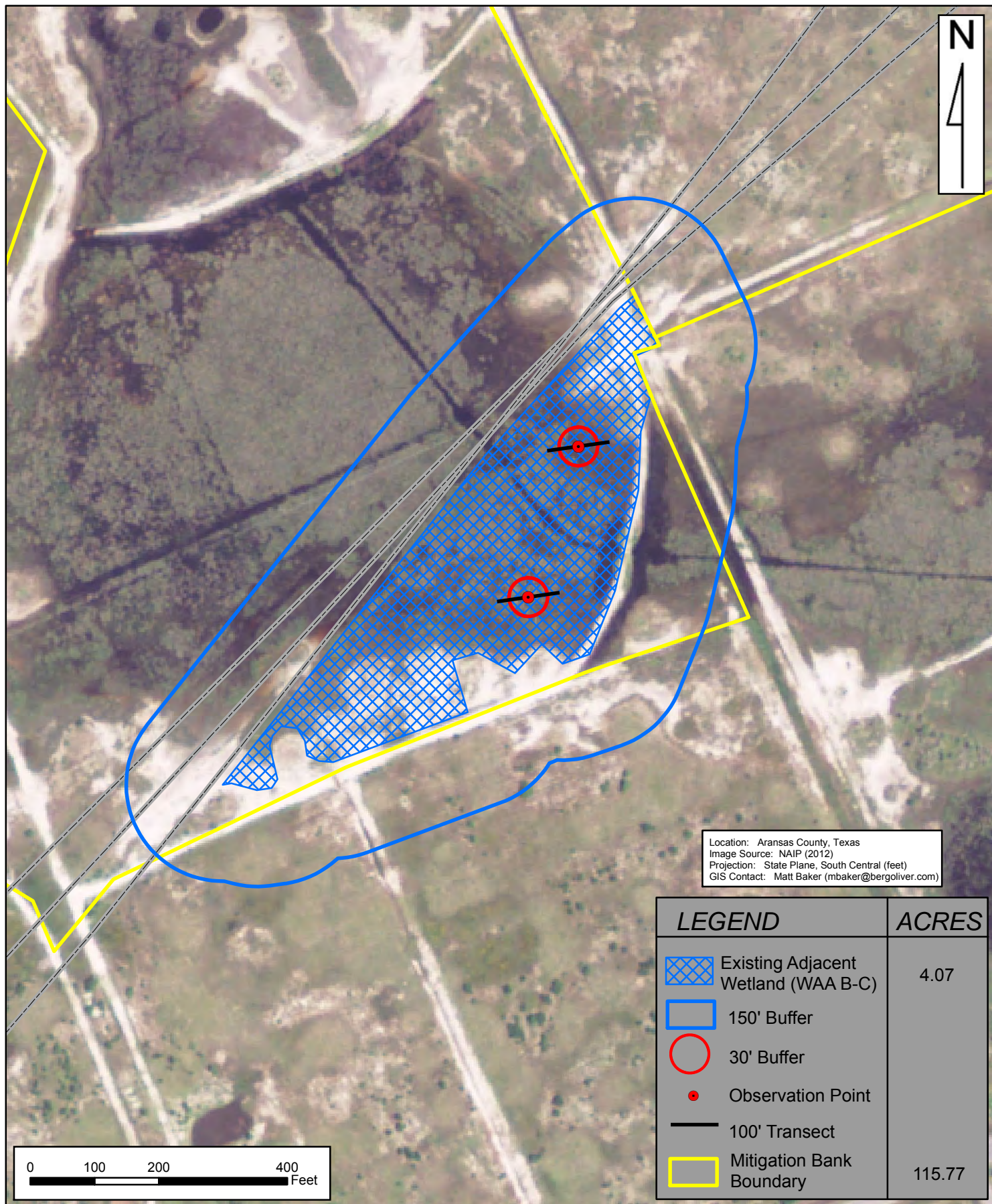
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.50	3 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.60	Average WAA width is 151-225 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	0.80	Clay loam

Functional Capacity Index (FCI)

Biological	0.62
Botanical	1.00
Physical	0.58
Chemical	0.32

Functional Capacity Units (FCU)

Biological	0.96
Botanical	1.55
Physical	0.90
Chemical	0.49



WAA B-C

Project #: 6931
 For: PBC Wetlands, LLC
 Location: SH 35 between Fulton, TX & Gregory, TX
 Aransas County, Texas

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA B-C pt 17
Natural Conditions - Year 0
Acreage = 4.07

Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.30	2 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.80	Average WAA width is 226-300 feet
V_{rough}	0.20	FCI is 0.05
V_{soil}	0.80	Clay loam

Functional Capacity Index (FCI)

Biological	0.61
Botanical	1.00
Physical	0.58
Chemical	0.32

Functional Capacity Units (FCU)

Biological	2.47
Botanical	4.07
Physical	2.36
Chemical	1.29

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA B-C pt 19
Natural Conditions - Year 0
Acreage = 4.07

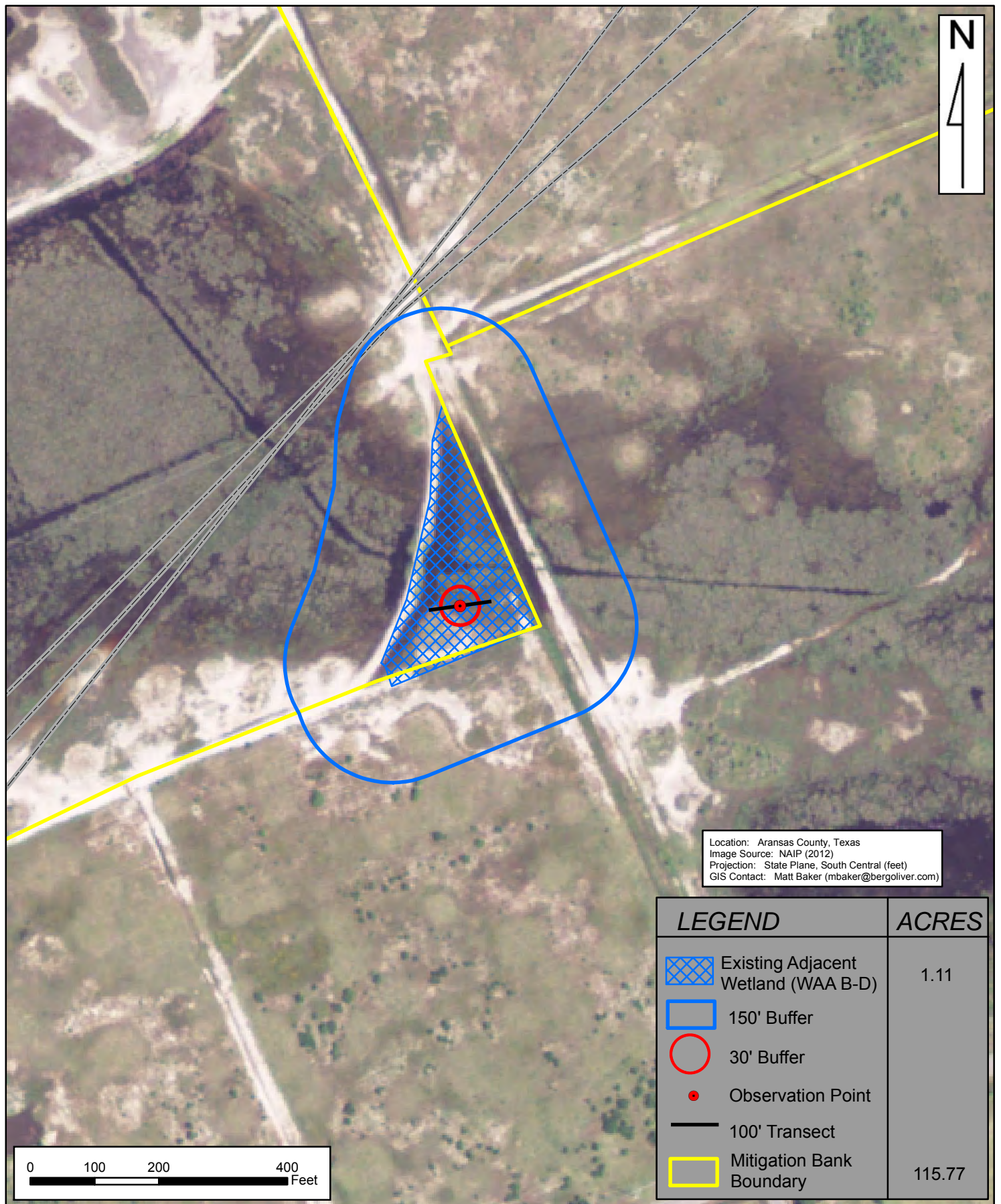
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.30	2 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater than 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.80	Average WAA width is 226-300 feet
V_{rough}	0.20	FCI is 0.05
V_{soil}	0.80	Clay loam

Functional Capacity Index (FCI)

Biological	0.61
Botanical	1.00
Physical	0.58
Chemical	0.32

Functional Capacity Units (FCU)

Biological	2.47
Botanical	4.07
Physical	2.36
Chemical	1.29



WAA B-D

Project #: 6931
 For: PBC Wetlands, LLC
 Location: SH 35 between Fulton, TX & Gregory, TX
 Aransas County, Texas

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA B-D
Natural Conditions - Year 0
Acreage = 1.11

Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.30	2 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater than 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.50	Average WAA width is 76-150 feet
V_{rough}	0.20	FCI is 0.05
V_{soil}	0.80	Clay loam

Functional Capacity Index (FCI)







Biological	0.61
Botanical	1.00
Physical	0.52
Chemical	0.32

Functional Capacity Units (FCU)

Biological	0.67
Botanical	1.11
Physical	0.58
Chemical	0.35



Location: Aransas County, Texas
Image Source: NAIP (2012)
Projection: State Plane, South Central (feet)
GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND	ACRES
 Existing Adjacent Wetland (WAA CC)	0.17
 150' Buffer	
 30' Buffer	
 Observation Point	
 100' Transect	
 Mitigation Bank Boundary	115.77

WAA CC

Project #: 6931
For: PBC Wetlands, LLC
Location: SH 35 between Fulton, TX & Gregory, TX
Aransas County, Texas

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA CC
Natural Conditions - Year 0
Acreage = 0.17

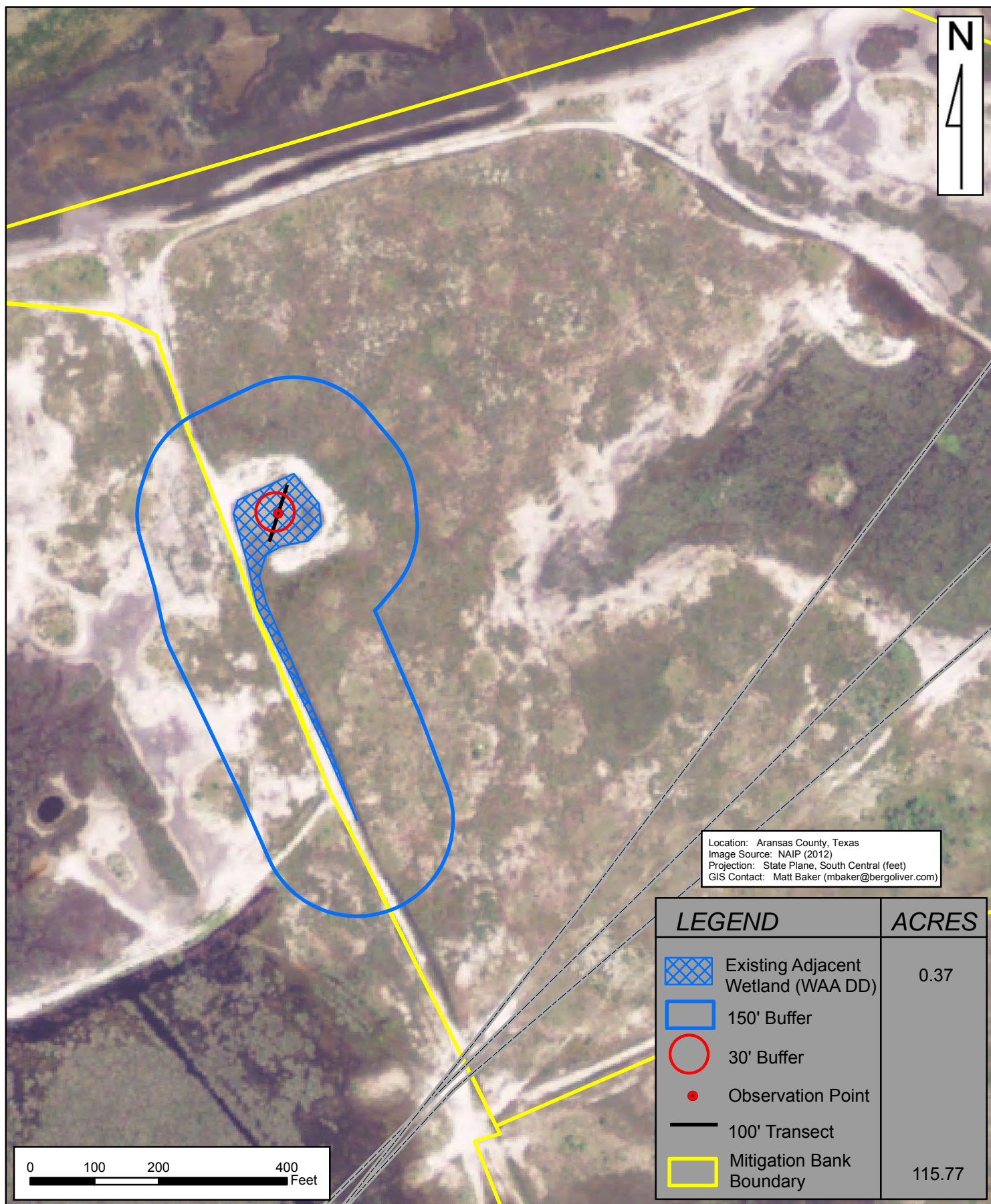
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.50	3 habitat types within 150' of WAA edge
V_{typical}	0.50	50% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.25	Average WAA width is 31-75 feet
V_{rough}	0.60	FCI is 0.07
V_{soil}	1.00	Clay

Functional Capacity Index (FCI)

Biological	0.37
Botanical	0.50
Physical	0.59
Chemical	0.22

Functional Capacity Units (FCU)

Biological	0.06
Botanical	0.09
Physical	0.10
Chemical	0.04



Location: Aransas County, Texas
 Image Source: NAIP (2012)
 Projection: State Plane, South Central (feet)
 GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND		ACRES
	Existing Adjacent Wetland (WAA DD)	0.37
	150' Buffer	
	30' Buffer	
	Observation Point	
	100' Transect	
	Mitigation Bank Boundary	115.77

WAA DD

Project #: 6931
 For: PBC Wetlands, LLC
 Location: SH 35 between Fulton, TX & Gregory, TX
 Aransas County, Texas

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA DD
Natural Conditions - Year 0
Acreage = 0.37

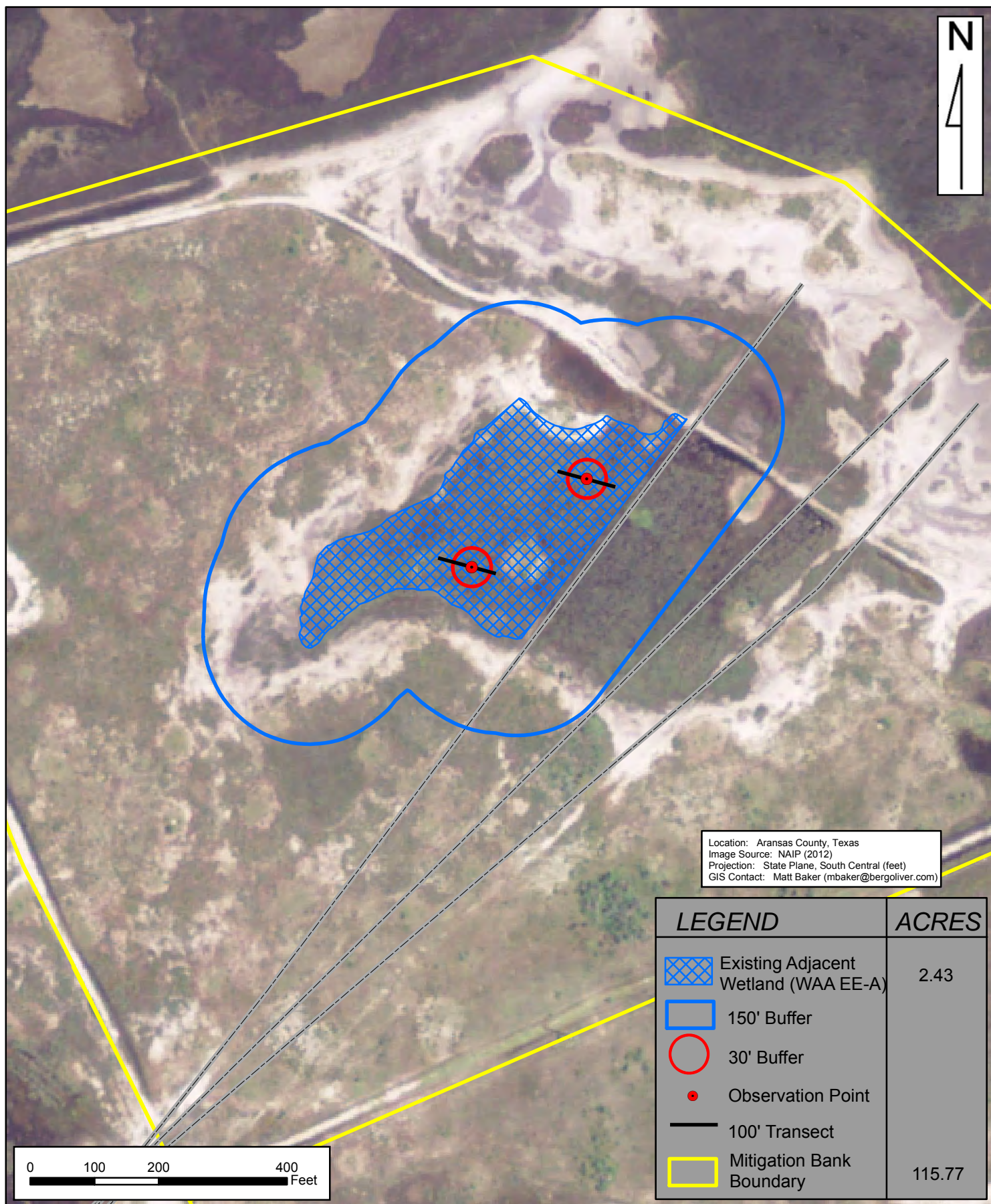
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.30	2 habitat types within 150' of WAA edge
V_{typical}	0.10	10-20% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater than 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.80	Average WAA width is 226-300 feet
V_{rough}	0.80	FCI is 0.08
V_{soil}	1.00	Clay

Functional Capacity Index (FCI)

Biological	0.16
Botanical	0.10
Physical	0.74
Chemical	0.10

Functional Capacity Units (FCU)

Biological	0.06
Botanical	0.04
Physical	0.27
Chemical	0.04



Location: Aransas County, Texas
 Image Source: NAIP (2012)
 Projection: State Plane, South Central (feet)
 GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND		ACRES
	Existing Adjacent Wetland (WAA EE-A)	2.43
	150' Buffer	
	30' Buffer	
	Observation Point	
	100' Transect	
	Mitigation Bank Boundary	115.77

WAA EE-A

Project #: 6931
 For: PBC Wetlands, LLC
 Location: SH 35 between Fulton, TX & Gregory, TX
 Aransas County, Texas

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA EE-A pt 14
Natural Conditions - Year 0
Acreage = 2.43

Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.50	3 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.85	Average WAA width is 301-375 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	1.00	Clay

Functional Capacity Index (FCI)

Biological	0.62
Botanical	1.00
Physical	0.67
Chemical	0.32

Functional Capacity Units (FCU)

Biological	1.51
Botanical	2.43
Physical	1.63
Chemical	0.77

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA EE-A pt15
Natural Conditions - Year 0
Acreage = 2.43

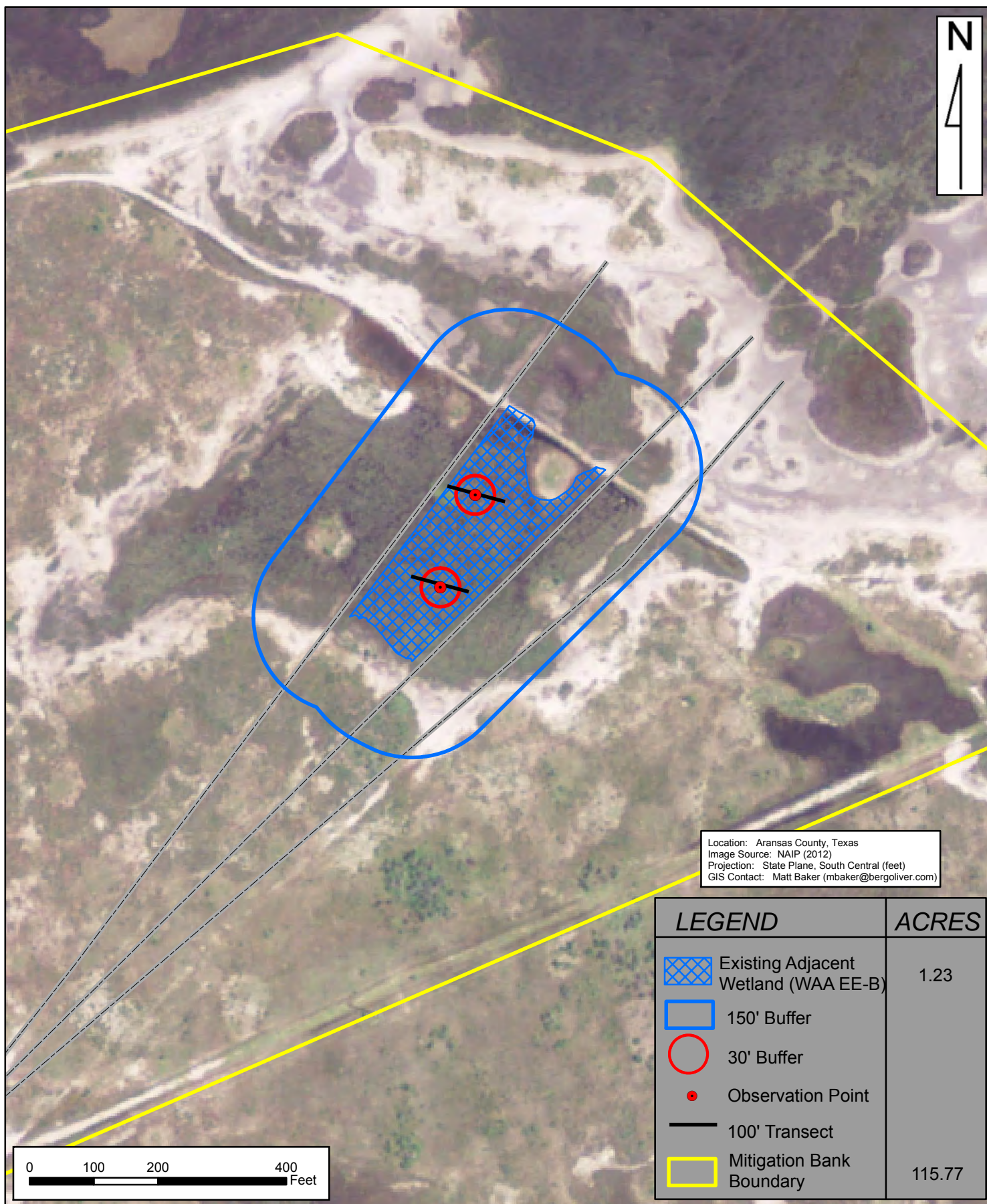
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.50	3 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.85	Average WAA width is 301-375 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	1.00	Clay

Functional Capacity Index (FCI)







Biological	0.62
Botanical	1.00
Physical	0.67
Chemical	0.32

Functional Capacity Units (FCU)

Biological	1.51
Botanical	2.43
Physical	1.63
Chemical	0.77



Location: Aransas County, Texas
Image Source: NAIP (2012)
Projection: State Plane, South Central (feet)
GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND		ACRES
	Existing Adjacent Wetland (WAA EE-B)	1.23
	150' Buffer	
	30' Buffer	
	Observation Point	
	100' Transect	
	Mitigation Bank Boundary	115.77

WAA EE-B

Project #: 6931
For: PBC Wetlands, LLC
Location: SH 35 between Fulton, TX & Gregory, TX
Aransas County, Texas

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA EE-B pt 12
Natural Conditions - Year 0
Acreage = 1.23

Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.50	3 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.60	Average WAA width is 151-225 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	1.00	Clay

Functional Capacity Index (FCI)

Biological	0.62
Botanical	1.00
Physical	0.62
Chemical	0.32

Functional Capacity Units (FCU)

Biological	0.76
Botanical	1.23
Physical	0.76
Chemical	0.39

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA EE-B pt 13
Natural Conditions - Year 0
Acreage = 1.23

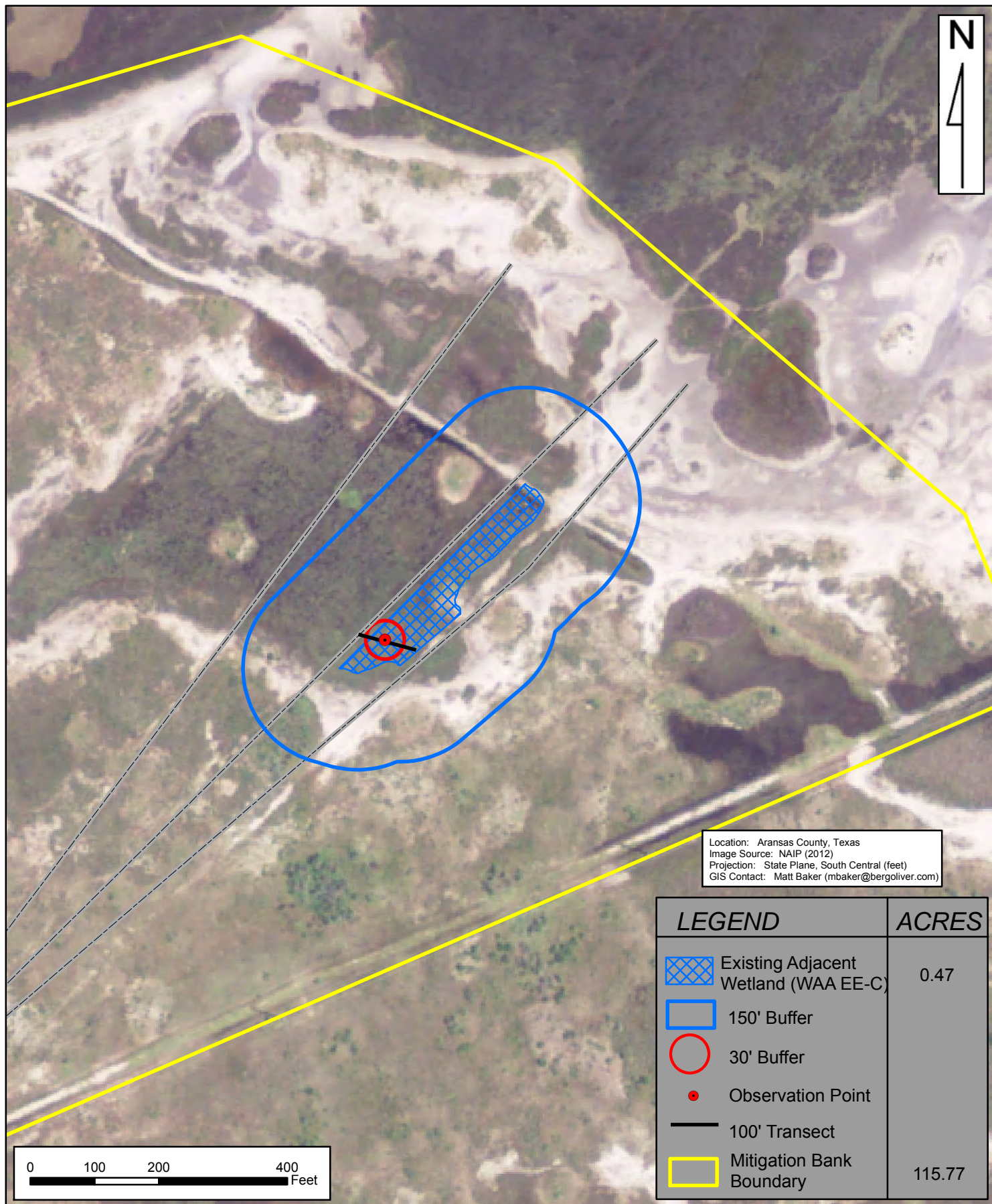
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.50	3 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.60	Average WAA width is 151-225 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	1.00	Clay

Functional Capacity Index (FCI)

Biological	0.62
Botanical	1.00
Physical	0.62
Chemical	0.32

Functional Capacity Units (FCU)

Biological	0.76
Botanical	1.23
Physical	0.76
Chemical	0.39



Location: Aransas County, Texas
 Image Source: NAIP (2012)
 Projection: State Plane, South Central (feet)
 GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND		ACRES
	Existing Adjacent Wetland (WAA EE-C)	0.47
	150' Buffer	
	30' Buffer	
	Observation Point	
	100' Transect	
	Mitigation Bank Boundary	115.77

WAA EE-C

Project #: 6931
 For: PBC Wetlands, LLC
 Location: SH 35 between Fulton, TX & Gregory, TX
 Aransas County, Texas

REVISIONS
Oct. 13, 2015 by MDB

BERG•OLIVER ASSOCIATES, INC.

ENVIRONMENTAL SCIENCE, ENGINEERING
 & LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400
 HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>



Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA EE-C
Natural Conditions - Year 0
Acreage = 0.47

Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.50	3 habitat types within 150' of WAA edge
V_{typical}	1.00	90-100% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater than 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.50	Average WAA width is 76-150 feet
V_{rough}	0.40	FCI is 0.06
V_{soil}	1.00	Clay

Functional Capacity Index (FCI)

Biological	0.62
Botanical	1.00
Physical	0.60
Chemical	0.32

Functional Capacity Units (FCU)

Biological	0.29
Botanical	0.47
Physical	0.28
Chemical	0.15



Location: Aransas County, Texas
 Image Source: NAIP (2012)
 Projection: State Plane, South Central (feet)
 GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND		ACRES
	Existing Adjacent Wetland (WAA F)	0.15
	150' Buffer	
	30' Buffer	
	Observation Point	
	100' Transect	
	Mitigation Bank Boundary	115.77

WAA F

Project #: 6931
 For: PBC Wetlands, LLC
 Location: SH 35 between Fulton, TX & Gregory, TX
 Aransas County, Texas

REVISIONS
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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA F
Natural Conditions - Year 0
Acreage = 0.15

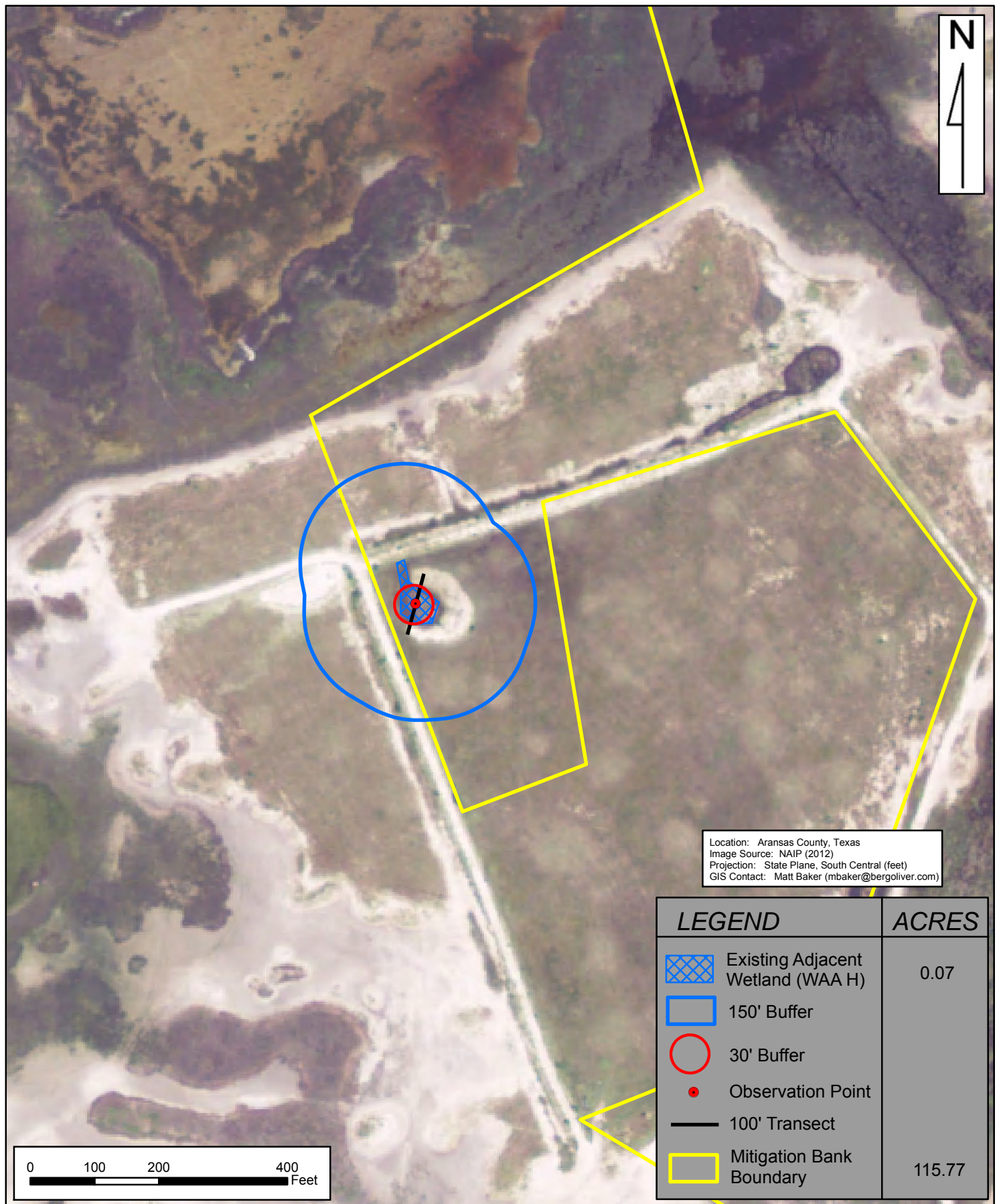
Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.20	1 habitat types within 150' of WAA edge
V_{typical}	0.10	10-20% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.25	Average WAA width is 31-75 feet
V_{rough}	1.00	FCI is between 0.09 - 0.10
V_{soil}	1.00	Clay

Functional Capacity Index (FCI)

Biological	0.15
Botanical	0.10
Physical	0.67
Chemical	0.10

Functional Capacity Units (FCU)

Biological	0.02
Botanical	0.02
Physical	0.10
Chemical	0.02



Location: Aransas County, Texas
 Image Source: NAIP (2012)
 Projection: State Plane, South Central (feet)
 GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND		ACRES
	Existing Adjacent Wetland (WAA H)	0.07
	150' Buffer	
	30' Buffer	
	Observation Point	
	100' Transect	
	Mitigation Bank Boundary	115.77

WAA H

Project #: 6931
 For: PBC Wetlands, LLC
 Location: SH 35 between Fulton, TX & Gregory, TX
 Aransas County, Texas

REVISIONS
Oct. 13, 2015 by MDB

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Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA H
Natural Conditions - Year 0
Acreage = 0.07

Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.20	1 habitat types within 150' of WAA edge
V_{typical}	0.10	10-20% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.10	Average WAA width is 0-31 feet
V_{rough}	1.00	FCI is between 0.09 - 0.10
V_{soil}	1.00	Clay

Functional Capacity Index (FCI)

Biological	0.15
Botanical	0.10
Physical	0.64
Chemical	0.10

Functional Capacity Units (FCU)

Biological	0.01
Botanical	0.01
Physical	0.04
Chemical	0.01

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet
PBC Wetlands, LLC - BOA Job 6931N-MBI
WAA H
Natural Conditions - Year 0
Acreage = 0.07

Variable	Sub-Index	Notes:
V_{edge}	0.40	Marsh lacks both tidal creeks & isolated ponds & depressions, shoreline is linear or smooth... Marsh area is large relative to shoreline length. OR the WAA is a depression that is not affected by the daily tide (high marsh)
V_{hydro}	0.10	Site receives water only during extreme storm events
V_{nhc}	0.20	1 habitat types within 150' of WAA edge
V_{typical}	0.10	10-20% of the WAA is covered by vegetation typical of the regional subclass
V_{slope}	1.00	Greater then 451 feet to water greater than or equal to 6 feet deep
V_{width}	0.10	Average WAA width is 0-31 feet
V_{rough}	1.00	FCI is between 0.09 - 0.10
V_{soil}	1.00	Clay

Functional Capacity Index (FCI)

Biological	0.15
Botanical	0.10
Physical	0.64
Chemical	0.10

Functional Capacity Units (FCU)

Biological	0.01
Botanical	0.01
Physical	0.04
Chemical	0.01

E. Invasive Species Management Plan

Coastal Bend Wetland Mitigation Bank

Regional Plant List

Herbaceous and grass-like species

Gregg amaranthaceae (*Amaranthus greggii*)
Doze daisy (*Aphanostephus skirrhobasis*)
Stinking camphor weed (*Pluchea odorata*)
Coastal water hyssop (*Bacopa monnieri*)
Maritime saltwort (*Batis maritima*)
Sea-oxeye daisy (*Borrchia frutescens*)
Gulf sea rocket (*Cakile lanceolata*)
Partridge pea (*Chamaecrista fasciculata*)
Saltgrass (*Distichlis spicata*)
Spikerush (*Eleocharis spp.*)
Fimbry (*Fimbristylis castanea*)
Camphor daisy (*Haplopappus phylocephalus*)
Salt heliotrope (*Heliotropium curassavicum*)
Camphorweed (*Heterotheca subaxillaris*)
Large leaf pennywort (*Hydrocotyle bonariensis*)
Saltmeadow cordgrasses (*Spartina patens*)
Gulf cordgrass (*Spartina spartinae*)
Smooth cordgrass (*Spartina alterniflora*)
Needlerush (*Juncus roemerianus*)
Carolina wolfberry (*Lycium carolinianum*)
Shoregrass (*Monanthochloe littoralis*)
Beach panicum (*Panicum amarum*)
Annual glasswort (*Salicornia bigelovii*)
Virginia glasswort (*Salicornia virginica*)
Olney bulrush (*Schoenoplectus americanus*)
American bulrush (*Schoenoplectus pungens*)
Salt marsh bulrush (*Schoenoplectus robustus*)
Seashore dropseed (*Sporobolus virginicus*)
Saltmarsh aster (*Symphyotrichum spp.*)

Shrub species

Black mangrove (*Avicennia germinans*)
Sea myrtle (*Baccharis halimifolia*)
High tide bush (*Iva frutescens*)
Sweet bay (*Magnolia virginiana*)

D. Survey Plat and Legal Description

PUERTO BAY

NOTE: ANY SUBMERGED AREA BELOW
MEAN HIGH WATER SUBJECT TO
CLAIM BY THE STATE OF TEXAS

115.77 ACRES
MITIGATION BOUNDARY
OUT OF ORIGINAL 786.145 ACRES
CF#210787, O.P.R.A.C.T.

BLOCK 2
LUCAS RANCH SUBDIVISION
VOL. 2, PG. 7,
P.R.A.C.T.

BLOCK 2
LUCAS RANCH SUBDIVISION
VOL. 2, PG. 7,
P.R.A.C.T.

13.282 ACRES
REMAINDER OF LOT 9
FRANK MORRISON

J. SMITH SURVEY A-187

110.954 AC.
(MARSH TRACT)
PORT BAY HUNTING & FISHING
CF#249544, O.P.R.A.C.T.

SEE ACCOMPANYING FIELD NOTES DESCRIPTION

PLAT BEARING ALONG F.M. 1089, USED FOR DIRECTIONAL CONTROL.

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Griffith & Brundrett
Surveying & Engineering, Inc.

411 S. Pearl St., P.O. Box 2322
Rockport, Texas 78381
361-729-6479
361-729-7933
jerry@grsurveyor.com
www.grsurveyor.com

DATE: DECEMBER 17, 2014

SCALE: 1" = 300'

FILE NAME: 1412178B1

REVISED
DATE:

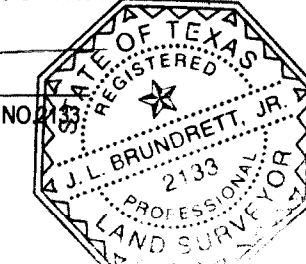
PREPARED FOR:
PORT BAY HUNTING CLUB

115.77 ACRES OF LAND - MITIGATION BOUNDARY

OUT OF A PORTION OF BLOCK 2, LUCAS RANCH SUBDIVISION, J. SMITH SURVEY, A-187, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 7, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING OUT OF AN ORIGINAL 786.145 ACRE TRACT AS DESCRIBED IN DEED OF RECORD UNDER CLERKS FILE NUMBER 210787, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND ALSO BEING A PORTION OF SEVERAL TRACTS OF LAND AS DESCRIBED IN A DEED OF RECORD TO PBC WETLANDS, LLC, AND RECORDED UNDER CLERKS FILE NUMBER 296684, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS.

I, J. L. BRUNDRETT, JR., A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT CORRECTLY SHOWS A SURVEY ON THE GROUND OF THE FOREGOING PROPERTY AND THAT THERE ARE NO VISIBLE EASEMENTS, ENCROACHMENTS OR PROTRUSIONS (EXCEPT AS SHOWN HEREON.)

J. L. BRUNDRETT, JR., R.P.L.S. REG. NO. 2133
FIRM REG. NO. 10004800



FIELD NOTES

115.77 ACRES – MITIGATION BOUNDARY

DECEMBER 17, 2014

BEING THE DESCRIPTION OF 115.77 ACRES OF LAND OUT OF BLOCK 2, LUCAS RANCH SUBDIVISION, J. SMITH SURVEY, A-187, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 7, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING OUT OF AN ORIGINAL 786.145 ACRE TRACT, AS DESCRIBED IN A DEED OF RECORD UNDER CLERKS FILE NUMBER 210787, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING PART OF SEVERAL TRACTS OF LAND AS DESCRIBED IN A DEED TO PBC WETLANDS, LLC, AND RECORDED UNDER CLERKS FILE NUMBER 296684, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, WITH SAID 115.77 ACRES OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCE, at a 5/8" found in the Northerly R.O.W. line of Texas State F.M. Road 1069, and being the common corner of Lots 9 and 10, of said Block 2; THENCE, North 23°52'58" West, along and with the common boundary line of said Lots 9 and 10, a distance of 866.77 feet to a 5/8" steel rebar found for an Exterior corner of a 231.017 acre tract out of said 786.145 acre tract, as described as Tract One, in said deed to PBC Wetlands, LLC, and being the SOUTHEAST corner and PLACE OF BEGINNING of this survey;

THENCE, North 23°53'11" West, along and with the common boundary line of said Lots 9 and 10, a distance of 443.06 feet to a 5/8" steel rebar found for the common corner of Lots 7, 8, 9 and 10, of said Block 2, and being an INTERIOR corner of this survey;

THENCE, North 66°06'49" East, along and with the common boundary lines of Lots 5, 6, 7, 10, 11 and 12, of said Block 2, a distance of 1980.0 feet to a 5/8" steel rebar found for the common corner of Lots 4, 5, 12, and 13, of said Block 2, and being an EXTERIOR corner of this survey;

THENCE, North 22°54'23" West, a distance of 293.32 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, North 49°56'03" West, a distance of 840.44 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, North 68°27'11" West, a distance of 526.14 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 73°07'12" West, a distance of 1539.80 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

THENCE, North 73°41'34" West, a distance of 495.79 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 29°08'07" West, a distance of 160.67 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 16°32'42" East, a distance of 443.0 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

THENCE, South 59°41'21" West, a distance of 702.95 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 21°24'36" East, a distance of 660.09 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, North 68°35'59" East, a distance of 206.47 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, North 09°53'37" West, a distance of 413.47 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

THENCE, North 72°24'25" East, a distance of 476.30 feet to a fence corner post found for an INTERIOR corner of this survey;

THENCE, South 37°17'33" East, a distance of 363.47 feet to a fence corner post found for an INTERIOR corner of this survey;

THENCE, South 18°52'18" West, a distance of 696.36 feet to a fence corner post found for an INTERIOR corner of this survey;

THENCE, South 67°47'08" West, a distance of 413.77 feet to a fence corner post found for an EXTERIOR corner of this survey;

THENCE, South 59°34'09" East, a distance of 693.93 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

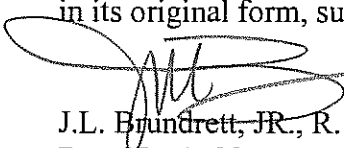
THENCE, South 23°24'33" East, a distance of 85.19 feet to a 5/8" steel rebar set for the Lower Northwest corner of a 5.001 acre tract described this date, and being an EXTERIOR corner of this survey;

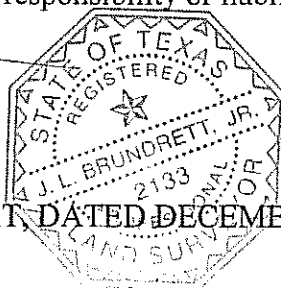
THENCE, North 39°00'57" East, a distance of 145.18 feet to a 5/8" steel rebar set for the Upper Northwest corner of said 5.001 acre tract, and being an INTERIOR corner of this survey;

THENCE, North 63°48'29" East, a distance of 401.72 feet to a fence corner post found for the Northeast corner of said 5.001 acre tract, and being an INTERIOR corner of this survey;

THENCE, North 67°54'23" East, a distance of 660.32 feet to the PLACE OF BEGINNING of this survey and containing 115.77 acres of land more or less.

Unless this Field Note description, including preamble, seal and signature, appears in its entirety, in its original form, surveyor assumes no responsibility or liability for its accuracy.


J.L. Brundrett, JR., R. P. L. S.
Reg. No. 2133



SEE ACCOMPANYING SURVEY PLAT, DATED DECEMBER 17, 2014
FILENAME: 141217BB1

141217bb3fn

F. Title Abstract

(w/ opinion of title from prospectus)

**G. Minerals Management Plan
or Land Use Plan**

H. Draft Conservation Easement
with Survey Plat and Legal Description

STATE OF TEXAS §
 §
COUNTY OF _____ §

 This instrument was acknowledged before me on _____, 20__ by
_____, on behalf of _____.

Name:
Notary Public, State of Texas
My commission expires: _____

STATE OF TEXAS §
 §
COUNTY OF _____ §

 This instrument was acknowledged before me on _____, 20__ by
_____, on behalf of _____.

Name:
Notary Public, State of Texas
My commission expires: _____

After recording return to:

Texas Agricultural Land Trust

PO Box 6152

San Antonio, Texas 78209

Exhibit A
to
Conservation Easement Agreement

Metes and Bounds Legal Description of the Property

[TO BE PROVIDED]

PUERTO BAY

NOTE: ANY SUBMERGED AREA BELOW
MEAN HIGH WATER SUBJECT TO
CLAIM BY THE STATE OF TEXAS

115.77 ACRES
MITIGATION BOUNDARY
OUT OF ORIGINAL 786.145 ACRES
CF#210787, O.P.R.A.C.T.

BLOCK 2
LUCAS RANCH SUBDIVISION
VOL. 2, PG. 7,
P.R.A.C.T.

BLOCK 2
LUCAS RANCH SUBDIVISION
VOL. 2, PG. 7,
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13.282 ACRES
REMAINDER OF LOT 9
FRANK MORRISON

110.954 AC.
(MARSH TRACT)
PORT BAY HUNTING & FISHING
CF#249544, O.P.R.A.C.T.

SEE ACCOMPANYING FIELD NOTES DESCRIPTION

PLAT BEARING ALONG F.M. 1089, USED FOR DIRECTIONAL CONTROL.

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DATE: DECEMBER 17, 2014

SCALE: 1" = 300'

FILE NAME: 1412178B1

REVISED
DATE:

PREPARED FOR:
PORT BAY HUNTING CLUB

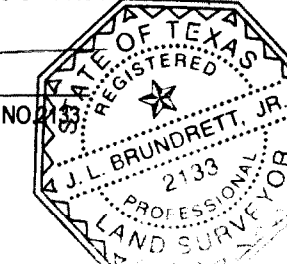
THIS IS TO CERTIFY THAT I HAVE CONSULTED THE FEDERAL FLOOD HAZARD MAP DATED 3/4/1985 AND FOUND THAT THE PROPERTY DESCRIBED HEREIN IS X (OR IS NOT) LOCATED IN A SPECIAL FLOOD HAZARD AREA. ZONE A2. BASE ELEVATION 1. PANEL NO. 0148C & 0148C. COMMUNITY NO. 485452. THIS INFORMATION IS BASED ON SCALING THE LOCATION OF THIS SURVEY ON THE FEMA MAP AND IS INTENDED TO BE USED TO DETERMINE INSURANCE RATES ONLY, AND NOT TO IDENTIFY SPECIFIC FLOODING CONDITIONS. SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS OR OWNERSHIP OF TITLE EVIDENCE. SURVEYOR DID NOT REVIEW EXCEPTIONS IN SCHEDULE "B" OF THE TITLE COMMITMENT TO DETERMINE WHETHER THEY DO OR DO NOT AFFECT SUBJECT PROPERTY.

115.77 ACRES OF LAND - MITIGATION BOUNDARY

OUT OF A PORTION OF BLOCK 2, LUCAS RANCH SUBDIVISION, J. SMITH SURVEY, A-187, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 7, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING OUT OF AN ORIGINAL 786.145 ACRE TRACT AS DESCRIBED IN DEED OF RECORD UNDER CLERKS FILE NUMBER 210787, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND ALSO BEING A PORTION OF SEVERAL TRACTS OF LAND AS DESCRIBED IN A DEED OF RECORD TO PBC WETLANDS, LLC, AND RECORDED UNDER CLERKS FILE NUMBER 296684, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS.

I, J. L. BRUNDRETT, JR., A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT CORRECTLY SHOWS A SURVEY ON THE GROUND OF THE FOREGOING PROPERTY AND THAT THERE ARE NO VISIBLE EASEMENTS, ENCROACHMENTS OR PROTRUSIONS (EXCEPT AS SHOWN HEREON.)

J. L. BRUNDRETT, JR., R.P.L.S. REG. NO. 2133
FIRM REG. NO. 10004800



FIELD NOTES

115.77 ACRES – MITIGATION BOUNDARY

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COMMENCE, at a 5/8" found in the Northerly R.O.W. line of Texas State F.M. Road 1069, and being the common corner of Lots 9 and 10, of said Block 2; THENCE, North 23°52'58" West, along and with the common boundary line of said Lots 9 and 10, a distance of 866.77 feet to a 5/8" steel rebar found for an Exterior corner of a 231.017 acre tract out of said 786.145 acre tract, as described as Tract One, in said deed to PBC Wetlands, LLC, and being the SOUTHEAST corner and PLACE OF BEGINNING of this survey;

THENCE, North 23°53'11" West, along and with the common boundary line of said Lots 9 and 10, a distance of 443.06 feet to a 5/8" steel rebar found for the common corner of Lots 7, 8, 9 and 10, of said Block 2, and being an INTERIOR corner of this survey;

THENCE, North 66°06'49" East, along and with the common boundary lines of Lots 5, 6, 7, 10, 11 and 12, of said Block 2, a distance of 1980.0 feet to a 5/8" steel rebar found for the common corner of Lots 4, 5, 12, and 13, of said Block 2, and being an EXTERIOR corner of this survey;

THENCE, North 22°54'23" West, a distance of 293.32 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, North 49°56'03" West, a distance of 840.44 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, North 68°27'11" West, a distance of 526.14 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 73°07'12" West, a distance of 1539.80 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

THENCE, North 73°41'34" West, a distance of 495.79 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 29°08'07" West, a distance of 160.67 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 16°32'42" East, a distance of 443.0 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

THENCE, South 59°41'21" West, a distance of 702.95 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 21°24'36" East, a distance of 660.09 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, North 68°35'59" East, a distance of 206.47 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, North 09°53'37" West, a distance of 413.47 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

THENCE, North 72°24'25" East, a distance of 476.30 feet to a fence corner post found for an INTERIOR corner of this survey;

THENCE, South 37°17'33" East, a distance of 363.47 feet to a fence corner post found for an INTERIOR corner of this survey;

THENCE, South 18°52'18" West, a distance of 696.36 feet to a fence corner post found for an INTERIOR corner of this survey;

THENCE, South 67°47'08" West, a distance of 413.77 feet to a fence corner post found for an EXTERIOR corner of this survey;

THENCE, South 59°34'09" East, a distance of 693.93 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

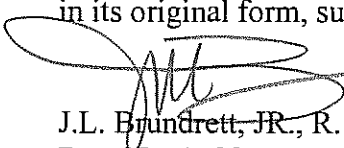
THENCE, South 23°24'33" East, a distance of 85.19 feet to a 5/8" steel rebar set for the Lower Northwest corner of a 5.001 acre tract described this date, and being an EXTERIOR corner of this survey;

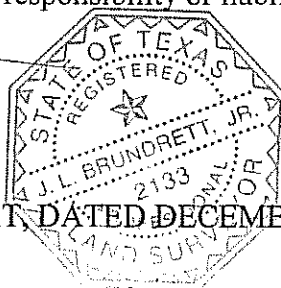
THENCE, North 39°00'57" East, a distance of 145.18 feet to a 5/8" steel rebar set for the Upper Northwest corner of said 5.001 acre tract, and being an INTERIOR corner of this survey;

THENCE, North 63°48'29" East, a distance of 401.72 feet to a fence corner post found for the Northeast corner of said 5.001 acre tract, and being an INTERIOR corner of this survey;

THENCE, North 67°54'23" East, a distance of 660.32 feet to the PLACE OF BEGINNING of this survey and containing 115.77 acres of land more or less.

Unless this Field Note description, including preamble, seal and signature, appears in its entirety, in its original form, surveyor assumes no responsibility or liability for its accuracy.


J.L. Brundrett, JR., R. P. L. S.
Reg. No. 2133



SEE ACCOMPANYING SURVEY PLAT, DATED DECEMBER 17, 2014
FILENAME: 141217BB1

141217bb3fn

Exhibit B
to
Conservation Easement Agreement

U.S. Army Corps of Engineers Permit

[TO BE ATTACHED]

Exhibit C
to
Conservation Easement Agreement

Mitigation Banking Instrument

[TO BE PROVIDED]

Exhibit D
to
Conservation Easement Agreement

Baseline Documentation Report Signature Page

[TO BE PROVIDED]

Exhibit E
to
Conservation Easement Agreement

Drill Site Designation

[TO BE PROVIDED]

PBC Wetlands, LLC

Long Term Management Policies

Right of Ways (ROW) Management

Three existing gas pipelines are located within the Coastal Bend Wetland Mitigation Bank (CBWMB). The right-of-way (ROW) access over each pipeline is 30 feet wide for the length of the line under the Bank property. These pipelines run through existing wetlands and uplands in the Bank property. No wetlands creation for mitigation credit are proposed by the Sponsor within the associated pipeline ROWs. The pipeline companies will retain access to the property through the main gate to the property for inspection and maintenance purposes of the ROWs. Any excavating or disruption within the existing pipeline ROWs will be returned to its original condition after necessary pipeline operations are completed.

Minerals Exploration Management

Subsurface minerals rights are not owned by the CBWMB or PBC Wetlands, LLC. Owners of the mineral rights have been identified and a document has been generated by TALT requesting that they convey the right to prohibit surface exploration on the mitigation bank to the CBWMB/TALT (**Exhibit F** of Conservation Easement Agreement). In return, the owners of PBC Wetlands, LLC have granted five (5) acres of land adjacent to the CBWMB boundary. These five (5) acres are to be registered in the Aransas County Courthouse as a designated drilling location from which all of the subsurface beneath the bank can be easily reached by directional drilling. Concurrent with this designation is a similar designation of a thirty (30) foot wide access ROW from the location to Farm-to-Market Road 1069 (**Attachment A**).

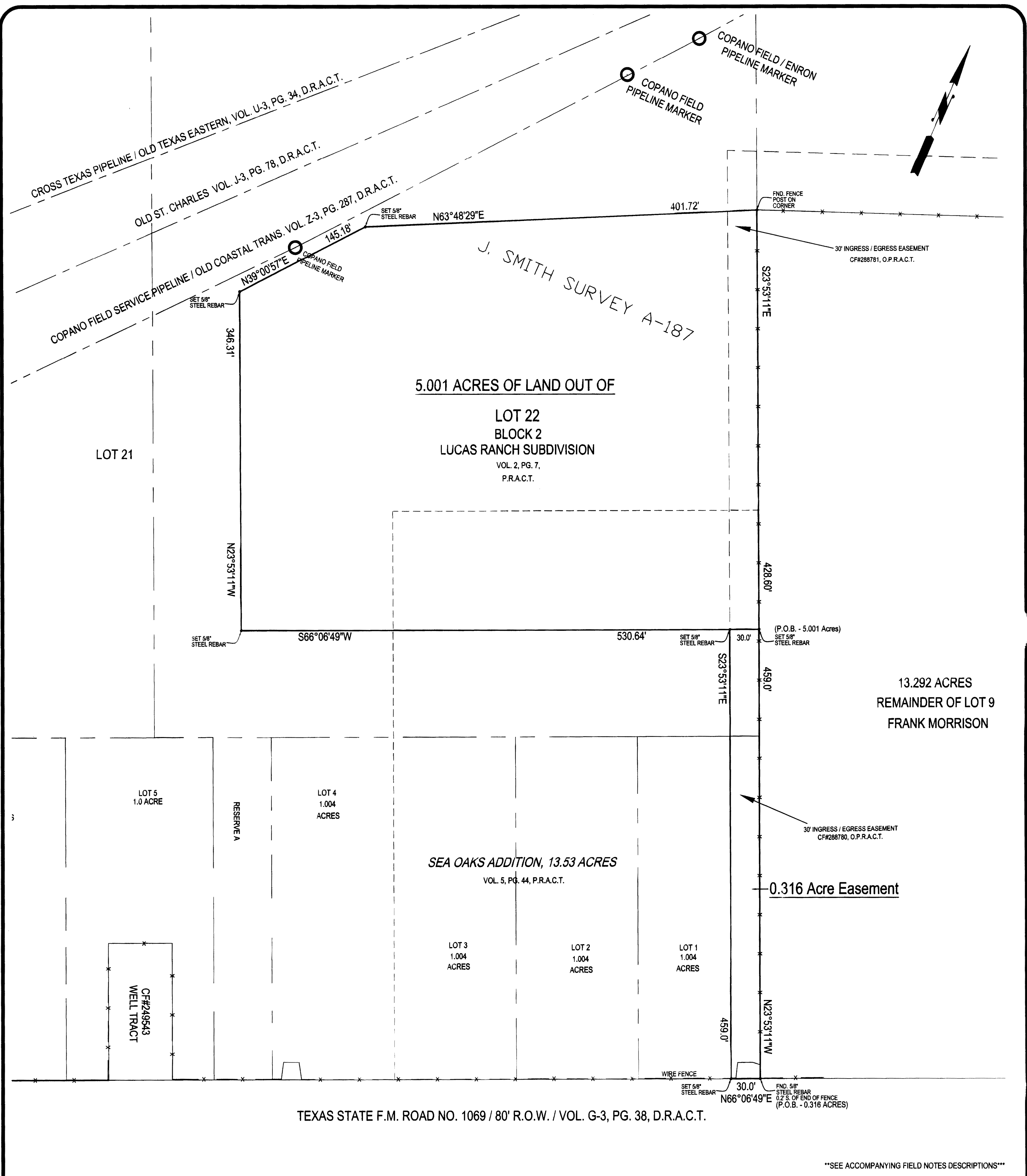
Recreational Use

The recreational use of the CBWMB will be conducted as stated in the conservation easement agreement with TALT. All recreational uses of the Bank are compatible with the CBWMB Goals and Objectives.

Fences bordering the CBWMB will be maintained, as necessary to protect the CBWMB from unlawful trespass.

Existing roadways on the property and within the CBWMB are designed to provide access for recreational activities and the ability to maintain the function of the Bank. The Sponsor will maintain these roadways as a part of its long-term management policy as described in the conservation easement agreement and the CBWMB Instrument. Additionally, no use of motorized vehicles will be permitted off of the existing access roadways within the CBWMB boundaries.

Attachment A- Drill Site Survey, Field Notes, & Ingress-Egress Easement



SEE ACCOMPANYING FIELD NOTES DESCRIPTIONS

<p>BEARING ALONG F.M. 1069, USED FOR DIRECTIONAL CONTROL UNLESS OTHERWISE SHOWN.</p> <p>COPYRIGHT NOTICE</p> <p>ANY COPY OF THIS DRAWING MUST BEAR THE SURVEYOR'S ORIGINAL SEAL AND SIGNATURE IN RED INK OR THE DRAWING IS AN UNAUTHORIZED REPRODUCTION WHICH MAY HAVE BEEN ALTERED OR CHANGED WITHOUT THE SURVEYOR'S KNOWLEDGE.</p> <p>THIS ORIGINAL WORK IS PROTECTED UNDER COPYRIGHT LAWS, TITLE 17, UNITED STATES CODE SECTIONS 101 AND 102. ALL VIOLATORS WILL BE PROSECUTED TO THE FULLEST EXTENT OF THE LAW.</p>		<p>THIS IS TO CERTIFY THAT I HAVE CONSULTED THE FEDERAL FLOOD HAZARD MAP DATED 3/4/1985 AND FOUND THAT THE PROPERTY DESCRIBED HEREIN IS <input checked="" type="checkbox"/> (OR) IS NOT <input type="checkbox"/> LOCATED IN A "SPECIAL FLOOD HAZARD AREA".</p> <p>ZONE <u>A8</u>, BASE ELEVATION <u>7</u>, PANEL NO. <u>0148C & 0148C</u>, COMMUNITY NO. <u>485452</u>.</p> <p>THIS INFORMATION IS BASED ON SCALING THE LOCATION OF THIS SURVEY ON THE ABOVE REFERENCED MAP AND IS INTENDED TO BE USED TO DETERMINE INSURANCE RATES ONLY, AND NOT TO IDENTIFY SPECIFIC FLOODING CONDITIONS.</p> <p>SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS OR OWNERSHIP OF TITLE EVIDENCE. SURVEYOR DID NOT REVIEW EXCEPTIONS IN SCHEDULE "B" OF THE TITLE COMMITMENT TO DETERMINE WHETHER THEY DO OR DO NOT AFFECT SUBJECT PROPERTY.</p>		<p>5.001 ACRES OF LAND OUT OF A 786.145 ACRE TRACT OUT OF THE J. SMITH SURVEY, A-187, AND BEING OUT OF LOT 22, BLOCK 2, LUCAS RANCH SUBDIVISION, ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 7, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND SAID 786.145 ACRE TRACT BEING DESCRIBED UNDER CLERKS FILE NUMBER 210787, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND A 0.316 ACRE INGRESS/EGRESS EASEMENT OUT OF PART OF SAID LOT 22, AND OUT OF LOT 1, SEA OAKS ADDITION, ACCORDING TO THE PLAT RECORDED IN VOLUME 5, PAGE 44, PLAT RECORDS OF ARANSAS COUNTY, TEXAS.</p>		<p>J. L. BRUNDRETT, JR., A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT CORRECTLY SHOWS A SURVEY ON THE GROUND OF THE FOREGOING PROPERTY AND THAT THERE ARE NO VISIBLE EASEMENTS, ENCROACHMENTS OR PROTRUSIONS EXCEPT AS SHOWN HEREON.</p> <p>J. L. BRUNDRETT, JR. 2133 REGISTERED LAND SURVEYOR</p>	
<p>Griffith & Brundrett Surveying & Engineering, Inc. 411 S. Pearl St., P.O. Box 2322 Rockport, Texas 78381 361-729-6479 361-729-7933 jerryb@gbssurveyor.com www.gbssurveyor.com</p>		<p>DATE: DECEMBER 15, 2014 SCALE: 1" = 60' FILE NAME: 1412158B1 REVISED: DATE:</p>		<p>PREPARED FOR: PORT BAY HUNTING CLUB</p>			

FIELD NOTES

5.001 ACRES

DECEMBER 17, 2014

BEING THE DESCRIPTION OF 5.001 ACRES OF LAND OUT OF LOT 22, BLOCK 2, LUCAS RANCH SUBDIVISION, J. SMITH SURVEY, A-187, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 7, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING OUT OF AN ORIGINAL 786.145 ACRE TRACT, AS DESCRIBED IN A DEED OF RECORD UNDER CLERKS FILE NUMBER 210787, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING PART OF A 231.017 ACRE TRACT AND A 5.0 ACRE TRACT AS DESCRIBED IN A DEED TO PBC WETLANDS, LLC, AND RECORDED UNDER CLERKS FILE NUMBER 296684, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, WITH SAID 5.001 ACRES OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCE, at a 5/8" steel rebar found in the Northerly R.O.W. line of Texas State F.M. Road 1069, and being the Southeast corner of Lot 1, Sea Oaks Addition, according to the plat recorded in Volume 5, Page 44, Plat Records of Aransas County, Texas, and being the Southwest corner of Lot 9, Block 2, of said Lucas Ranch Subdivision; THENCE, North 23°53'11" West, along and with the common boundary line of said Lot 1, Sea Oaks Addition and Lot 9, Block 2, at 350.0 feet pass the Northeast corner of said Lot 1, and continuing along and with the common boundary of Lot 22 and Lot 9, of said Block 2, a total distance of 459.0 feet to a 5/8" steel rebar set for the SOUTHEAST corner and PLACE OF BEGINNING of this survey;

THENCE, South 66°06'49" West, crossing said Lot 22, a distance of 530.64 feet to a 5/8" steel rebar set for the SOUTHWEST corner of this survey;

THENCE, North 23°53'11" West, a distance of 346.31 feet to a 5/8" steel rebar set for the LOWER NORTHWEST corner of this survey;

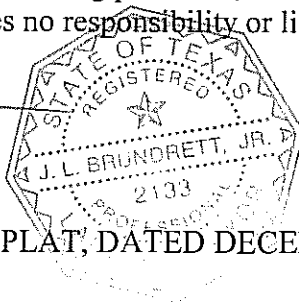
THENCE, North 39°00'57" East, a distance of 145.18 feet to a 5/8" steel rebar set for the UPPER NORTHWEST corner of this survey;

THENCE, North 63°48'29" East, a distance of 401.72 feet to a fence corner post found in the common boundary line of said Lots 9 and 22, and being the NORTHEAST corner of this survey;

THENCE, South 23°53'11" East, along and with the common boundary line of said Lots 9 and 22, a distance of 428.60 feet to the PLACE OF BEGINNING of this survey and containing 5.001 acres of land more or less.

Unless this Field Note description, including preamble, seal and signature, appears in its entirety, in its original form, surveyor assumes no responsibility or liability for its accuracy.

J.L. Brundrett, JR., R. P. L. S.
Reg. No. 2133



SEE ACCOMPANYING SURVEY PLAT, DATED DECEMBER 15, 2014
FILENAME: 141215BB1

141217bb1fn

FIELD NOTES

0.316 ACRE INGRESS/EGRESS EASEMENT

DECEMBER 17, 2014

BEING THE DESCRIPTION OF A 0.316 ACRE INGRESS/EGRESS EASEMENT OUT OF LOT 1, SEA OAKS ADDITION, J. SMITH SURVEY, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 5, PAGE 44, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND A PORTION OF LOT 22, BLOCK 2, LUCAS RANCH SUBDIVISION, J. SMITH SURVEY, A-187, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 7, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING OUT OF AN ORIGINAL 786.145 ACRE TRACT, AS DESCRIBED IN A DEED OF RECORD UNDER CLERKS FILE NUMBER 210787, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING PART OF A 231.017 ACRE TRACT AND A 5.0 ACRE TRACT AS DESCRIBED IN A DEED TO PBC WETLANDS, LLC, AND RECORDED UNDER CLERKS FILE NUMBER 296684, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING A PORTION OF AN EXISTING 30.0 FOOT WIDE INGRESS/EGRESS EASEMENT AS DESCRIBED UNDER CLERKS FILE NUMBER 288780, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, WITH SAID 0.316 ACRES OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGIN, at a 5/8" steel rebar found in the Northerly R.O.W. line of Texas State F.M. Road 1069, and being the Southeast corner of said Lot 1, Sea Oaks Addition, and being the Southwest corner of Lot 9, Block 2, of said Lucas Ranch Subdivision, and being the SOUTHEAST corner and PLACE OF BEGINNING of this survey;

THENCE, North 23°53'11" West, along and with the common boundary line of said Lot 1, Sea Oaks Addition and Lot 9, Block 2, at 350.0 feet pass the Northeast corner of said Lot 1, and continuing along and with the common boundary of Lot 22 and Lot 9, of said Block 2, a total distance of 459.0 feet to a 5/8" steel rebar set for the Southeast corner of a 5.001 acre tract described this date, and being the NORTHEAST corner of this survey;

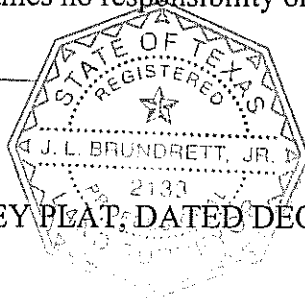
THENCE, South 66°06'49" West, crossing said Lot 22, a distance of 30.0 feet to a 5/8" steel rebar set for the NORTHWEST corner of this survey;

THENCE, South 23°53'11" East, along a line parallel and 10.0 feet West of the common boundary line of said Lot 1, a distance of 459.0 feet to a 5/8" steel rebar set in the Northerly R.O.W. line of said Texas State F.M. Road 1069, and being the SOUTHWEST corner of this survey;

THENCE, North 66°06'49" East, along and with the Northerly R.O.W. line of said Texas State F.M. Road 1069, a distance of 300 feet to the PLACE OF BEGINNING of this survey and containing 0.316 acres of land more or less.

Unless this Field Note description, including preamble, seal and signature, appears in its entirety, in its original form, surveyor assumes no responsibility or liability for its accuracy.

J.L. Brundrett, JR., R. P. L. S.
Reg. No. 2133



SEE ACCOMPANYING SURVEY PLAT DATED DECEMBER 15, 2014
FILENAME: 141215BB1

141217bb1fn

Exhibit F
to
Conservation Easement Agreement

Surface Use Agreement

[TO BE PROVIDED]

**DRILL SITE LOCATION AGREEMENT
AND ROAD EASEMENT DESIGNATION**

STATE OF TEXAS

§

COUNTY OF ARANSAS

§

§

THIS DRILL SITE LOCATION AGREEMENT AND ROAD EASEMENT DESIGNATION ("Agreement") by and among the undersigned owners and holders of the surface of and the minerals in and under 449.317 acres of land, more or less, out of the J. Smith Survey, A-187, Aransas County, Texas, being the same lands more particularly described in that certain Special Warranty Deed with Vendor's Lien recorded as Document No. 296684 in the Official Public Records of Aransas County, Texas (said 449.317 acres being described hereinafter as the "Historical Marsh"), is to be made effective as of the _____ day of _____, 2015 (the "Effective Date"), subject to the following terms and conditions:

RECITALS

A. PBC Wetlands, LLC, a Texas limited liability company, hereinafter referred to as "PBCW", the owner of the surface of the Historical Marsh, plans to include all or a portion of the Historical Marsh in one or more wetland Mitigation Banks and create one or more corresponding Conservation Easements, hereinafter referred to as "CE", whether one or more, that would restrict the surface use of those lands included in the Mitigation Banks from use of the surface for drill site well locations, facilities or other related surface use improvements by the oil and gas industry that may be detrimental to the CE.

B. To the extent of the Mitigation Banks described in Exhibit A attached hereto and incorporated herein for all purposes, PBCW has requested that the undersigned owners of the mineral estate in and under the Historical Marsh limit all surface operations incidental to exploring and drilling for, producing, developing, treating, storing and marketing oil, gas and other minerals attributable to the said Mitigation Banks to an area of not more than five (5) acres (in as near the shape of a square or rectangle as is practicable), as more fully described in Exhibit B attached hereto and incorporated herein for all purposes (the "Drilling Location").

C. The undersigned party or parties, hereinafter referred to as the "Mineral Owner," whether one or more, is the owner and holder of a mineral and/or royalty interest in and to the Historical Marsh.

D. PBCW has requested that the undersigned Mineral Owner waive and relinquish all rights of surface use with respect to the Mitigation Banks (the "Waived Property") and said Mineral Owner is willing to do so, subject to the terms set forth in this Agreement and any other valid matter of record affecting the Waived Property or apparent on the surface.

NOW THEREFORE, in consideration of the premises and other good and valuable consideration, the legal sufficiency of which is hereby acknowledged, PBCW and the undersigned Mineral Owner (collectively, the "Parties") COVENANT AND AGREE as follows:

1. **Drilling Location.** The Parties hereby agree that, subject to the rights of third persons under any presently valid and subsisting mineral leases and all other valid matters of record, or apparent on the surface, all operations on the Waived Property relating to the exploration for, and development and production of, oil, gas and other minerals therefrom shall be limited to the Drilling Location and the Road Easement (defined hereinbelow), only.
2. **Road Easement.** PBCW hereby designates a roadway easement over and across the Historic Marsh and/or PBCW's adjacent surface property for ingress and egress in and to the Drilling Location along a route also as described in the attached **Exhibit B** (the "Road Easement").
3. **Waiver of Rights of Surface Use.** The undersigned mineral owners hereby waive and relinquish all rights of ingress and egress in and over the Waived Property, including, but not limited to, the right to install on the surface of the Waived Property any surface or subsurface fixtures, equipment, facilities and other appurtenances for the purposes of exploring and drilling for, producing, transporting, and marketing oil, gas, and other minerals from the Waived Property; provided, however, that this waiver shall not be construed to limit directional or horizontal drilling under the Waived Property from well sites located on the Drilling Location, or other lands; provided further, however, that no penetration of the subsurface of the Waived Property for drilling purposes shall be made at a depth which is less than two hundred (200) feet below ground level thereof.
4. **Binding Effect/Covenants Running with the Property.** This Agreement shall be binding upon and shall inure to the benefit of each of the Parties hereto and their respective heirs, personal representatives, successors, and assigns. Without limiting the foregoing, the terms of this Agreement shall be covenants running with the land and binding upon the Parties and any person or entity acquiring or succeeding to their respective rights in the surface or mineral estate of the Historical Marsh and shall inure to the benefit of and be directly enforceable by PBCW and all future owners of all or any portion of the surface estate of the Historical Marsh, including, but not limited to, the owners and holders of any CE granted by PBCW, its successors and assigns.
5. **Choice of Law.** THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS, WITHOUT REGARD TO ANY CONFLICT OF LAWS OR PRINCIPLES THAT MIGHT OTHERWISE DIRECT APPLICATION OF THE LAWS OF ANOTHER FORUM, AND THE EXCLUSIVE VENUE SHALL BE IN THE DISTRICT COURT OF ARANSAS COUNTY.
6. **Counterpart Execution.** This Agreement is executed and delivered in multiple counterparts, each of which shall constitute an original, and the execution and delivery of any one of such counterparts by any signatory shall be binding upon such signatory and shall have the same force and effect as if the same counterpart were executed and delivered by all of the signatories.

[Signature Page Follows]

1. **Drilling Location.** The Parties hereby agree that, subject to the rights of third persons under any presently valid and subsisting mineral leases and all other valid matters of record, or apparent on the surface, all operations on the Waived Property relating to the exploration for, and development and production of, oil, gas and other minerals therefrom shall be limited to the Drilling Location and the Road Easement (defined hereinbelow), only.
2. **Road Easement.** PBCW hereby designates a roadway easement over and across the Historic Marsh and/or PBCW's adjacent surface property for ingress and egress in and to the Drilling Location along a route also as described in the attached **Exhibit B** (the "Road Easement").
3. **Waiver of Rights of Surface Use.** The undersigned mineral owners hereby waive and relinquish all rights of ingress and egress in and over the Waived Property, including, but not limited to, the right to install on the surface of the Waived Property any surface or subsurface fixtures, equipment, facilities and other appurtenances for the purposes of exploring and drilling for, producing, transporting, and marketing oil, gas, and other minerals from the Waived Property; provided, however, that this waiver shall not be construed to limit directional or horizontal drilling under the Waived Property from well sites located on the Drilling Location, or other lands; provided further, however, that no penetration of the subsurface of the Waived Property for drilling purposes shall be made at a depth which is less than two hundred (200) feet below ground level thereof.
4. **Binding Effect/Covenants Running with the Property.** This Agreement shall be binding upon and shall inure to the benefit of each of the Parties hereto and their respective heirs, personal representatives, successors, and assigns. Without limiting the foregoing, the terms of this Agreement shall be covenants running with the land and binding upon the Parties and any person or entity acquiring or succeeding to their respective rights in the surface or mineral estate of the Historical Marsh and shall inure to the benefit of and be directly enforceable by PBCW and all future owners of all or any portion of the surface estate of the Historical Marsh, including, but not limited to, the owners and holders of any CE granted by PBCW, its successors and assigns.
5. **Choice of Law.** THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS, WITHOUT REGARD TO ANY CONFLICT OF LAWS OR PRINCIPLES THAT MIGHT OTHERWISE DIRECT APPLICATION OF THE LAWS OF ANOTHER FORUM, AND THE EXCLUSIVE VENUE SHALL BE IN THE DISTRICT COURT OF ARANSAS COUNTY.
6. **Counterpart Execution.** This Agreement is executed and delivered in multiple counterparts, each of which shall constitute an original, and the execution and delivery of any one of such counterparts by any signatory shall be binding upon such signatory and shall have the same force and effect as if the same counterpart were executed and delivered by all of the signatories.

[Signature Page Follows]

EXECUTED to be effective as of the Effective Date.

MINERAL OWNER:

PBCW

By: Kathryn Picton
Name: KATHRYN PICTON
Title: OWNER

By: Edward M. Duvall
Name: Edward M. Duvall
Title: President

ACKNOWLEDGEMENTS

THE STATE OF TEXAS §

COUNTY OF ARANSAS §

This instrument was acknowledged before me this 12th day of November, 2015, by
KATHRYN PICTON.

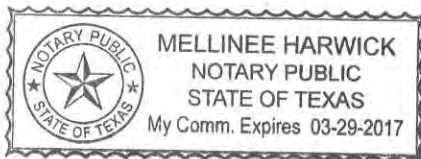


Mellinee Harwick
Notary Public, State of Texas

THE STATE OF TEXAS §

COUNTY OF BEXAR §

This instrument was acknowledged before me this 12th day of November, 2015, by
EDWARD M. DUVALL, as PRESIDENT of PBC
Wetlands, LLC, a Texas limited liability company, on behalf of said company.



Mellinee Harwick
Notary Public, State of Texas

**DRILL SITE LOCATION AGREEMENT
AND ROAD EASEMENT DESIGNATION**

STATE OF TEXAS

§

§

COUNTY OF ARANSAS

§

THIS DRILL SITE LOCATION AGREEMENT AND ROAD EASEMENT DESIGNATION ("Agreement") by and among the undersigned owners and holders of the surface of and the minerals in and under 449.317 acres of land, more or less, out of the J. Smith Survey, A-187, Aransas County, Texas, being the same lands more particularly described in that certain Special Warranty Deed with Vendor's Lien recorded as Document No. 296684 in the Official Public Records of Aransas County, Texas (said 449.317 acres being described hereinafter as the "Historical Marsh"), is to be made effective as of the 12 day of November, 2015 (the "Effective Date"), subject to the following terms and conditions:

RECITALS

A. PBC Wetlands, LLC, a Texas limited liability company, hereinafter referred to as "PBCW", the owner of the surface of the Historical Marsh, plans to include all or a portion of the Historical Marsh in one or more wetland Mitigation Banks and create one or more corresponding Conservation Easements, hereinafter referred to as "CE", whether one or more, that would restrict the surface use of those lands included in the Mitigation Banks from use of the surface for drill site well locations, facilities or other related surface use improvements by the oil and gas industry that may be detrimental to the CE.

B. To the extent of the Mitigation Banks described in Exhibit A attached hereto and incorporated herein for all purposes, PBCW has requested that the undersigned owners of the mineral estate in and under the Historical Marsh limit all surface operations incidental to exploring and drilling for, producing, developing, treating, storing and marketing oil, gas and other minerals attributable to the said Mitigation Banks to an area of not more than five (5) acres (in as near the shape of a square or rectangle as is practicable), as more fully described in Exhibit B attached hereto and incorporated herein for all purposes (the "Drilling Location").

C. The undersigned party or parties, hereinafter referred to as the "Mineral Owner," whether one or more, is the owner and holder of a mineral and/or royalty interest in and to the Historical Marsh.

D. PBCW has requested that the undersigned Mineral Owner waive and relinquish all rights of surface use with respect to the Mitigation Banks (the "Waived Property") and said Mineral Owner is willing to do so, subject to the terms set forth in this Agreement and any other valid matter of record affecting the Waived Property or apparent on the surface.

NOW THEREFORE, in consideration of the premises and other good and valuable consideration, the legal sufficiency of which is hereby acknowledged, PBCW and the undersigned Mineral Owner (collectively, the "Parties") COVENANT AND AGREE as follows:

1. **Drilling Location.** The Parties hereby agree that, subject to the rights of third persons under any presently valid and subsisting mineral leases and all other valid matters of record, or apparent on the surface, all operations on the Waived Property relating to the exploration for, and development and production of, oil, gas and other minerals therefrom shall be limited to the Drilling Location and the Road Easement (defined hereinbelow), only.
2. **Road Easement.** PBCW hereby designates a roadway easement over and across the Historic Marsh and/or PBCW's adjacent surface property for ingress and egress in and to the Drilling Location along a route also as described in the attached **Exhibit B** (the "Road Easement").
3. **Waiver of Rights of Surface Use.** The undersigned mineral owners hereby waive and relinquish all rights of ingress and egress in and over the Waived Property, including, but not limited to, the right to install on the surface of the Waived Property any surface or subsurface fixtures, equipment, facilities and other appurtenances for the purposes of exploring and drilling for, producing, transporting, and marketing oil, gas, and other minerals from the Waived Property; provided, however, that this waiver shall not be construed to limit directional or horizontal drilling under the Waived Property from well sites located on the Drilling Location, or other lands; provided further, however, that no penetration of the subsurface of the Waived Property for drilling purposes shall be made at a depth which is less than two hundred (200) feet below ground level thereof.
4. **Binding Effect/Covenants Running with the Property.** This Agreement shall be binding upon and shall inure to the benefit of each of the Parties hereto and their respective heirs, personal representatives, successors, and assigns. Without limiting the foregoing, the terms of this Agreement shall be covenants running with the land and binding upon the Parties and any person or entity acquiring or succeeding to their respective rights in the surface or mineral estate of the Historical Marsh and shall inure to the benefit of and be directly enforceable by PBCW and all future owners of all or any portion of the surface estate of the Historical Marsh, including, but not limited to, the owners and holders of any CE granted by PBCW, its successors and assigns.
5. **Choice of Law.** THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS, WITHOUT REGARD TO ANY CONFLICT OF LAWS OR PRINCIPLES THAT MIGHT OTHERWISE DIRECT APPLICATION OF THE LAWS OF ANOTHER FORUM, AND THE EXCLUSIVE VENUE SHALL BE IN THE DISTRICT COURT OF ARANSAS COUNTY.
6. **Counterpart Execution.** This Agreement is executed and delivered in multiple counterparts, each of which shall constitute an original, and the execution and delivery of any one of such counterparts by any signatory shall be binding upon such signatory and shall have the same force and effect as if the same counterpart were executed and delivered by all of the signatories.

[Signature Page Follows]

EXECUTED to be effective as of the Effective Date.

MINERAL OWNER:

PBCW

By: Patricia Wendell Barker
Name: Patricia Wendell Barker
Title: owner

By: Edward M. Duvall
Name: Edward M. Duvall
Title: President

ACKNOWLEDGEMENTS

THE STATE OF TEXAS §

COUNTY OF ARANSAS §

This instrument was acknowledged before me this 12th day of November, 2015, by
PATRICIA WENDELL BARKER

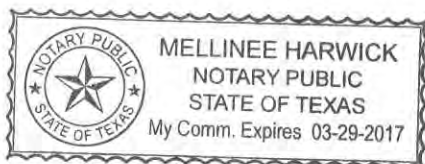


Mellinee Harwick
Notary Public, State of Texas

THE STATE OF TEXAS §

Aransas
COUNTY OF ~~BEXAR~~ §

This instrument was acknowledged before me this 12th day of November, 2015, by
EDWARD M. DUVALL, as PRESIDENT of PBC
Wetlands, LLC, a Texas limited liability company, on behalf of said company.



Mellinee Harwick
Notary Public, State of Texas

**DRILL SITE LOCATION AGREEMENT
AND ROAD EASEMENT DESIGNATION**

STATE OF TEXAS

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COUNTY OF ARANSAS

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THIS DRILL SITE LOCATION AGREEMENT AND ROAD EASEMENT DESIGNATION ("Agreement") by and among the undersigned owners and holders of the surface of and the minerals in and under 449.317 acres of land, more or less, out of the J. Smith Survey, A-187, Aransas County, Texas, being the same lands more particularly described in that certain Special Warranty Deed with Vendor's Lien recorded as Document No. 296684 in the Official Public Records of Aransas County, Texas (said 449.317 acres being described hereinafter as the "Historical Marsh"), is to be made effective as of the 22 day of October, 2015 (the "Effective Date"), subject to the following terms and conditions:

RECITALS

A. PBC Wetlands, LLC, a Texas limited liability company, hereinafter referred to as "PBCW", the owner of the surface of the Historical Marsh, plans to include all or a portion of the Historical Marsh in one or more wetland Mitigation Banks and create one or more corresponding Conservation Easements, hereinafter referred to as "CE", whether one or more, that would restrict the surface use of those lands included in the Mitigation Banks from use of the surface for drill site well locations, facilities or other related surface use improvements by the oil and gas industry that may be detrimental to the CE.

B. To the extent of the Mitigation Banks described in **Exhibit A** attached hereto and incorporated herein for all purposes, PBCW has requested that the undersigned owners of the mineral estate in and under the Historical Marsh limit all surface operations incidental to exploring and drilling for, producing, developing, treating, storing and marketing oil, gas and other minerals attributable to the said Mitigation Banks to an area of not more than five (5) acres (in as near the shape of a square or rectangle as is practicable), as more fully described in **Exhibit B** attached hereto and incorporated herein for all purposes (the "Drilling Location").

C. The undersigned party or parties, hereinafter referred to as the "Mineral Owner," whether one or more, is the owner and holder of a mineral and/or royalty interest in and to the Historical Marsh.

D. PBCW has requested that the undersigned Mineral Owner waive and relinquish all rights of surface use with respect to the Mitigation Banks (the "Waived Property") and said Mineral Owner is willing to do so, subject to the terms set forth in this Agreement and any other valid matter of record affecting the Waived Property or apparent on the surface.

NOW THEREFORE, in consideration of the premises and other good and valuable consideration, the legal sufficiency of which is hereby acknowledged, PBCW and the undersigned Mineral Owner (collectively, the "Parties") COVENANT AND AGREE as follows:

1. **Drilling Location.** The Parties hereby agree that, subject to the rights of third persons under any presently valid and subsisting mineral leases and all other valid matters of record, or apparent on the surface, all operations on the Waived Property relating to the exploration for, and development and production of, oil, gas and other minerals therefrom shall be limited to the Drilling Location and the Road Easement (defined hereinbelow), only.
2. **Road Easement.** PBCW hereby designates a roadway easement over and across the Historic Marsh and/or PBCW's adjacent surface property for ingress and egress in and to the Drilling Location along a route also as described in the attached **Exhibit B** (the "Road Easement").
3. **Waiver of Rights of Surface Use.** The undersigned mineral owners hereby waive and relinquish all rights of ingress and egress in and over the Waived Property, including, but not limited to, the right to install on the surface of the Waived Property any surface or subsurface fixtures, equipment, facilities and other appurtenances for the purposes of exploring and drilling for, producing, transporting, and marketing oil, gas, and other minerals from the Waived Property; provided, however, that this waiver shall not be construed to limit directional or horizontal drilling under the Waived Property from well sites located on the Drilling Location, or other lands; provided further, however, that no penetration of the subsurface of the Waived Property for drilling purposes shall be made at a depth which is less than two hundred (200) feet below ground level thereof.
4. **Binding Effect/Covenants Running with the Property.** This Agreement shall be binding upon and shall inure to the benefit of each of the Parties hereto and their respective heirs, personal representatives, successors, and assigns. Without limiting the foregoing, the terms of this Agreement shall be covenants running with the land and binding upon the Parties and any person or entity acquiring or succeeding to their respective rights in the surface or mineral estate of the Historical Marsh and shall inure to the benefit of and be directly enforceable by PBCW and all future owners of all or any portion of the surface estate of the Historical Marsh, including, but not limited to, the owners and holders of any CE granted by PBCW, its successors and assigns.
5. **Choice of Law.** THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS, WITHOUT REGARD TO ANY CONFLICT OF LAWS OR PRINCIPLES THAT MIGHT OTHERWISE DIRECT APPLICATION OF THE LAWS OF ANOTHER FORUM, AND THE EXCLUSIVE VENUE SHALL BE IN THE DISTRICT COURT OF ARANSAS COUNTY.
6. **Counterpart Execution.** This Agreement is executed and delivered in multiple counterparts, each of which shall constitute an original, and the execution and delivery of any one of such counterparts by any signatory shall be binding upon such signatory and shall have the same force and effect as if the same counterpart were executed and delivered by all of the signatories.

[Signature Page Follows]

EXECUTED to be effective as of the Effective Date.

MINERAL OWNER:

PBCW

By:

Name:

Title:

By:

Name:

Title:

Reginald Wendell
REGINALD WENDELL

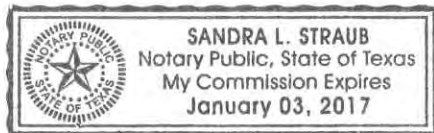
Edward M. Duvall
Edward M. Duvall
President

ACKNOWLEDGEMENTS

THE STATE OF TEXAS §

Fort Bend
COUNTY OF ~~ARANSAS~~ §

This instrument was acknowledged before me this 22 day of October, 2015, by
REGINALD WENDELL

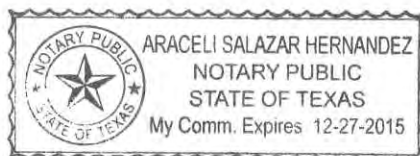


Sandra L. Straub
Notary Public, State of Texas

THE STATE OF TEXAS §

Fort Bend
COUNTY OF ~~BEXAR~~ §

This instrument was acknowledged before me this 7 day of December, 2015, by
Edward M. Duvall, as President of PBC
Wetlands, LLC, a Texas limited liability company, on behalf of said company.



Araceli S. Hernandez
Notary Public, State of Texas

A-1

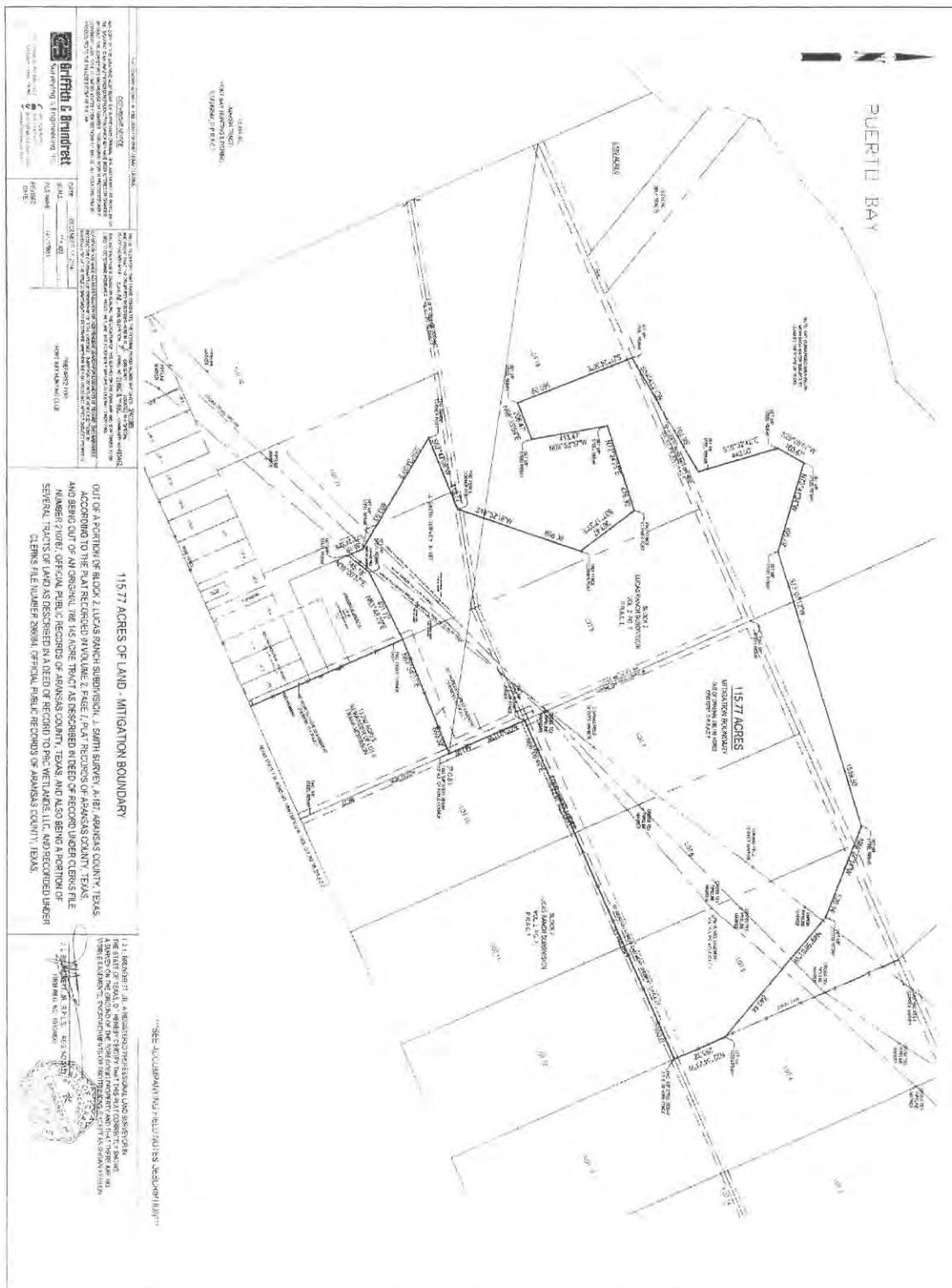


EXHIBIT A

BEING THE DESCRIPTION OF 115.77 ACRES OF LAND OUT OF BLOCK 2, LUCAS RANCH SUBDIVISION, J. SMITH SURVEY, A-187, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 7, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING OUT OF AN ORIGINAL 786.145 ACRE TRACT, AS DESCRIBED IN A DEED OF RECORD UNDER CLERKS FILE NUMBER 210787, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING PART OF SEVERAL TRACTS OF LAND AS DESCRIBED IN A DEED TO PBC WETLANDS, LLC, AND RECORDED UNDER CLERKS FILE NUMBER 296684, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, WITH SAID 115.77 ACRES OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCE, at a 5/8" found in the Northerly R.O.W. line of Texas State F.M. Road 1069, and being the common corner of Lots 9 and 10, of said Block 2; THENCE, North 23°52'58" West, along and with the common boundary line of said Lots 9 and 10, a distance of 866.77 feet to a 5/8" steel rebar found for an Exterior corner of a 231.017 acre tract out of said 786.145 acre tract, as described as Tract One, in said deed to PBC Wetlands, LLC, and being the SOUTHEAST corner and PLACE OF BEGINNING of this survey;

THENCE, North 23°53'11" West, along and with the common boundary line of said Lots 9 and 10, a distance of 443.06 feet to a 5/8" steel rebar found for the common corner of Lots 7, 8, 9 and 10, of said Block 2, and being an INTERIOR corner of this survey;

THENCE, North 66°06'49" East, along and with the common boundary lines of Lots 5, 6, 7, 10, 11 and 12, of said Block 2, a distance of 1980.0 feet to a 5/8" steel rebar found for the common corner of Lots 4, 5, 12, and 13, of said Block 2, and being an EXTERIOR corner of this survey;

THENCE, North 22°54'23" West, a distance of 293.32 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, North 49°56'03" West, a distance of 840.44 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, North 68°27'11" West, a distance of 526.14 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 73°07'12" West, a distance of 1539.80 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

THENCE, North 73°41'34" West, a distance of 495.79 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 29°08'07" West, a distance of 160.67 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 16°32'42" East, a distance of 443.0 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

THENCE, South 59°41'21" West, a distance of 702.95 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 21°24'36" East, a distance of 660.09 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

EXHIBIT A

THENCE, North 68°35'59" East, a distance of 206.47 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, North 09°53'37" West, a distance of 413.47 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

THENCE, North 72°24'25" East, a distance of 476.30 feet to a fence corner post found for an INTERIOR corner of this survey;

THENCE, South 37°17'33" East, a distance of 363.47 feet to a fence corner post found for an INTERIOR corner of this survey;

THENCE, South 18°52'18" West, a distance of 696.36 feet to a fence corner post found for an INTERIOR corner of this survey;

THENCE, South 67°47'08" West, a distance of 413.77 feet to a fence corner post found for an EXTERIOR corner of this survey;

THENCE, South 59°34'09" East, a distance of 693.93 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

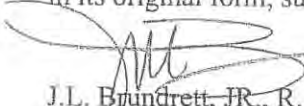
THENCE, South 23°24'33" East, a distance of 85.19 feet to a 5/8" steel rebar set for the Lower Northwest corner of a 5.001 acre tract described this date, and being an EXTERIOR corner of this survey;

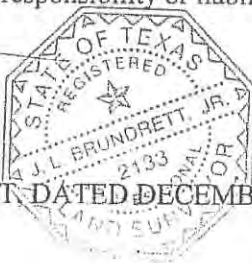
THENCE, North 39°00'57" East, a distance of 145.18 feet to a 5/8" steel rebar set for the Upper Northwest corner of said 5.001 acre tract, and being an INTERIOR corner of this survey;

THENCE, North 63°48'29" East, a distance of 401.72 feet to a fence corner post found for the Northeast corner of said 5.001 acre tract, and being an INTERIOR corner of this survey;

THENCE, North 67°54'23" East, a distance of 660.32 feet to the PLACE OF BEGINNING of this survey and containing 115.77 acres of land more or less.

Unless this Field Note description, including preamble, seal and signature, appears in its entirety, in its original form, surveyor assumes no responsibility or liability for its accuracy.


J.L. Brundrett, JR., R. P. L. S.
Reg. No. 2133



SEE ACCOMPANYING SURVEY PLAT DATED DECEMBER 17, 2014
FILENAME: 141217BB1

EXHIBIT B

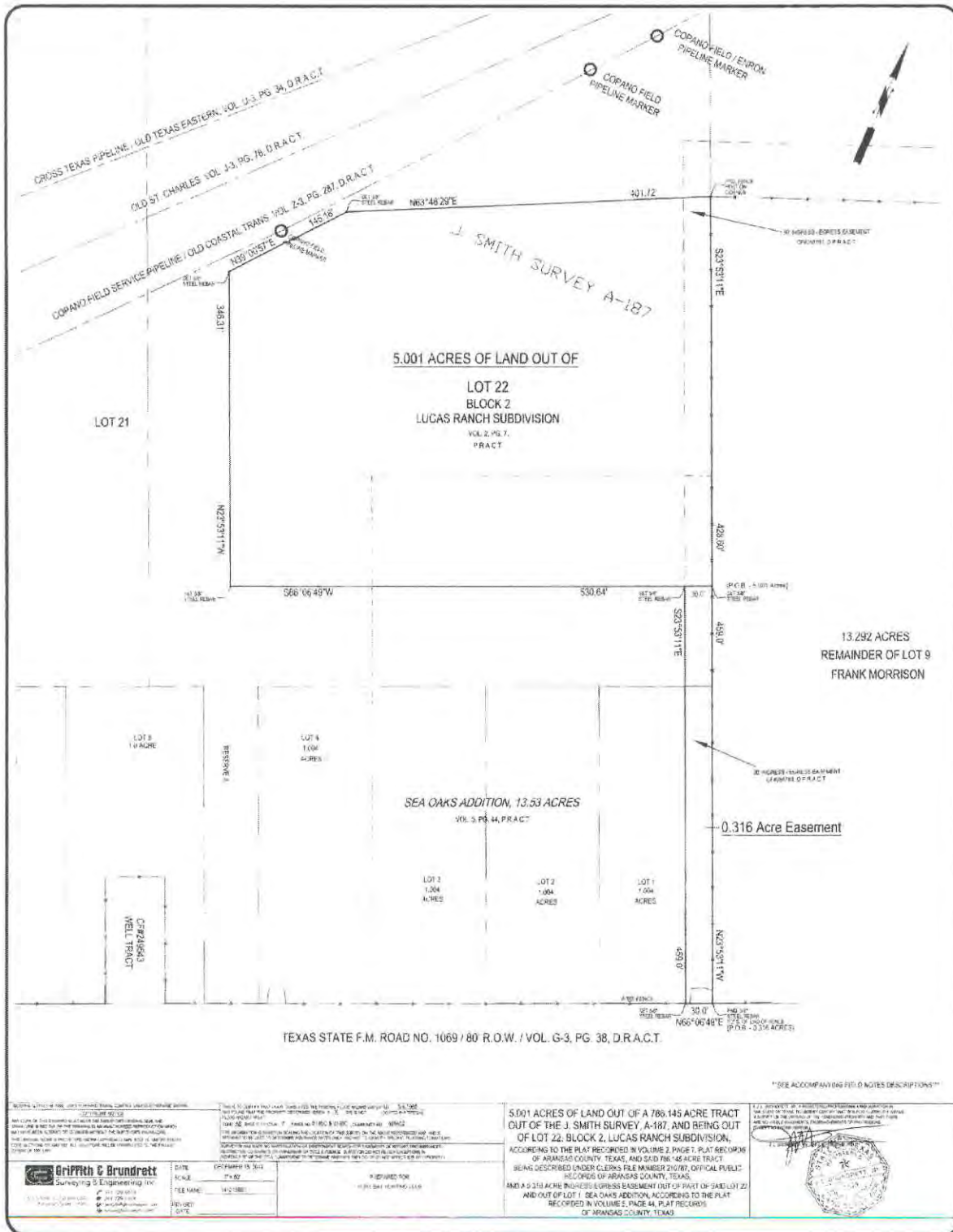


EXHIBIT B

BEING THE DESCRIPTION OF 5.001 ACRES OF LAND OUT OF LOT 22, BLOCK 2, LUCAS RANCH SUBDIVISION, J. SMITH SURVEY, A-187, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 7, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING OUT OF AN ORIGINAL 786.145 ACRE TRACT, AS DESCRIBED IN A DEED OF RECORD UNDER CLERKS FILE NUMBER 210787, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING PART OF A 231.017 ACRE TRACT AND A 5.0 ACRE TRACT AS DESCRIBED IN A DEED TO PBC WETLANDS, LLC, AND RECORDED UNDER CLERKS FILE NUMBER 296684, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, WITH SAID 5.001 ACRES OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCE, at a 5/8" steel rebar found in the Northerly R.O.W. line of Texas State F.M. Road 1069, and being the Southeast corner of Lot 1, Sea Oaks Addition, according to the plat recorded in Volume 5, Page 44, Plat Records of Aransas County, Texas, and being the Southwest corner of Lot 9, Block 2, of said Lucas Ranch Subdivision; THENCE, North 23°53'11" West, along and with the common boundary line of said Lot 1, Sea Oaks Addition and Lot 9, Block 2, at 350.0 feet pass the Northeast corner of said Lot 1, and continuing along and with the common boundary of Lot 22 and Lot 9, of said Block 2, a total distance of 459.0 feet to a 5/8" steel rebar set for the SOUTHEAST corner and PLACE OF BEGINNING of this survey;

THENCE, South 66°06'49" West, crossing said Lot 22, a distance of 530.64 feet to a 5/8" steel rebar set for the SOUTHWEST corner of this survey;

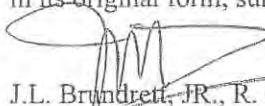
THENCE, North 23°53'11" West, a distance of 346.31 feet to a 5/8" steel rebar set for the LOWER NORTHWEST corner of this survey;

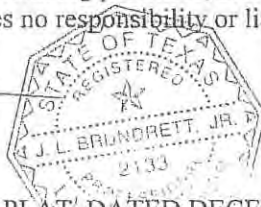
THENCE, North 39°00'57" East, a distance of 145.18 feet to a 5/8" steel rebar set for the UPPER NORTHWEST corner of this survey;

THENCE, North 63°48'29" East, a distance of 401.72 feet to a fence corner post found in the common boundary line of said Lots 9 and 22, and being the NORTHEAST corner of this survey;

THENCE, South 23°53'11" East, along and with the common boundary line of said Lots 9 and 22, a distance of 428.60 feet to the PLACE OF BEGINNING of this survey and containing 5.001 acres of land more or less.

Unless this Field Note description, including preamble, seal and signature, appears in its entirety, in its original form, surveyor assumes no responsibility or liability for its accuracy.


J.L. Brundrett, Jr., R. P. L. S.
Reg. No. 2133



SEE ACCOMPANYING SURVEY PLAT, DATED DECEMBER 15, 2014
FILENAME: 141215BB1

EXHIBIT B

BEING THE DESCRIPTION OF 5.001 ACRES OF LAND OUT OF LOT 22, BLOCK 2, LUCAS RANCH SUBDIVISION, J. SMITH SURVEY, A-187, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 7, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING OUT OF AN ORIGINAL 786.145 ACRE TRACT, AS DESCRIBED IN A DEED OF RECORD UNDER CLERKS FILE NUMBER 210787, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING PART OF A 231.017 ACRE TRACT AND A 5.0 ACRE TRACT AS DESCRIBED IN A DEED TO PBC WETLANDS, LLC, AND RECORDED UNDER CLERKS FILE NUMBER 296684, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, WITH SAID 5.001 ACRES OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCE, at a 5/8" steel rebar found in the Northerly R.O.W. line of Texas State F.M. Road 1069, and being the Southeast corner of Lot 1, Sea Oaks Addition, according to the plat recorded in Volume 5, Page 44, Plat Records of Aransas County, Texas, and being the Southwest corner of Lot 9, Block 2, of said Lucas Ranch Subdivision; THENCE, North 23°53'11" West, along and with the common boundary line of said Lot 1, Sea Oaks Addition and Lot 9, Block 2, at 350.0 feet pass the Northeast corner of said Lot 1, and continuing along and with the common boundary of Lot 22 and Lot 9, of said Block 2, a total distance of 459.0 feet to a 5/8" steel rebar set for the SOUTHEAST corner and PLACE OF BEGINNING of this survey;

THENCE, South 66°06'49" West, crossing said Lot 22, a distance of 530.64 feet to a 5/8" steel rebar set for the SOUTHWEST corner of this survey;

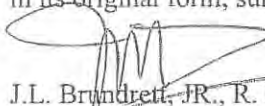
THENCE, North 23°53'11" West, a distance of 346.31 feet to a 5/8" steel rebar set for the LOWER NORTHWEST corner of this survey;

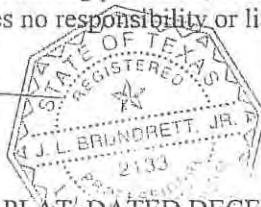
THENCE, North 39°00'57" East, a distance of 145.18 feet to a 5/8" steel rebar set for the UPPER NORTHWEST corner of this survey;

THENCE, North 63°48'29" East, a distance of 401.72 feet to a fence corner post found in the common boundary line of said Lots 9 and 22, and being the NORTHEAST corner of this survey;

THENCE, South 23°53'11" East, along and with the common boundary line of said Lots 9 and 22, a distance of 428.60 feet to the PLACE OF BEGINNING of this survey and containing 5.001 acres of land more or less.

Unless this Field Note description, including preamble, seal and signature, appears in its entirety, in its original form, surveyor assumes no responsibility or liability for its accuracy.


J.L. Brundrett, Jr., R. P. L. S.
Reg. No. 2133



SEE ACCOMPANYING SURVEY PLAT, DATED DECEMBER 15, 2014
FILENAME: 141215BB1

EXHIBIT B

BEING THE DESCRIPTION OF A 0.316 ACRE INGRESS/EGRESS EASEMENT OUT OF LOT 1, SEA OAKS ADDITION, J. SMITH SURVEY, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 5, PAGE 44, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND A PORTION OF LOT 22, BLOCK 2, LUCAS RANCH SUBDIVISION, J. SMITH SURVEY, A-187, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 7, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING OUT OF AN ORIGINAL 786.145 ACRE TRACT, AS DESCRIBED IN A DEED OF RECORD UNDER CLERKS FILE NUMBER 210787, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING PART OF A 231.017 ACRE TRACT AND A 5.0 ACRE TRACT AS DESCRIBED IN A DEED TO PBC WETLANDS, LLC, AND RECORDED UNDER CLERKS FILE NUMBER 296684, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING A PORTION OF AN EXISTING 30.0 FOOT WIDE INGRESS/EGRESS EASEMENT AS DESCRIBED UNDER CLERKS FILE NUMBER 288780, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, WITH SAID 0.316 ACRES OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGIN, at a 5/8" steel rebar found in the Northerly R.O.W. line of Texas State F.M. Road 1069, and being the Southeast corner of said Lot 1, Sea Oaks Addition, and being the Southwest corner of Lot 9, Block 2, of said Lucas Ranch Subdivision, and being the SOUTHEAST corner and PLACE OF BEGINNING of this survey;

THENCE, North 23°53'11" West, along and with the common boundary line of said Lot 1, Sea Oaks Addition and Lot 9, Block 2, at 350.0 feet pass the Northeast corner of said Lot 1, and continuing along and with the common boundary of Lot 22 and Lot 9, of said Block 2, a total distance of 459.0 feet to a 5/8" steel rebar set for the Southeast corner of a 5.001 acre tract described this date, and being the NORTHEAST corner of this survey;

THENCE, South 66°06'49" West, crossing said Lot 22, a distance of 30.0 feet to a 5/8" steel rebar set for the NORTHWEST corner of this survey;

THENCE, South 23°53'11" East, along a line parallel and 10.0 feet West of the common boundary line of said Lot 1, a distance of 459.0 feet to a 5/8" steel rebar set in the Northerly R.O.W. line of said Texas State F.M. Road 1069, and being the SOUTHWEST corner of this survey;

THENCE, North 66°06'49" East, along and with the Northerly R.O.W. line of said Texas State F.M. Road 1069, a distance of 300 feet to the PLACE OF BEGINNING of this survey and containing 0.316 acres of land more or less.

Unless this Field Note description, including preamble, seal and signature, appears in its entirety, in its original form, surveyor assumes no responsibility or liability for its accuracy.

J.L. Brundrett, JR., R. P. L. S.
Reg. No. 2133



SEE ACCOMPANYING SURVEY PLAT; DATED DECEMBER 15, 2014
FILENAME: 141215BB1

**DRILL SITE LOCATION AGREEMENT
AND ROAD EASEMENT DESIGNATION**

STATE OF TEXAS

§

§

COUNTY OF ARANSAS

§

THIS DRILL SITE LOCATION AGREEMENT AND ROAD EASEMENT DESIGNATION ("Agreement") by and among the undersigned owners and holders of the surface of and the minerals in and under 449.317 acres of land, more or less, out of the J. Smith Survey, A-187, Aransas County, Texas, being the same lands more particularly described in that certain Special Warranty Deed with Vendor's Lien recorded as Document No. 296684 in the Official Public Records of Aransas County, Texas (said 449.317 acres being described hereinafter as the "Historical Marsh"), is to be made effective as of the ____ day of _____, 2015 (the "Effective Date"), subject to the following terms and conditions:

RECITALS

A. PBC Wetlands, LLC, a Texas limited liability company, hereinafter referred to as "PBCW", the owner of the surface of the Historical Marsh, plans to include all or a portion of the Historical Marsh in one or more wetland Mitigation Banks and create one or more corresponding Conservation Easements, hereinafter referred to as "CE", whether one or more, that would restrict the surface use of those lands included in the Mitigation Banks from use of the surface for drill site well locations, facilities or other related surface use improvements by the oil and gas industry that may be detrimental to the CE.

B. To the extent of the Mitigation Banks described in Exhibit A attached hereto and incorporated herein for all purposes, PBCW has requested that the undersigned owners of the mineral estate in and under the Historical Marsh limit all surface operations incidental to exploring and drilling for, producing, developing, treating, storing and marketing oil, gas and other minerals attributable to the said Mitigation Banks to an area of not more than five (5) acres (in as near the shape of a square or rectangle as is practicable), as more fully described in Exhibit B attached hereto and incorporated herein for all purposes (the "Drilling Location").

C. The undersigned party or parties, hereinafter referred to as the "Mineral Owner," whether one or more, is the owner and holder of a mineral and/or royalty interest in and to the Historical Marsh.

D. PBCW has requested that the undersigned Mineral Owner waive and relinquish all rights of surface use with respect to the Mitigation Banks (the "Waived Property") and said Mineral Owner is willing to do so, subject to the terms set forth in this Agreement and any other valid matter of record affecting the Waived Property or apparent on the surface.

NOW THEREFORE, in consideration of the premises and other good and valuable consideration, the legal sufficiency of which is hereby acknowledged, PBCW and the undersigned Mineral Owner (collectively, the "Parties") COVENANT AND AGREE as follows:

1. **Drilling Location.** The Parties hereby agree that, subject to the rights of third persons under any presently valid and subsisting mineral leases and all other valid matters of record, or apparent on the surface, all operations on the Waived Property relating to the exploration for, and development and production of, oil, gas and other minerals therefrom shall be limited to the Drilling Location and the Road Easement (defined hereinbelow), only.
2. **Road Easement.** PBCW hereby designates a roadway easement over and across the Historic Marsh and/or PBCW's adjacent surface property for ingress and egress in and to the Drilling Location along a route also as described in the attached **Exhibit B** (the "Road Easement").
3. **Waiver of Rights of Surface Use.** The undersigned mineral owners hereby waive and relinquish all rights of ingress and egress in and over the Waived Property, including, but not limited to, the right to install on the surface of the Waived Property any surface or subsurface fixtures, equipment, facilities and other appurtenances for the purposes of exploring and drilling for, producing, transporting, and marketing oil, gas, and other minerals from the Waived Property; provided, however, that this waiver shall not be construed to limit directional or horizontal drilling under the Waived Property from well sites located on the Drilling Location, or other lands; provided further, however, that no penetration of the subsurface of the Waived Property for drilling purposes shall be made at a depth which is less than two hundred (200) feet below ground level thereof.
4. **Binding Effect/Covenants Running with the Property.** This Agreement shall be binding upon and shall inure to the benefit of each of the Parties hereto and their respective heirs, personal representatives, successors, and assigns. Without limiting the foregoing, the terms of this Agreement shall be covenants running with the land and binding upon the Parties and any person or entity acquiring or succeeding to their respective rights in the surface or mineral estate of the Historical Marsh and shall inure to the benefit of and be directly enforceable by PBCW and all future owners of all or any portion of the surface estate of the Historical Marsh, including, but not limited to, the owners and holders of any CE granted by PBCW, its successors and assigns.
5. **Choice of Law.** THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS, WITHOUT REGARD TO ANY CONFLICT OF LAWS OR PRINCIPLES THAT MIGHT OTHERWISE DIRECT APPLICATION OF THE LAWS OF ANOTHER FORUM, AND THE EXCLUSIVE VENUE SHALL BE IN THE DISTRICT COURT OF ARANSAS COUNTY.
6. **Counterpart Execution.** This Agreement is executed and delivered in multiple counterparts, each of which shall constitute an original, and the execution and delivery of any one of such counterparts by any signatory shall be binding upon such signatory and shall have the same force and effect as if the same counterpart were executed and delivered by all of the signatories.

[Signature Page Follows]

EXECUTED to be effective as of the Effective Date.

MINERAL OWNER:

PBCW

By: Wilma Littleton
Name: WILMA LITTLETON
Title: OWNER

By: Edward M. Duvall
Name: Edward M. Duvall
Title: President

ACKNOWLEDGEMENTS

THE STATE OF TEXAS §

COUNTY OF ARANSAS §

This instrument was acknowledged before me this 12th day of November, 2015, by
WILMA LITTLETON.

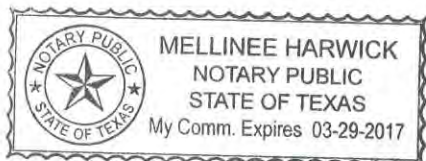


Mellinee Harwick
Notary Public, State of Texas

THE STATE OF TEXAS §

COUNTY OF BEXAR §

This instrument was acknowledged before me this 12th day of November, 2015, by
EDWARD M. DUVALL, as PRESIDENT of PBC
Wetlands, LLC, a Texas limited liability company, on behalf of said company.



Mellinee Harwick
Notary Public, State of Texas

EXECUTED to be effective as of the Effective Date.

MINERAL OWNER:

PBCW

By: Kathryn Picton
Name: KATHRYN PICTON
Title: OWNER

By: Edward M. Duvall
Name: Edward M. Duvall
Title: President

ACKNOWLEDGEMENTS

THE STATE OF TEXAS §

COUNTY OF ARANSAS §

This instrument was acknowledged before me this 12th day of November, 2015, by
KATHRYN PICTON.

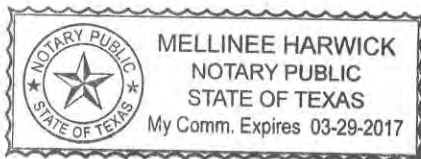


Mellinee Harwick
Notary Public, State of Texas

THE STATE OF TEXAS §

COUNTY OF BEXAR §

This instrument was acknowledged before me this 12th day of November, 2015, by
EDWARD M. DUVALL, as PRESIDENT of PBC
Wetlands, LLC, a Texas limited liability company, on behalf of said company.



Mellinee Harwick
Notary Public, State of Texas

**DRILL SITE LOCATION AGREEMENT
AND ROAD EASEMENT DESIGNATION**

STATE OF TEXAS

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COUNTY OF ARANSAS

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THIS DRILL SITE LOCATION AGREEMENT AND ROAD EASEMENT DESIGNATION ("Agreement") by and among the undersigned owners and holders of the surface of and the minerals in and under 449.317 acres of land, more or less, out of the J. Smith Survey, A-187, Aransas County, Texas, being the same lands more particularly described in that certain Special Warranty Deed with Vendor's Lien recorded as Document No. 296684 in the Official Public Records of Aransas County, Texas (said 449.317 acres being described hereinafter as the "Historical Marsh"), is to be made effective as of the 12 day of November, 2015 (the "Effective Date"), subject to the following terms and conditions:

RECITALS

A. PBC Wetlands, LLC, a Texas limited liability company, hereinafter referred to as "PBCW", the owner of the surface of the Historical Marsh, plans to include all or a portion of the Historical Marsh in one or more wetland Mitigation Banks and create one or more corresponding Conservation Easements, hereinafter referred to as "CE", whether one or more, that would restrict the surface use of those lands included in the Mitigation Banks from use of the surface for drill site well locations, facilities or other related surface use improvements by the oil and gas industry that may be detrimental to the CE.

B. To the extent of the Mitigation Banks described in Exhibit A attached hereto and incorporated herein for all purposes, PBCW has requested that the undersigned owners of the mineral estate in and under the Historical Marsh limit all surface operations incidental to exploring and drilling for, producing, developing, treating, storing and marketing oil, gas and other minerals attributable to the said Mitigation Banks to an area of not more than five (5) acres (in as near the shape of a square or rectangle as is practicable), as more fully described in Exhibit B attached hereto and incorporated herein for all purposes (the "Drilling Location").

C. The undersigned party or parties, hereinafter referred to as the "Mineral Owner," whether one or more, is the owner and holder of a mineral and/or royalty interest in and to the Historical Marsh.

D. PBCW has requested that the undersigned Mineral Owner waive and relinquish all rights of surface use with respect to the Mitigation Banks (the "Waived Property") and said Mineral Owner is willing to do so, subject to the terms set forth in this Agreement and any other valid matter of record affecting the Waived Property or apparent on the surface.

NOW THEREFORE, in consideration of the premises and other good and valuable consideration, the legal sufficiency of which is hereby acknowledged, PBCW and the undersigned Mineral Owner (collectively, the "Parties") COVENANT AND AGREE as follows:

1. **Drilling Location.** The Parties hereby agree that, subject to the rights of third persons under any presently valid and subsisting mineral leases and all other valid matters of record, or apparent on the surface, all operations on the Waived Property relating to the exploration for, and development and production of, oil, gas and other minerals therefrom shall be limited to the Drilling Location and the Road Easement (defined hereinbelow), only.
2. **Road Easement.** PBCW hereby designates a roadway easement over and across the Historic Marsh and/or PBCW's adjacent surface property for ingress and egress in and to the Drilling Location along a route also as described in the attached **Exhibit B** (the "Road Easement").
3. **Waiver of Rights of Surface Use.** The undersigned mineral owners hereby waive and relinquish all rights of ingress and egress in and over the Waived Property, including, but not limited to, the right to install on the surface of the Waived Property any surface or subsurface fixtures, equipment, facilities and other appurtenances for the purposes of exploring and drilling for, producing, transporting, and marketing oil, gas, and other minerals from the Waived Property; provided, however, that this waiver shall not be construed to limit directional or horizontal drilling under the Waived Property from well sites located on the Drilling Location, or other lands; provided further, however, that no penetration of the subsurface of the Waived Property for drilling purposes shall be made at a depth which is less than two hundred (200) feet below ground level thereof.
4. **Binding Effect/Covenants Running with the Property.** This Agreement shall be binding upon and shall inure to the benefit of each of the Parties hereto and their respective heirs, personal representatives, successors, and assigns. Without limiting the foregoing, the terms of this Agreement shall be covenants running with the land and binding upon the Parties and any person or entity acquiring or succeeding to their respective rights in the surface or mineral estate of the Historical Marsh and shall inure to the benefit of and be directly enforceable by PBCW and all future owners of all or any portion of the surface estate of the Historical Marsh, including, but not limited to, the owners and holders of any CE granted by PBCW, its successors and assigns.
5. **Choice of Law.** THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS, WITHOUT REGARD TO ANY CONFLICT OF LAWS OR PRINCIPLES THAT MIGHT OTHERWISE DIRECT APPLICATION OF THE LAWS OF ANOTHER FORUM, AND THE EXCLUSIVE VENUE SHALL BE IN THE DISTRICT COURT OF ARANSAS COUNTY.
6. **Counterpart Execution.** This Agreement is executed and delivered in multiple counterparts, each of which shall constitute an original, and the execution and delivery of any one of such counterparts by any signatory shall be binding upon such signatory and shall have the same force and effect as if the same counterpart were executed and delivered by all of the signatories.

[Signature Page Follows]

EXECUTED to be effective as of the Effective Date.

MINERAL OWNER:

PBCW

By: Patricia Wendell Barker
Name: Patricia Wendell Barker
Title: owner

By: Edward M. Duvall
Name: Edward M. Duvall
Title: President

ACKNOWLEDGEMENTS

THE STATE OF TEXAS §

COUNTY OF ARANSAS §

This instrument was acknowledged before me this 12th day of November, 2015, by
PATRICIA WENDELL BARKER

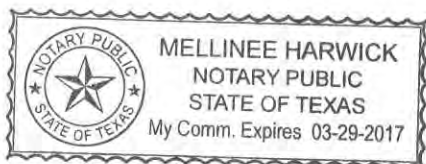


Mellinee Harwick
Notary Public, State of Texas

THE STATE OF TEXAS §

Aransas
COUNTY OF ~~BEXAR~~ §

This instrument was acknowledged before me this 12th day of November, 2015, by
EDWARD M. DUVAL, as PRESIDENT of PBC
Wetlands, LLC, a Texas limited liability company, on behalf of said company.



Mellinee Harwick
Notary Public, State of Texas

**DRILL SITE LOCATION AGREEMENT
AND ROAD EASEMENT DESIGNATION**

STATE OF TEXAS

§

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COUNTY OF ARANSAS

§

THIS DRILL SITE LOCATION AGREEMENT AND ROAD EASEMENT DESIGNATION ("Agreement") by and among the undersigned owners and holders of the surface of and the minerals in and under 449.317 acres of land, more or less, out of the J. Smith Survey, A-187, Aransas County, Texas, being the same lands more particularly described in that certain Special Warranty Deed with Vendor's Lien recorded as Document No. 296684 in the Official Public Records of Aransas County, Texas (said 449.317 acres being described hereinafter as the "Historical Marsh"), is to be made effective as of the 22 day of October, 2015 (the "Effective Date"), subject to the following terms and conditions:

RECITALS

A. PBC Wetlands, LLC, a Texas limited liability company, hereinafter referred to as "PBCW", the owner of the surface of the Historical Marsh, plans to include all or a portion of the Historical Marsh in one or more wetland Mitigation Banks and create one or more corresponding Conservation Easements, hereinafter referred to as "CE", whether one or more, that would restrict the surface use of those lands included in the Mitigation Banks from use of the surface for drill site well locations, facilities or other related surface use improvements by the oil and gas industry that may be detrimental to the CE.

B. To the extent of the Mitigation Banks described in **Exhibit A** attached hereto and incorporated herein for all purposes, PBCW has requested that the undersigned owners of the mineral estate in and under the Historical Marsh limit all surface operations incidental to exploring and drilling for, producing, developing, treating, storing and marketing oil, gas and other minerals attributable to the said Mitigation Banks to an area of not more than five (5) acres (in as near the shape of a square or rectangle as is practicable), as more fully described in **Exhibit B** attached hereto and incorporated herein for all purposes (the "Drilling Location").

C. The undersigned party or parties, hereinafter referred to as the "Mineral Owner," whether one or more, is the owner and holder of a mineral and/or royalty interest in and to the Historical Marsh.

D. PBCW has requested that the undersigned Mineral Owner waive and relinquish all rights of surface use with respect to the Mitigation Banks (the "Waived Property") and said Mineral Owner is willing to do so, subject to the terms set forth in this Agreement and any other valid matter of record affecting the Waived Property or apparent on the surface.

NOW THEREFORE, in consideration of the premises and other good and valuable consideration, the legal sufficiency of which is hereby acknowledged, PBCW and the undersigned Mineral Owner (collectively, the "Parties") COVENANT AND AGREE as follows:

1. **Drilling Location.** The Parties hereby agree that, subject to the rights of third persons under any presently valid and subsisting mineral leases and all other valid matters of record, or apparent on the surface, all operations on the Waived Property relating to the exploration for, and development and production of, oil, gas and other minerals therefrom shall be limited to the Drilling Location and the Road Easement (defined hereinbelow), only.
2. **Road Easement.** PBCW hereby designates a roadway easement over and across the Historic Marsh and/or PBCW's adjacent surface property for ingress and egress in and to the Drilling Location along a route also as described in the attached **Exhibit B** (the "Road Easement").
3. **Waiver of Rights of Surface Use.** The undersigned mineral owners hereby waive and relinquish all rights of ingress and egress in and over the Waived Property, including, but not limited to, the right to install on the surface of the Waived Property any surface or subsurface fixtures, equipment, facilities and other appurtenances for the purposes of exploring and drilling for, producing, transporting, and marketing oil, gas, and other minerals from the Waived Property; provided, however, that this waiver shall not be construed to limit directional or horizontal drilling under the Waived Property from well sites located on the Drilling Location, or other lands; provided further, however, that no penetration of the subsurface of the Waived Property for drilling purposes shall be made at a depth which is less than two hundred (200) feet below ground level thereof.
4. **Binding Effect/Covenants Running with the Property.** This Agreement shall be binding upon and shall inure to the benefit of each of the Parties hereto and their respective heirs, personal representatives, successors, and assigns. Without limiting the foregoing, the terms of this Agreement shall be covenants running with the land and binding upon the Parties and any person or entity acquiring or succeeding to their respective rights in the surface or mineral estate of the Historical Marsh and shall inure to the benefit of and be directly enforceable by PBCW and all future owners of all or any portion of the surface estate of the Historical Marsh, including, but not limited to, the owners and holders of any CE granted by PBCW, its successors and assigns.
5. **Choice of Law.** THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS, WITHOUT REGARD TO ANY CONFLICT OF LAWS OR PRINCIPLES THAT MIGHT OTHERWISE DIRECT APPLICATION OF THE LAWS OF ANOTHER FORUM, AND THE EXCLUSIVE VENUE SHALL BE IN THE DISTRICT COURT OF ARANSAS COUNTY.
6. **Counterpart Execution.** This Agreement is executed and delivered in multiple counterparts, each of which shall constitute an original, and the execution and delivery of any one of such counterparts by any signatory shall be binding upon such signatory and shall have the same force and effect as if the same counterpart were executed and delivered by all of the signatories.

[Signature Page Follows]

EXECUTED to be effective as of the Effective Date.

MINERAL OWNER:

PBCW

By:

Name:

Title:

By:

Name:

Title:

Reginald Wendell
REGINALD WENDELL

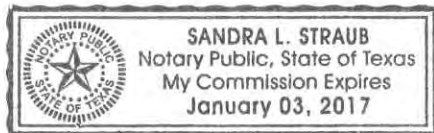
Edward M. Duvall
Edward M. Duvall
President

ACKNOWLEDGEMENTS

THE STATE OF TEXAS §

Fort Bend
COUNTY OF ~~ARANSAS~~ §

This instrument was acknowledged before me this 22 day of October, 2015, by
REGINALD WENDELL

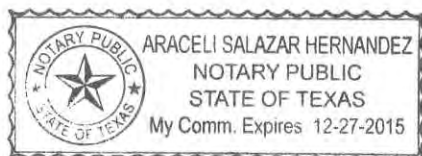


Sandra L. Straub
Notary Public, State of Texas

THE STATE OF TEXAS §

Fort Bend
COUNTY OF ~~BEXAR~~ §

This instrument was acknowledged before me this 7 day of December, 2015, by
Edward M. Duvall, as President of PBC
Wetlands, LLC, a Texas limited liability company, on behalf of said company.



Araceli S. Hernandez
Notary Public, State of Texas

EXHIBIT A

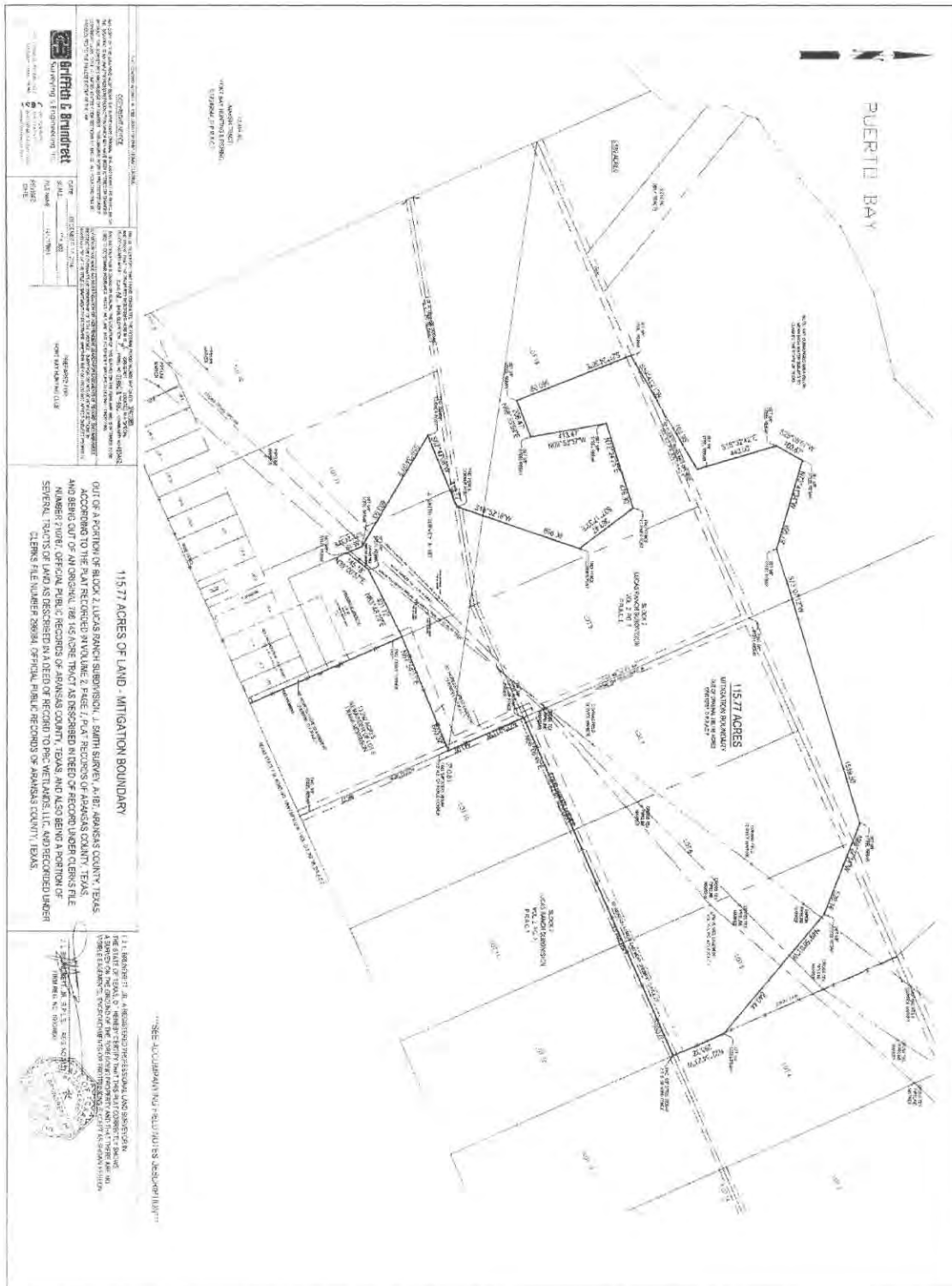


EXHIBIT A

BEING THE DESCRIPTION OF 115.77 ACRES OF LAND OUT OF BLOCK 2, LUCAS RANCH SUBDIVISION, J. SMITH SURVEY, A-187, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 7, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING OUT OF AN ORIGINAL 786.145 ACRE TRACT, AS DESCRIBED IN A DEED OF RECORD UNDER CLERKS FILE NUMBER 210787, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING PART OF SEVERAL TRACTS OF LAND AS DESCRIBED IN A DEED TO PBC WETLANDS, LLC, AND RECORDED UNDER CLERKS FILE NUMBER 296684, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, WITH SAID 115.77 ACRES OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCE, at a 5/8" found in the Northerly R.O.W. line of Texas State F.M. Road 1069, and being the common corner of Lots 9 and 10, of said Block 2; THENCE, North 23°52'58" West, along and with the common boundary line of said Lots 9 and 10, a distance of 866.77 feet to a 5/8" steel rebar found for an Exterior corner of a 231.017 acre tract out of said 786.145 acre tract, as described as Tract One, in said deed to PBC Wetlands, LLC, and being the SOUTHEAST corner and PLACE OF BEGINNING of this survey;

THENCE, North 23°53'11" West, along and with the common boundary line of said Lots 9 and 10, a distance of 443.06 feet to a 5/8" steel rebar found for the common corner of Lots 7, 8, 9 and 10, of said Block 2, and being an INTERIOR corner of this survey;

THENCE, North 66°06'49" East, along and with the common boundary lines of Lots 5, 6, 7, 10, 11 and 12, of said Block 2, a distance of 1980.0 feet to a 5/8" steel rebar found for the common corner of Lots 4, 5, 12, and 13, of said Block 2, and being an EXTERIOR corner of this survey;

THENCE, North 22°54'23" West, a distance of 293.32 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, North 49°56'03" West, a distance of 840.44 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, North 68°27'11" West, a distance of 526.14 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 73°07'12" West, a distance of 1539.80 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

THENCE, North 73°41'34" West, a distance of 495.79 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 29°08'07" West, a distance of 160.67 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 16°32'42" East, a distance of 443.0 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

THENCE, South 59°41'21" West, a distance of 702.95 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, South 21°24'36" East, a distance of 660.09 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

EXHIBIT A

THENCE, North 68°35'59" East, a distance of 206.47 feet to a 5/8" steel rebar set for an EXTERIOR corner of this survey;

THENCE, North 09°53'37" West, a distance of 413.47 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

THENCE, North 72°24'25" East, a distance of 476.30 feet to a fence corner post found for an INTERIOR corner of this survey;

THENCE, South 37°17'33" East, a distance of 363.47 feet to a fence corner post found for an INTERIOR corner of this survey;

THENCE, South 18°52'18" West, a distance of 696.36 feet to a fence corner post found for an INTERIOR corner of this survey;

THENCE, South 67°47'08" West, a distance of 413.77 feet to a fence corner post found for an EXTERIOR corner of this survey;

THENCE, South 59°34'09" East, a distance of 693.93 feet to a 5/8" steel rebar set for an INTERIOR corner of this survey;

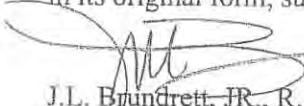
THENCE, South 23°24'33" East, a distance of 85.19 feet to a 5/8" steel rebar set for the Lower Northwest corner of a 5.001 acre tract described this date, and being an EXTERIOR corner of this survey;

THENCE, North 39°00'57" East, a distance of 145.18 feet to a 5/8" steel rebar set for the Upper Northwest corner of said 5.001 acre tract, and being an INTERIOR corner of this survey;

THENCE, North 63°48'29" East, a distance of 401.72 feet to a fence corner post found for the Northeast corner of said 5.001 acre tract, and being an INTERIOR corner of this survey;

THENCE, North 67°54'23" East, a distance of 660.32 feet to the PLACE OF BEGINNING of this survey and containing 115.77 acres of land more or less.

Unless this Field Note description, including preamble, seal and signature, appears in its entirety, in its original form, surveyor assumes no responsibility or liability for its accuracy.


J.L. Brundrett, JR., R. P. L. S.
Reg. No. 2133



SEE ACCOMPANYING SURVEY PLAT DATED DECEMBER 17, 2014
FILENAME: 141217BB1

EXHIBIT B

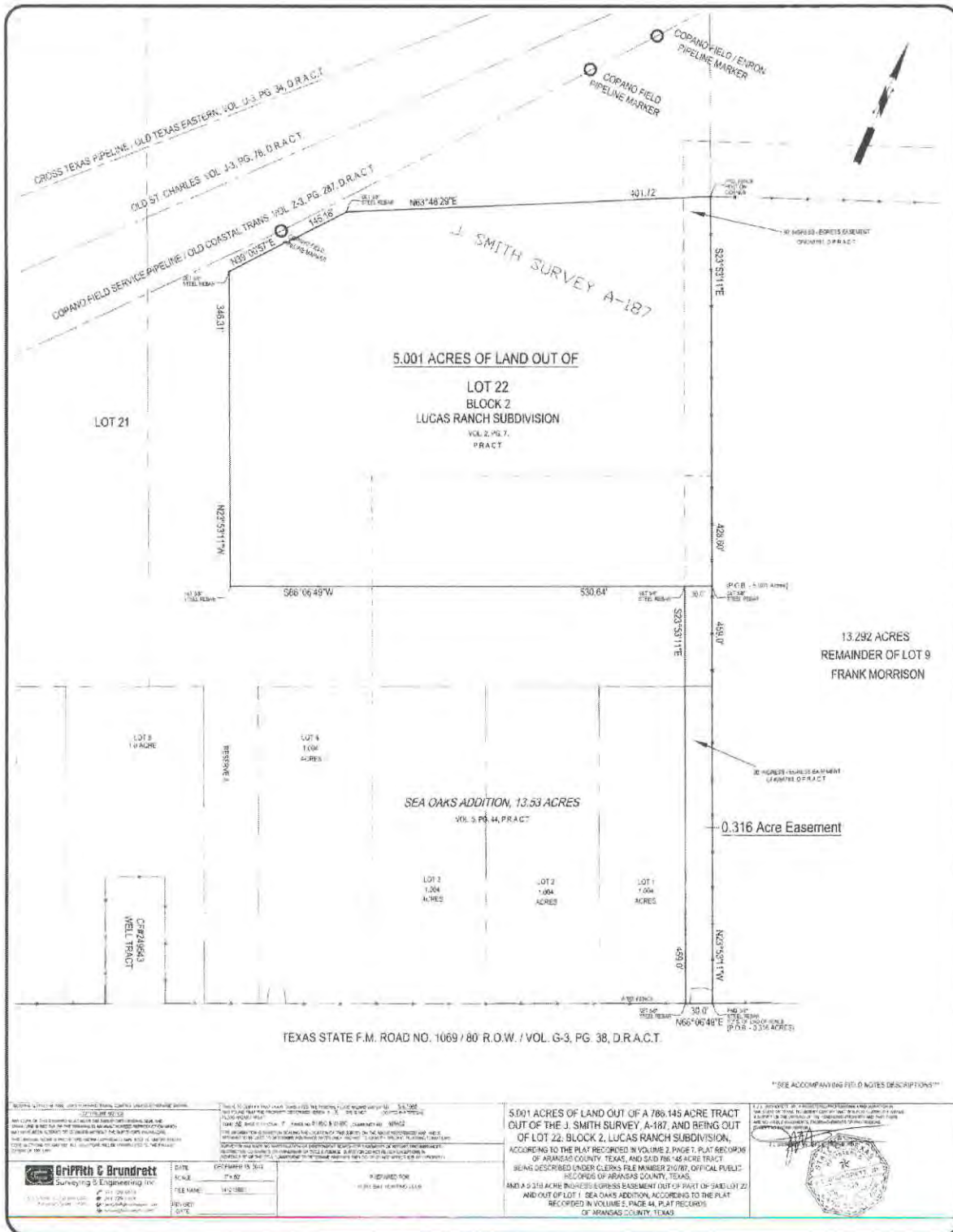


EXHIBIT B

BEING THE DESCRIPTION OF 5.001 ACRES OF LAND OUT OF LOT 22, BLOCK 2, LUCAS RANCH SUBDIVISION, J. SMITH SURVEY, A-187, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 7, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING OUT OF AN ORIGINAL 786.145 ACRE TRACT, AS DESCRIBED IN A DEED OF RECORD UNDER CLERKS FILE NUMBER 210787, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING PART OF A 231.017 ACRE TRACT AND A 5.0 ACRE TRACT AS DESCRIBED IN A DEED TO PBC WETLANDS, LLC, AND RECORDED UNDER CLERKS FILE NUMBER 296684, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, WITH SAID 5.001 ACRES OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCE, at a 5/8" steel rebar found in the Northerly R.O.W. line of Texas State F.M. Road 1069, and being the Southeast corner of Lot 1, Sea Oaks Addition, according to the plat recorded in Volume 5, Page 44, Plat Records of Aransas County, Texas, and being the Southwest corner of Lot 9, Block 2, of said Lucas Ranch Subdivision; THENCE, North 23°53'11" West, along and with the common boundary line of said Lot 1, Sea Oaks Addition and Lot 9, Block 2, at 350.0 feet pass the Northeast corner of said Lot 1, and continuing along and with the common boundary of Lot 22 and Lot 9, of said Block 2, a total distance of 459.0 feet to a 5/8" steel rebar set for the SOUTHEAST corner and PLACE OF BEGINNING of this survey;

THENCE, South 66°06'49" West, crossing said Lot 22, a distance of 530.64 feet to a 5/8" steel rebar set for the SOUTHWEST corner of this survey;

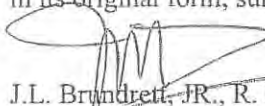
THENCE, North 23°53'11" West, a distance of 346.31 feet to a 5/8" steel rebar set for the LOWER NORTHWEST corner of this survey;

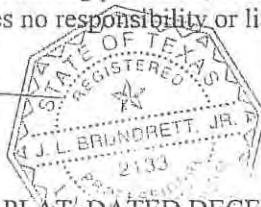
THENCE, North 39°00'57" East, a distance of 145.18 feet to a 5/8" steel rebar set for the UPPER NORTHWEST corner of this survey;

THENCE, North 63°48'29" East, a distance of 401.72 feet to a fence corner post found in the common boundary line of said Lots 9 and 22, and being the NORTHEAST corner of this survey;

THENCE, South 23°53'11" East, along and with the common boundary line of said Lots 9 and 22, a distance of 428.60 feet to the PLACE OF BEGINNING of this survey and containing 5.001 acres of land more or less.

Unless this Field Note description, including preamble, seal and signature, appears in its entirety, in its original form, surveyor assumes no responsibility or liability for its accuracy.


J.L. Brundrett, Jr., R. P. L. S.
Reg. No. 2133



SEE ACCOMPANYING SURVEY PLAT, DATED DECEMBER 15, 2014
FILENAME: 141215BB1

EXHIBIT B

BEING THE DESCRIPTION OF 5.001 ACRES OF LAND OUT OF LOT 22, BLOCK 2, LUCAS RANCH SUBDIVISION, J. SMITH SURVEY, A-187, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 7, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING OUT OF AN ORIGINAL 786.145 ACRE TRACT, AS DESCRIBED IN A DEED OF RECORD UNDER CLERKS FILE NUMBER 210787, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING PART OF A 231.017 ACRE TRACT AND A 5.0 ACRE TRACT AS DESCRIBED IN A DEED TO PBC WETLANDS, LLC, AND RECORDED UNDER CLERKS FILE NUMBER 296684, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, WITH SAID 5.001 ACRES OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCE, at a 5/8" steel rebar found in the Northerly R.O.W. line of Texas State F.M. Road 1069, and being the Southeast corner of Lot 1, Sea Oaks Addition, according to the plat recorded in Volume 5, Page 44, Plat Records of Aransas County, Texas, and being the Southwest corner of Lot 9, Block 2, of said Lucas Ranch Subdivision; THENCE, North 23°53'11" West, along and with the common boundary line of said Lot 1, Sea Oaks Addition and Lot 9, Block 2, at 350.0 feet pass the Northeast corner of said Lot 1, and continuing along and with the common boundary of Lot 22 and Lot 9, of said Block 2, a total distance of 459.0 feet to a 5/8" steel rebar set for the SOUTHEAST corner and PLACE OF BEGINNING of this survey;

THENCE, South 66°06'49" West, crossing said Lot 22, a distance of 530.64 feet to a 5/8" steel rebar set for the SOUTHWEST corner of this survey;

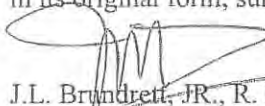
THENCE, North 23°53'11" West, a distance of 346.31 feet to a 5/8" steel rebar set for the LOWER NORTHWEST corner of this survey;

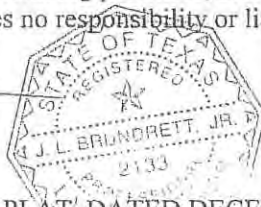
THENCE, North 39°00'57" East, a distance of 145.18 feet to a 5/8" steel rebar set for the UPPER NORTHWEST corner of this survey;

THENCE, North 63°48'29" East, a distance of 401.72 feet to a fence corner post found in the common boundary line of said Lots 9 and 22, and being the NORTHEAST corner of this survey;

THENCE, South 23°53'11" East, along and with the common boundary line of said Lots 9 and 22, a distance of 428.60 feet to the PLACE OF BEGINNING of this survey and containing 5.001 acres of land more or less.

Unless this Field Note description, including preamble, seal and signature, appears in its entirety, in its original form, surveyor assumes no responsibility or liability for its accuracy.


J.L. Brundrett, Jr., R. P. L. S.
Reg. No. 2133



SEE ACCOMPANYING SURVEY PLAT, DATED DECEMBER 15, 2014
FILENAME: 141215BB1

EXHIBIT B

BEING THE DESCRIPTION OF A 0.316 ACRE INGRESS/EGRESS EASEMENT OUT OF LOT 1, SEA OAKS ADDITION, J. SMITH SURVEY, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 5, PAGE 44, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND A PORTION OF LOT 22, BLOCK 2, LUCAS RANCH SUBDIVISION, J. SMITH SURVEY, A-187, ARANSAS COUNTY, TEXAS, ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 7, PLAT RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING OUT OF AN ORIGINAL 786.145 ACRE TRACT, AS DESCRIBED IN A DEED OF RECORD UNDER CLERKS FILE NUMBER 210787, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING PART OF A 231.017 ACRE TRACT AND A 5.0 ACRE TRACT AS DESCRIBED IN A DEED TO PBC WETLANDS, LLC, AND RECORDED UNDER CLERKS FILE NUMBER 296684, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, AND BEING A PORTION OF AN EXISTING 30.0 FOOT WIDE INGRESS/EGRESS EASEMENT AS DESCRIBED UNDER CLERKS FILE NUMBER 288780, OFFICIAL PUBLIC RECORDS OF ARANSAS COUNTY, TEXAS, WITH SAID 0.316 ACRES OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGIN, at a 5/8" steel rebar found in the Northerly R.O.W. line of Texas State F.M. Road 1069, and being the Southeast corner of said Lot 1, Sea Oaks Addition, and being the Southwest corner of Lot 9, Block 2, of said Lucas Ranch Subdivision, and being the SOUTHEAST corner and PLACE OF BEGINNING of this survey;

THENCE, North 23°53'11" West, along and with the common boundary line of said Lot 1, Sea Oaks Addition and Lot 9, Block 2, at 350.0 feet pass the Northeast corner of said Lot 1, and continuing along and with the common boundary of Lot 22 and Lot 9, of said Block 2, a total distance of 459.0 feet to a 5/8" steel rebar set for the Southeast corner of a 5.001 acre tract described this date, and being the NORTHEAST corner of this survey;

THENCE, South 66°06'49" West, crossing said Lot 22, a distance of 30.0 feet to a 5/8" steel rebar set for the NORTHWEST corner of this survey;

THENCE, South 23°53'11" East, along a line parallel and 10.0 feet West of the common boundary line of said Lot 1, a distance of 459.0 feet to a 5/8" steel rebar set in the Northerly R.O.W. line of said Texas State F.M. Road 1069, and being the SOUTHWEST corner of this survey;

THENCE, North 66°06'49" East, along and with the Northerly R.O.W. line of said Texas State F.M. Road 1069, a distance of 300 feet to the PLACE OF BEGINNING of this survey and containing 0.316 acres of land more or less.

Unless this Field Note description, including preamble, seal and signature, appears in its entirety, in its original form, surveyor assumes no responsibility or liability for its accuracy.

J.L. Brundrett, JR., R. P. L. S.
Reg. No. 2133



SEE ACCOMPANYING SURVEY PLAT; DATED DECEMBER 15, 2014
FILENAME: 141215BB1

**DRILL SITE LOCATION AGREEMENT
AND ROAD EASEMENT DESIGNATION**

STATE OF TEXAS

§

§

COUNTY OF ARANSAS

§

THIS DRILL SITE LOCATION AGREEMENT AND ROAD EASEMENT DESIGNATION ("Agreement") by and among the undersigned owners and holders of the surface of and the minerals in and under 449.317 acres of land, more or less, out of the J. Smith Survey, A-187, Aransas County, Texas, being the same lands more particularly described in that certain Special Warranty Deed with Vendor's Lien recorded as Document No. 296684 in the Official Public Records of Aransas County, Texas (said 449.317 acres being described hereinafter as the "Historical Marsh"), is to be made effective as of the ____ day of _____, 2015 (the "Effective Date"), subject to the following terms and conditions:

RECITALS

A. PBC Wetlands, LLC, a Texas limited liability company, hereinafter referred to as "PBCW", the owner of the surface of the Historical Marsh, plans to include all or a portion of the Historical Marsh in one or more wetland Mitigation Banks and create one or more corresponding Conservation Easements, hereinafter referred to as "CE", whether one or more, that would restrict the surface use of those lands included in the Mitigation Banks from use of the surface for drill site well locations, facilities or other related surface use improvements by the oil and gas industry that may be detrimental to the CE.

B. To the extent of the Mitigation Banks described in Exhibit A attached hereto and incorporated herein for all purposes, PBCW has requested that the undersigned owners of the mineral estate in and under the Historical Marsh limit all surface operations incidental to exploring and drilling for, producing, developing, treating, storing and marketing oil, gas and other minerals attributable to the said Mitigation Banks to an area of not more than five (5) acres (in as near the shape of a square or rectangle as is practicable), as more fully described in Exhibit B attached hereto and incorporated herein for all purposes (the "Drilling Location").

C. The undersigned party or parties, hereinafter referred to as the "Mineral Owner," whether one or more, is the owner and holder of a mineral and/or royalty interest in and to the Historical Marsh.

D. PBCW has requested that the undersigned Mineral Owner waive and relinquish all rights of surface use with respect to the Mitigation Banks (the "Waived Property") and said Mineral Owner is willing to do so, subject to the terms set forth in this Agreement and any other valid matter of record affecting the Waived Property or apparent on the surface.

NOW THEREFORE, in consideration of the premises and other good and valuable consideration, the legal sufficiency of which is hereby acknowledged, PBCW and the undersigned Mineral Owner (collectively, the "Parties") COVENANT AND AGREE as follows:

1. **Drilling Location.** The Parties hereby agree that, subject to the rights of third persons under any presently valid and subsisting mineral leases and all other valid matters of record, or apparent on the surface, all operations on the Waived Property relating to the exploration for, and development and production of, oil, gas and other minerals therefrom shall be limited to the Drilling Location and the Road Easement (defined hereinbelow), only.
2. **Road Easement.** PBCW hereby designates a roadway easement over and across the Historic Marsh and/or PBCW's adjacent surface property for ingress and egress in and to the Drilling Location along a route also as described in the attached **Exhibit B** (the "Road Easement").
3. **Waiver of Rights of Surface Use.** The undersigned mineral owners hereby waive and relinquish all rights of ingress and egress in and over the Waived Property, including, but not limited to, the right to install on the surface of the Waived Property any surface or subsurface fixtures, equipment, facilities and other appurtenances for the purposes of exploring and drilling for, producing, transporting, and marketing oil, gas, and other minerals from the Waived Property; provided, however, that this waiver shall not be construed to limit directional or horizontal drilling under the Waived Property from well sites located on the Drilling Location, or other lands; provided further, however, that no penetration of the subsurface of the Waived Property for drilling purposes shall be made at a depth which is less than two hundred (200) feet below ground level thereof.
4. **Binding Effect/Covenants Running with the Property.** This Agreement shall be binding upon and shall inure to the benefit of each of the Parties hereto and their respective heirs, personal representatives, successors, and assigns. Without limiting the foregoing, the terms of this Agreement shall be covenants running with the land and binding upon the Parties and any person or entity acquiring or succeeding to their respective rights in the surface or mineral estate of the Historical Marsh and shall inure to the benefit of and be directly enforceable by PBCW and all future owners of all or any portion of the surface estate of the Historical Marsh, including, but not limited to, the owners and holders of any CE granted by PBCW, its successors and assigns.
5. **Choice of Law.** THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS, WITHOUT REGARD TO ANY CONFLICT OF LAWS OR PRINCIPLES THAT MIGHT OTHERWISE DIRECT APPLICATION OF THE LAWS OF ANOTHER FORUM, AND THE EXCLUSIVE VENUE SHALL BE IN THE DISTRICT COURT OF ARANSAS COUNTY.
6. **Counterpart Execution.** This Agreement is executed and delivered in multiple counterparts, each of which shall constitute an original, and the execution and delivery of any one of such counterparts by any signatory shall be binding upon such signatory and shall have the same force and effect as if the same counterpart were executed and delivered by all of the signatories.

[Signature Page Follows]

EXECUTED to be effective as of the Effective Date.

MINERAL OWNER:

PBCW

By: Wilma Littleton
Name: WILMA LITTLETON
Title: OWNER

By: Edward M. Duvall
Name: Edward M. Duvall
Title: President

ACKNOWLEDGEMENTS

THE STATE OF TEXAS §

COUNTY OF ARANSAS §

This instrument was acknowledged before me this 12th day of November, 2015, by
WILMA LITTLETON.

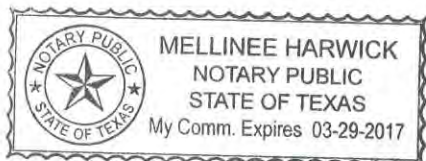


Mellinee Harwick
Notary Public, State of Texas

THE STATE OF TEXAS §

COUNTY OF BEXAR §

This instrument was acknowledged before me this 12th day of November, 2015, by
EDWARD M. DUVALL, as PRESIDENT of PBC
Wetlands, LLC, a Texas limited liability company, on behalf of said company.



Mellinee Harwick
Notary Public, State of Texas

EXHIBIT B

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SEE ACCOMPANYING SURVEY PLAT; DATED DECEMBER 15, 2014
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AND ROAD EASEMENT DESIGNATION**

STATE OF TEXAS

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COUNTY OF ARANSAS

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B. To the extent of the Mitigation Banks described in Exhibit A attached hereto and incorporated herein for all purposes, PBCW has requested that the undersigned owners of the mineral estate in and under the Historical Marsh limit all surface operations incidental to exploring and drilling for, producing, developing, treating, storing and marketing oil, gas and other minerals attributable to the said Mitigation Banks to an area of not more than five (5) acres (in as near the shape of a square or rectangle as is practicable), as more fully described in Exhibit B attached hereto and incorporated herein for all purposes (the "Drilling Location").

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[Signature Page Follows]

EXECUTED to be effective as of the Effective Date.

MINERAL OWNER:

PBCW

By: Wilma Littleton
Name: WILMA LITTLETON
Title: OWNER

By: Edward M. Duvall
Name: Edward M. Duvall
Title: President

ACKNOWLEDGEMENTS

THE STATE OF TEXAS §

COUNTY OF ARANSAS §

This instrument was acknowledged before me this 12th day of November, 2015, by
WILMA LITTLETON.

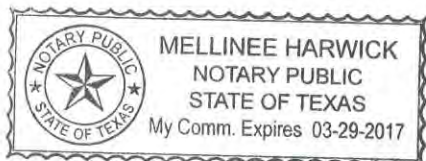


Mellinee Harwick
Notary Public, State of Texas

THE STATE OF TEXAS §

COUNTY OF BEXAR §

This instrument was acknowledged before me this 12th day of November, 2015, by
EDWARD M. DUVALL, as PRESIDENT of PBC
Wetlands, LLC, a Texas limited liability company, on behalf of said company.



Mellinee Harwick
Notary Public, State of Texas

I. Financial Assurance & Long-term Funding Agreements
with Draft Documents

Administrative (recommended min 10%)	10%		
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Summary of Long-term Costs and Principal

Annual Cost Subtotal		\$ 2,370.07
Contingency (10-20%)	15%	\$ 355.51
Administrative (min 10%)	10%	\$ 237.00
Annual Cost Total		\$ 2,962.58
Capitalization Rate	4.00%	
Total Fund Principal		\$ 74,064.50

**Coastal Bend Wetland Mitigation Bank
Long Term Management Fund
Land Management and Maintenance costs**

Task	Description	Hours/miles	Unit Cost	Cost	Recurrence/year	Annual Cost	Subtotal	Notes
Management & Maintenance							\$1,920	
Site visit	Inspect Infrastructure	2	\$50	\$100	2	\$200		Agent hours
Travel (per visit)	Mileage	360	\$0.50	\$180	2	\$360		
Travel (per day)	Lodging and meals	2	\$70.00	\$70	2	\$140		Day rate @ Port Bay Club
Trash, signs & vandalism	Collect, replace, report	0		\$0	2	\$0		included in site visit charge
Fence, gate & locks	replace fence materials, 30 yr life	3490	\$1.50	\$5,235	0.033	\$173		Grazing Lessee provides labor
Fence Maintenance				\$0		\$0		Grazing Lease maintains fences
Road Maintenance	total 7 years			\$4,355	0.143	\$623		Total excludes Harvey expense
Hurricane Response	Harvey Expense (3 days)			\$1,590	0.02	\$32		travel + Agent hours
Hurricane Repairs	Harvey Infrastructure Expense			19,605	0.02	\$392		replace infrastructure
Ecological Maintenance							\$130	
Update Management Plan		8	\$50	\$400	0.2	\$80		
Ecological Monitoring	monitor T&E species, report	1	\$50	\$50	1	\$50		
Cattail Control	monitor & record	0		\$0		\$0		none needed
Prescribed Burning	evaluate need	0		\$0		\$0		none needed
Occupancy							\$320.07	
Property Taxes	taxes					\$320.07		
Annual Cost Subtotal							\$2,370.07	

Task Prioritization

In the event of a shortage of funds for long-term management activities, the following list of priorities should be followed for the management of the property in the order of the highest to lowest priority:

1. Project Management
 - a. Reporting
 - b. Site Inspection
 - c. Invasive Plant Monitoring
 - d. Coordination with Conservation Easement Holder
 - e. Coordination with Agent and Long-term Steward
 - f. Coordination with Long-term Management Fund Manager
2. Infrastructure Management
 - a. Road mowing
 - b. Road maintenance
 - c. Hurricane Response
3. Biological Management
 - a. Invasive Plant Control (if necessary)
 - b. Prescribed Burning (if necessary)
4. Infrastructure Management (least priority)
 - a. Feral Hog Control
 - b. Signage
 - c. Gate and Fence Maintenance
 - d. Trash Removal

Long-term Funding Agreement

The following is a copy of the long-term funding agreement between the Agent and Foundation.

PBC Wetlands, LLC

March 15, 2023

When the USACE issues a Letter of Intent (LOI) to sign the Coastal Bend Wetland Mitigation Bank's (CBWMB) Mitigation Banking Instrument (MBI), the sponsor, PBC Wetlands, LLC (PBCW) will commission a short-term financing insurance policy which guarantees funding for the CBWMB construction budget of which funding for the Long Term Maintenance Fund (LTMF) is included. The policy would be force until the CBWMB is completely constructed and the LTMF is completely funded.

From 2008 to 2022, PBCW maintained a \$500,000 revolving line of credit (RLOC) to finance the CBWMB construction expense at over a cost of \$15,000. The RLOC was not used during that time period. When the USACE issues the LOI, PBCW will re-establish the \$500,000 RLOC and the financial institution will issue a letter to the USACE stating that the amount needed to fund LTMF is in place and withheld for that purpose as a portion of the RLOC.

LONG-TERM FUNDING AGREEMENT

Coastal Bend Wetland Mitigation Bank

AN AGREEMENT (the "**Agreement**") by and between the PBC Wetlands, LLC with an address at 7131 Trailbrook Drive Sugarland, Texas 77479 ("**Grantor**"), and the Texas Agricultural Land Trust (TALT), with an address at 1919 Oakwell Farms Parkway, Suite 100 ("**Foundation**") (collectively, the "**Parties**").

WHEREAS the Grantor for approximately 115.77 acres of real property (the "**Property**") located in Aransas County, Texas, as more completely described below; and

Longitude/Latitude	-97.113795W / 28.029559N
UTM	Zone 14; Easting 685520.07; Northing: 3101705.94
USGS Quad	Rockport SW Quad
County	Aransas
Driving Location	2 road miles south of Rockport, Texas on FM 1069
Gate Access Longitude/Latitude	-97.113342W / 28.023699N

WHEREAS the United States Army Corps of Engineers - Galveston District ("USACE") and the Grantor have a mitigation bank instrument, USACE Project Number SWG-2008-00922, dated _____, and incorporated herein by reference as (the "**Mitigation Bank**"), wherein the USACE permitted Grantor's establishment and operation of the Coastal Bend Wetland Mitigation Bank per the terms of the "**Mitigation Bank Instrument**" or "**MBI**") on the Property; and

WHEREAS, as a condition of the MBI and pursuant to the Conservation Easement of Texas Agricultural Land Trust (TALT) on the Property, Grantor agreed and is obligated to manage and maintain the Property in perpetuity to improve, conserve, and/or protect the aquatic resources, habitat and other ecological values of the Bank Property ("Long-Term Management Plan").

The Bank Property, comprised of approximately 115.77 acres, including emergent wetlands, will be managed in accordance with the MBI and associated Long-Term Management Plan.

WHEREAS, as a condition of the MBI, the Grantor agreed and is obligated to establish and maintain a separate non-wasting endowed account (the "**Endowment Fund**" or "**Fund**"), which shall be funded with, among other things, a portion of the proceeds from the sale and/or conveyance of Mitigation Credits on the Property (as defined in the MBI); and

WHEREAS, to satisfy its obligations to establish and maintain the Endowment Fund, the Grantor enters in this Agreement, on the terms set forth herein.

NOW, THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as provided herein:

1. Transfer of Assets. In accordance with the MBI, the Grantor further agrees to transfer an amount equal to a minimum of \$80,000.00 (the "**Target Amount**") to the Foundation for deposit into the Fund. The amount shall be transferred by the Grantor at its sole discretion, in whole or in part, and shall collectively be referred to as the "**Donation**".

2. Fund Designation. The donation shall be designated on the books of the Foundation and in its publications sufficient to identify the assets and activities of the Fund. The Grantor grants to the Foundation permission to honor the Grantor and to express the appreciation of the Foundation publicly in the form of news announcements, both internal and external.

The Endowment Principal payment is a permanently restricted gift to TALT. The TALT Board shall have a fiduciary duty to ensure that funds received pursuant to this Agreement are managed in accordance with TALT's Policy for Fund Management, Investments, and Spending (TALT Policy). The Endowment Principal managed under the terms of this Agreement will be classified as "permanently restricted" and income derived from it, defined as interest dividends and realized capital gains and losses, will be classified as "temporarily restricted"

3. Management of the Fund. The assets of the Fund shall be the property of the Foundation held by it in its corporate capacity and shall not be deemed a trust fund held by it in a trustee capacity. The assets of the Fund shall be wholly owned, invested, and managed by the Foundation in accordance with the Long-Term Strategy of its Investment Policy, the current form of which is attached as Exhibit "B" hereto. The Grantor shall have no right or responsibility with respect to the investment or financial management of the Fund under this Agreement or otherwise. The Foundation also shall have full right and power to commingle and co-invest the assets of the Fund with other investment assets of the Foundation and to delegate investment management of the assets of the Fund. In the event the assets of the Fund are commingled with other Foundation assets, the Foundation shall maintain at all times separate records and books of account so as to specifically identify the assets and intents of the Fund from time to time. All income generated from the assets in the Fund as well as all gains and losses, realized and unrealized, thereon shall be credited to the Fund as appropriate. The Foundation shall not be liable to the USACE, the Grantor, or any other entities or persons for losses arising from investment of funds in the Fund that is consistent with this Agreement.

4. Fees and Expenses. The Foundation shall, in its sole discretion, assess against the Fund, pro rata along with all other similarly situated funds of the Foundation, appropriate and reasonable costs for the administration of the Fund, including but not limited to reasonable investment fees, and taxes (if any), and 1.0% annually of the fair market value of the Fund computed and assessed either quarterly or annually, in either case at the Foundation's election, based on the average balance over the prior four (4) or twelve (12) months. When total assets in funds established by or in partnership with **Grantor** at the Foundation exceed \$1,000,000.00, the 0.75% fee shall be reduced to 0.50%, computed and assessed in the same manner described above. The Foundation shall collect the fees and expenses referenced in this Section 4 by deducting same from the balance of the Fund.

5. Designation of Purposes. The Fund shall at all times be used exclusively for charitable purposes as defined under Sections 501(c)(3) and 170 of the Internal Revenue Code of 1986, as amended (the "**Code**"), and in accordance with the MBI. No part of the net income or assets of the Fund shall inure to the benefit of the Grantor or the Foundation, its officers or board members, or to any private person except as explicitly set forth herein. The Foundation acknowledges that the purposes are consistent with and further the purpose and mission of the Foundation.

6. Distributions. In accordance with the MBI, the Foundation is authorized to make distributions and disbursements from the Fund to pay costs and expenses reasonably incurred in and related to the management of the Property, including, but not limited to, property taxes, contracts, equipment, materials, and signage.

Generally, distributions from the Fund will be made in accordance with a spending policy ("**Amount**") established by the Foundation's Board of Directors from time to time. Distributions are calculated by multiplying the Amount by the preceding rolling 12-quarter average of the Fund market value. For a fund in existence for fewer than three years, the fair market value of the fund must be calculated for the period the fund has been in existence. Distributions in excess of the Amount may be made to the Mitigation Bank based on written request by the Grantor. In making the determination to distribute in excess of the Amount, the Foundation will consider needs with respect to both annual operating and maintenance requirements and expenditures for long-term replacement of capital improvements (collectively "**Annual Expenditures**").

Distributions in excess of the projected Annual Expenditures for the Mitigation Bank may be authorized if such distributions pay costs and expenses for management activities outlined in the MBI and protect the financial viability of the Fund. Distributions in excess of the projected Annual Expenditures for the Mitigation Bank for management costs and expenses not outlined in the MBI shall be authorized only if such exceptions are approved in writing by the USACE, serve to advance the land stewardship goals of the MBI, and protect the financial viability of the Fund.

7. Foundation's Reliance on Information.

A. The Foundation is expressly entitled to rely on the validity of the USACE approval and the accuracy and validity of the land management plan and funding addressed in the MBI without independent verification. The Foundation shall not be liable in any respect to the USACE, the Grantor, or to any other party, for errors, omissions, inaccuracies, or other elements of the land management plan or the funding related to same, whether contained therein or omitted therefrom, including but not limited to the sufficiency or adequacy of the Fund, as established in the MBI.

B. If, at any time, the plan for managing the Mitigation Bank as set forth in the MBI is amended or otherwise modified in accordance with the terms of the MBI, the Grantor shall immediately notify the Foundation in writing of such amendment or modification and transmit written documentation memorializing such modification executed by the USACE. Grantor and the Foundation agree and acknowledge that the Foundation shall be entitled to rely upon a modification or change authorized by the USACE in accordance with the terms of the MBI.

8. Duration of the Fund. It is the Grantor and the USACE's intention that the Fund will last in perpetuity to fund the costs and expenses associated with the management and maintenance of the Property and that these obligations shall continue in perpetuity as covenants running with the land. If the purposes for which the Fund is created have been accomplished or so frustrated that the Fund serves no purpose or should the Foundation: (i) become insolvent or file for bankruptcy; (ii) no longer be classified as a public charity under Code Section 509(a); (iii) commit an act or omission with respect to the Fund which is grossly negligent or willful misconduct; or (iv) cease to exist or conduct its operations, any Party as well as the USACE, after providing written notice to the other Party and the USACE, and with the USACE written concurrence, may petition a court of competent jurisdiction for the dissolution of the Fund. In any of the instances set forth above, with the USACE written approval, the Fund may be distributed to: (a) a conservation organization that is determined by the Internal Revenue Service to be tax exempt for one or more purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code or corresponding section of any future federal tax code and that agrees to use the Fund for a public conservation purpose in the State of Texas; (b) a governmental entity that agrees to hold and disburse the Fund for a USACE -approved conservation purpose in the State of Texas; or (c) to a USACE-selected and approved non-governmental entity that agrees to hold and disburse the Fund to and/or as prescribed by the USACE for a public conservation purpose in the State of Texas. Any such written determination shall be delivered to the Foundation by the USACE.

9. Accountings. The Foundation shall render periodic accounts of the administration of the Fund to the Grantor. In no event, however, shall the accounting be rendered less than once each fiscal year (beginning January 1 through December 31). The accounting shall consist of annual reports regarding expenditures and reimbursements as well as income, contributions, and the donation. If requested, the Foundation shall also provide the USACE a copy of its most recent financial statement as prepared by an independent auditor.

10. Amendment. This Agreement, as part of the MBI, may be amended or modified only by agreement of the Parties in writing expressly identified as an amendment to this Agreement, signed by the Parties thereto, with approval of the USACE, in coordination with the Interagency Review Team. Any such amendments or modifications shall be recorded in a written signed addendum, which shall become part of this Agreement. Additionally, before any action by either party is taken to modify this Agreement, the party wishing to take such action to modify shall give at least 120 days written notice to the USACE.

11. No Preferential Treatment. Grantor acknowledges that in entering into this Agreement Grantor is dealing exclusively with the Foundation. Neither the fact, nor the terms, of this Agreement shall create or imply any type of preferential treatment or obligation on behalf of the Texas Agricultural Land Trust ("TALT") in its review of the MBI and other documents related to the Property. Grantor agrees it shall not seek any such preferential treatment in connection with TALT or otherwise seek to trade on its relationship with the Foundation created under this Agreement.

12. Entire Agreement. This Agreement, along with any exhibits hereto, contains the entire understanding of the Parties with respect to the subject matter herein and is subject to the laws of the State of Texas, without regard to its conflict of laws rules. This Agreement supersedes all other agreements and understandings, both oral and written, between the Parties relating to the Fund. If any provision of this Agreement is determined to be invalid or unenforceable, the remaining provisions hereof shall nevertheless remain in effect.

13. Independent Parties. Each of the Parties is acting in its independent capacity in entering into and carrying out this Agreement and not as an agent, employee, or representative of the other Party.

14. Waiver. Any waiver by either Party of any term or provision of this Agreement shall be given in writing. No waiver shall be construed as a waiver of any other provision of this Agreement, nor shall such waiver be construed as a waiver of such provision respecting any other event or circumstance.

15. Headings. The headings used in this agreement are for convenience only and shall not determine or limit the interpretation, construction or meaning of this Agreement.

16. Third-Party Beneficiary. This Agreement shall not be the basis of any claims, rights, causes of action, challenges, or appeals by any person not a Party to this Agreement, except that the Parties acknowledge that the USACE shall have the rights expressly assigned to it hereunder.

17. Notice. Any notice required or permitted to be given under this Agreement shall be sufficient if in writing and delivered by certified or registered mail, return receipt requested, postage prepaid, at the address set forth below, or to such other person or at such other place as either Party may designate in a notice. Notice shall be sent as follows:

To Grantor:
PBC Wetlands, LLC
7131 Trailbrook Drive
Sugarland, Texas 77479

To Foundation:
Texas Agricultural Land Trust
1919 Oakwell Farms Pkwy; Ste 100
San Antonio, Texas 78218

To USACE:
Regulatory Division Attn: Regulatory Chief Galveston District
U.S. Army Corps of Engineers
2000 Fort Point Road
Galveston, Texas 77550

18. Counterparts. This Agreement may be executed in identical counterparts, and each counterpart shall be deemed to be an original document. All executed counterparts together shall constitute one and the same document, and any counterpart signature pages may be attached and assembled to form a single original document.

Long-Term Management Plan
Coastal Bend Wetland Mitigation Bank
February 15, 2023

Purpose

The purpose of this long-term management plan is to outline the long-term management needs associated with the Coastal Bend Wetland Mitigation Bank (CBWMB). The plan includes a schedule, budget, and funding derivation for long-term management of the site.

Parties / Roles & Responsibilities

Agent / Counsel

The Agent shall be PBC Wetlands, LLC. The Agent shall be responsible for implementing the long-term management plan. This includes maintaining records, inspecting the property, contracting for activities such as invasive species control and mowing, and coordinating activities at the site.

Agent's Name:	PBC Wetlands, LLC (PBCW)
Primary Contact:	Ed Duvall
Mailing Address:	7131 Trailbrook Drive Sugar Land, TX 77479
Phone Number:	(713) 906-2772
Fax Number:	(281) 343-1334
Email Address:	eduvco@aol.com

Agent's Counsel:	John R. Boyer, Jr, Attorney at Law
Primary Contact:	John R. Boyer, Jr
Mailing Address:	12910 Carlaris Ct. Houston, Texas 77041
Phone Number:	713-542-1816
Email Address:	jboyer@boyerbusinesslaw.com

Conservation Easement Holder / Foundation

As more specifically defined in the conservation easement for the site, the conservation easement holder shall be responsible for inspecting the property annually to ensure the terms of the conservation easement are upheld and defending the terms of the easement should they be challenged.

Easement/ Foundation:	Texas Agricultural Land Trust (TALT)
Primary Contact:	Andy James
Mailing Address:	P.O. Box 6152 San Antonio, Texas 78209
Phone Number:	210-826-0074
Email Address:	Ajames@txaglandtrust.org

11. No Preferential Treatment. Grantor acknowledges that in entering into this Agreement Grantor is dealing exclusively with the Foundation. Neither the fact, nor the terms, of this Agreement shall create or imply any type of preferential treatment or obligation on behalf of the Texas Agricultural Land Trust ("TALT") in its review of the MBI and other documents related to the Property. Grantor agrees it shall not seek any such preferential treatment in connection with TALT or otherwise seek to trade on its relationship with the Foundation created under this Agreement.

12. Entire Agreement. This Agreement, along with any exhibits hereto, contains the entire understanding of the Parties with respect to the subject matter herein and is subject to the laws of the State of Texas, without regard to its conflict of laws rules. This Agreement supersedes all other agreements and understandings, both oral and written, between the Parties relating to the Fund. If any provision of this Agreement is determined to be invalid or unenforceable, the remaining provisions hereof shall nevertheless remain in effect.

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15. Headings. The headings used in this agreement are for convenience only and shall not determine or limit the interpretation, construction or meaning of this Agreement.

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To Grantor:
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San Antonio, Texas 78218

To USACE:
Regulatory Division Attn: Regulatory Chief Galveston District
U.S. Army Corps of Engineers
2000 Fort Point Road
Galveston, Texas 77550

18. Counterparts. This Agreement may be executed in identical counterparts, and each counterpart shall be deemed to be an original document. All executed counterparts together shall constitute one and the same document, and any counterpart signature pages may be attached and assembled to form a single original document.

19. Assignment. Grantor may assign its rights and obligations under this Agreement to any party to whom Grantor transfers long-term management responsibilities in accordance with the MBI. Foundation may assign its rights and obligations under this Agreement, including ownership of the Fund, only with the written agreement of the Grantor, the Foundation, and the USACE and as provided in the MBI.

IN WITNESS WHEREOF, the Grantor and the Foundation have executed this Agreement as of the date last signed below.

Grantor

PBC WETLANDS, LLC

By _____

Date _____

Foundation

TEXAS AGRICULTURAL LAND TRUST

By _____

Date _____

J. Water Rights Documentation
from prospectus

WATER BUDGET ANALYSIS

PBC WETLANDS "WOODSON TRACT" PROPOSED MITIGATION BANK

Prepared for:

PBC Wetlands, LLC

Prepared by:

CLR, Inc.

19530 FM 362
Waller, Texas 77484
(713) 462-0993

December 6, 2010

PBC Wetlands Woodson Tract Mitigation Site
Water Budget Analysis
December 6, 2010

INTRODUCTION AND SUMMARY RESULT

This report was prepared for PBC Wetlands, LLC for a proposed wetland mitigation bank site. The site is located in Aransas County, southwest of Rockport, Texas. The purpose of this study was to prepare a water balance, or water budget analysis, in order to determine the acreage of created freshwater wetlands that could be supported.

The site is a 449.4-acre tract of land, also known as the "Woodson Tract". Approximately one-third of the land, about 150 acres, is intended to be used as created freshwater wetlands or as upstream on-site drainage to said created wetlands. In addition, review of topographic maps for Aransas County show that an additional 676 acres drains to this area from off-site.

Aransas County has a dry subhumid climate. Average annual rainfall is approximately 31 inches. Potential evapotranspiration for the area, at 47 inches, exceeds the available rainfall. Therefore, additional water from off-site runoff is necessary to sustain a wetland site. This study found that sufficient off-site drainage areas do exist to provide the necessary runoff.

In this report, ten years of rainfall data was reviewed and modeled for the water budget on the Woodson Tract. We find that 89 acres of created wetlands can be supported by utilizing the existing hydrologic conditions.

WATER BUDGET ANALYSIS METHODOLOGY

The water budget model is a water balance calculation that accounts for the inputs and outputs of water to and from a designated place. In this case, the place is proposed wetland cells in a generally defined location, while the total acreage of the cells is to be determined. The sources of water inflow are precipitation (directly to the cells) and surface inflow (runoff from upstream drainage areas).

Basic outflows consist of evapotranspiration, or the combined effects of evaporation and the water utilized by plants (transpiration). The water budget model is expressed as the following equation:

$$\text{Water Balance} = P + I - ET$$

Where: P = Precipitation
 I = Surface Inflow (Upstream Runoff)
 ET = Evapotranspiration

When the water budget model finds a surplus or deficit, there are three possibilities. The first condition is an increase or decrease in storage. Storage may be surface water ponded within the wetland cell, or it may be water stored in the soil. The second condition occurs when storage is depleted and the water budget registers a deficit; that condition results in plants having insufficient water and reaching the wilt point. The third condition is the opposite. If storage is at its maximum and the water budget registers a surplus, then the site has excess runoff. Excess runoff is lost to future use.

Precipitation, P

Ten years of daily precipitation data from 2000 to 2009 was obtained from the National Climatic Data Center (NCDC). Unedited Local Climatological Data (ULCD) from the Aransas County Airport Station in Rockport, Texas was collected for years 2000 – 2004. For 2005 – 2009, Quality Controlled Local Climatological Data (QCLCD) was available from the same location. Average rainfall for the studied ten years was found to be 30.16 inches. This correlated favorably with the results of the Texas Water Development Board study, “Ground-Water Resources of Aransas County, Texas” (Dec. 1970), which found an average annual rainfall of 31 inches for the period 1948 to 1966. The collected rainfall data is provided in **Exhibit A**.

For the water budget model, daily precipitation was summarized into monthly precipitation for each of the 120 months. In addition, each month of the year (e.g., January, February, etc.) was combined for the ten-year period to determine average monthly rainfall.

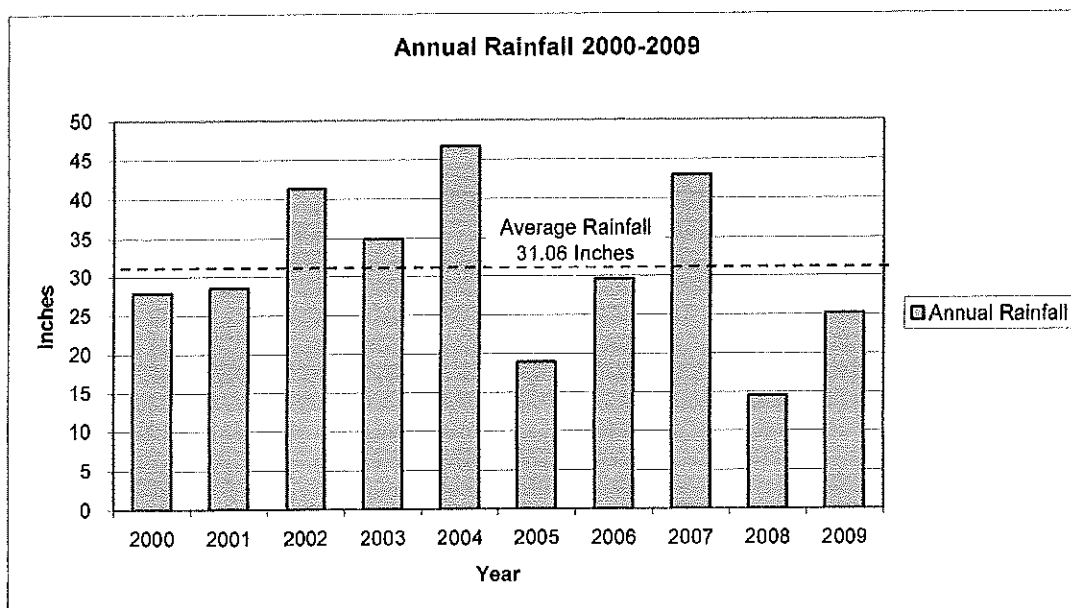


Chart 1

Surface Inflow, I

The amount of surface inflow is determined by precipitation, drainage area, soil characteristics and land use. Surface inflow is calculated as the total runoff from the areas upstream of the wetland cells. The SCS Runoff Curve Number Method was used. The SCS runoff equation is:

$$Q = \frac{(P - I_a)^2}{(P - I_a) + S}$$

Where: Q = Runoff (inches)
P = Precipitation (in.)
S = Potential Maximum Retention after runoff begins (in.)
I_a = Initial Abstraction (in.), losses before runoff begins [I_a = 0.2S]

Drainage Area – The upstream drainage area was delineated using topographic maps and field reconnaissance. Topographic maps were purchased from the Aransas County Surveyor and consisted of GPS-controlled remote sensing data for Live Oak Peninsula. The area is flat terrain, and man-made drainage facilities (ditches and culverts) can possibly redirect significant areas, so field visits were conducted to verify drainage patterns. Visits were made in dry and wet conditions. Two visits were conducted after significant rainfall events. The off-site drainage area found was 676 acres. A map of the drainage area is provided as **Exhibit B**.

Soil Characteristics – The SCS Runoff Curve Number Method uses the hydrologic soil group classification in the determination of runoff. Hydrologic soil classification ranges from Soil Group A, soils with high infiltration and low runoff potential, to Soil Group D, soils with low infiltration/high runoff characteristics. We accessed the Natural Resources Conservation Service (NCRS) online Web Soil Survey. Data for the upstream drainage area comes from the “Soil Survey for San Patricio and Aransas Counties, Texas.” The pertinent soils were in Hydrologic Soil Groups A, C and D. The soil report is provided as **Exhibit C**.

Land Use – Field visits and aerial photography were utilized to assess land use. The area is approximately 60% wooded and 40% grassland/range. Rural, residential settlement predominates the wooded areas and occupies a significant amount of the grasslands. Due to the extent of buildings, roads, driveways and man-made drainage in this area, 85% of the area was designated as “Farmsteads” as defined by USDA’s Technical Release 55, Urban Hydrology for Small Watersheds. The remaining land use was designated as “Pasture, grassland, or range”.

The hydrologic soils groups and land use are combined to create a weighted SCS Runoff Curve Number (CN). The CN is used to determine the Potential Maximum Retention (S) in the following equation:

$$S = \frac{1000}{CN} - 10$$

Calculation of the CN is provided as **Exhibit D**.

Runoff was calculated for each day of the ten-year data. While average annual rainfall is approximately 31 inches, average annual runoff was found to be only 2.43 inches. The result was compared to hydrological studies for counties adjacent to Aransas County. (No similar study was found for Aransas County.)

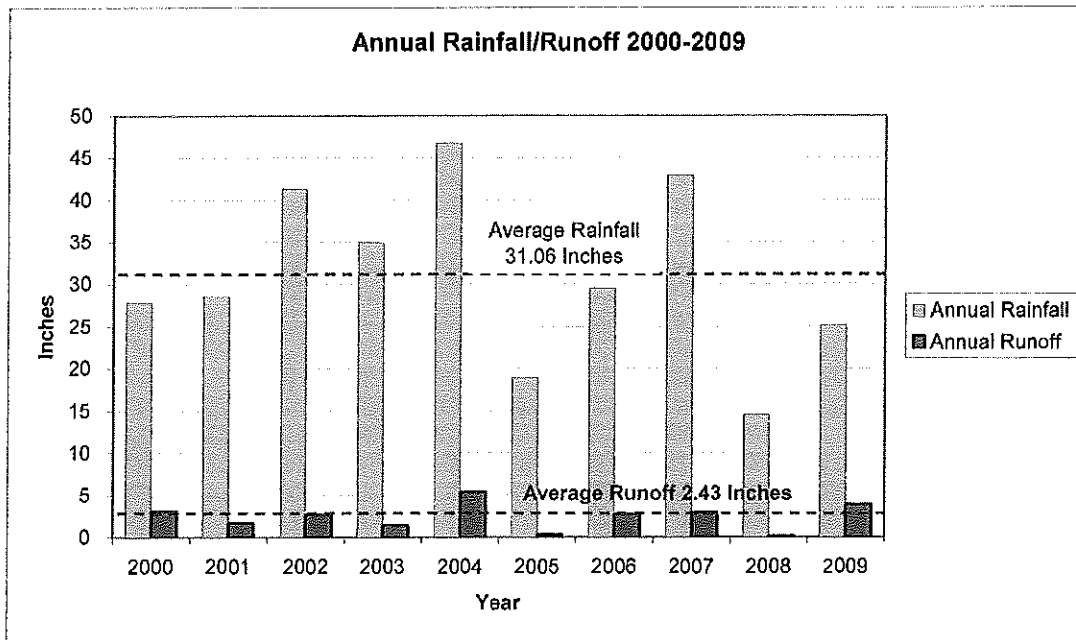


Chart 2

The USGS study, "Hydrological Conditions and Quality of Rainfall and Storm Runoff in Agricultural and Rangeland Areas in San Patricio County, Texas, 200-2001," found runoff to be 1.91 inches and 2.37 inches at two streamflow-gaging stations. That study concluded that "average annual runoff ... is about 2 inches."

The USGS study, "Hydrological Conditions and Water Quality in an Agricultural Area in Kleberg and Nueces Counties, Texas, 1996-98," found an average of 4.02 inches of runoff as a result of 25.86 inches average rainfall over the 3-year study period. The results of this analysis are comparable to the two referenced studies.

The dry climate and soil conditions greatly reduce runoff from upstream areas. For rainfall events that are less than $1\frac{1}{8}$ inches, there is no runoff. Runoff events are interspersed between long periods of no runoff. In response to this situation, the water balance was calculated based on average monthly data and the result was run through the ten years of data to see how the balance responds to yearly and monthly variations.

Surface inflow is multiplied by the ratio of upstream drainage area to wetland cell area. For example: If four acres of upland area has 2.43 inches of runoff into 1 acre of wetlands, then the total inflow is 9.72 inches ($2.43 \text{ in.} \times 4/1 = 9.72 \text{ in.}$).

Evapotranspiration

Evaporation is release of water from a liquid to a gas from the surface of water. Transpiration is the release of water to the atmosphere through plants. Evapotranspiration (ET) is the combined transfer of water to the air. Potential evapotranspiration (PET) is the amount of water that would be transferred under optimal conditions. Actual evapotranspiration (AET) is the amount of water released, but is limited to water availability.

Monthly potential evapotranspiration was calculated using the Thornthwaite Method with correction factors for local heat index. The calculation of monthly PET is provided in **Exhibit E**.

Actual evapotranspiration is less than PET when there is insufficient precipitation, insufficient surface inflow, and depleted storage.

Storage, ST

Storage takes two forms. One form is Surface Water Storage (SWS), which in this case is the maximum depth of ponding in the proposed wetland cells. Per the wetland consultant, the ponding depth is eight (8) inches. The second form is Soil Moisture Storage (SMS), which is the amount of water available to plant within the root zone. The ratio of available water per unit of soil is known as the Available Water Capacity.

Available Water Capacity (AWC) was obtained from the NCRS online Web Soil Survey. The soils report is provided as **Exhibit F**. The area where the wetland cells are likely to be placed is underlain by Dietrich fine sand and Narta fine sandy loam. Both soils have an AWC of 0.08 in./in. Per the wetland consultant, the root zone is six (6) inches. Therefore, the Soil Moisture Storage is 0.48 inches ($0.08 \text{ in./in.} \times 6 \text{ inches}$).

Total Storage is 8.48 inches.

WATER BUDGET ANALYSIS RESULTS AND DISCUSSION

The water budget was analyzed using monthly precipitation, surface inflow, and potential evapotranspiration averaged over the 10-year period of 2000 to 2009. We modeled 676 acres of off-site acreage, which would provide surface inflow. Of the 150 acres that is allocated to freshwater wetlands on the mitigation bank site, land was either allocated to wetland cell or to surface inflow. Using the water budget analysis, we balanced the apportionment of the on-site property to these two uses. We found that the model would support 89 acres of wetland cells. Surface inflow is supplied from 676 acres of off-site drainage area and 61 acres of on-site area.

Table 1 summarizes the water balance for 89 acres of wetland cells and 737 acres of surface inflow.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	ΔST
Precipitation	2.08	0.93	1.88	1.30	2.65	2.97	4.42	1.81	4.57	3.23	4.02	1.20	31.06	
Surface Inflow ¹	0.05	0.00	2.11	0.24	3.32	2.71	2.14	0.41	2.68	1.30	5.07	0.00	20.04	
Potential ET	0.87	1.28	2.22	3.71	5.51	6.96	7.25	7.01	5.92	3.75	1.92	1.05	47.47	
Water Balance	1.26	(0.35)	1.76	(2.17)	0.46	(1.27)	(0.69)	(4.80)	1.33	0.78	7.17	0.15	3.63	
Storage	8.48	8.13	8.48	8.31	6.76	5.49	4.80	0.01	1.34	2.12	8.48	8.48		0.00
Actual ET	0.87	1.28	2.22	3.71	5.51	6.96	7.25	7.01	5.92	3.75	1.92	1.05	47.47	
Deficit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Excess Runoff	1.26	0.00	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.15	3.63	

1. Surface Inflow is multiplied by ratio of upland drainage area to area of wetland cells
 2. All units are in inches.
 3. ΔST = Change in storage
 4. Orange numbers indicate that Surface Water Storage is depleted, but Soil Moisture Storage is available.

Table 1

The aim was to provide (1) no deficit for any average month and (2) replace storage to its original value within the annual cycle. Since water deficits were to be avoided, and given the variable rainfall throughout the year, the ratio of drainage areas to wetland cells was set at a higher level. This results in excess runoff, in wetter months, when the water balance exceeded maximum storage.

Note that:

Precipitation plus Surface Inflow = 31.06 + 20.04 = 51.10 inches, and
 Actual ET plus Excess Runoff = 47.47 + 3.63 = 51.10 inches.

The results are based on average years and are intended to provide long-term water balance. Obviously rainfall will vary from year to year. To see how the results would perform over the study period, the water budget model was run over the full ten-year cycle. The model is provided as **Exhibit G**. A comparison of PET and AET are charted so that times of limited water availability become apparent. From the chart it can be observed that 2007 was one of the wettest periods while 2009 was the driest.

List of Exhibits

- A. National Climatic Data Center (NCDC) Local Climatological Data from January 2000 to December 2009.
- B. Off-site Drainage Area Map
- C. Soil Survey Report – Hydrologic Groups for Off-site Drainage Area
- D. Calculation of Curve Number (CN) using Win-TR55
- E. Adjusted Thornthwaite Monthly Potential Evapotranspiration
- F. Soil Survey Report – Available Water Capacity for On-site Mitigation Area
- G. Ten-Year Water Balance

EXHIBIT A

National Climatic Data Center (NCDC) Local Climatological Data
from January 2000 to December 2009.

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA

(final)

NOAA, National Climatic Data Center

Month: 12/2009

Station Location: ARANSAS COUNTY AIRPORT (12972)

ROCKPORT, TX

Lat. 28.084 Lon. -97.046

Elevation(Ground): 25 ft. above sea level

D a t e	Temperature (Fahrenheit)				Degree Days Base 65 Degrees			Sun		Significant Weather	Snow/Ice on Ground(In)				Precipitation (In)		Pressure(Inches of Hg)		Wind: Speed=mph Dir=tens of degrees				D a t e		
	Max.	Min.	Avg.	Dep From Normal	Avg. Dew pt.	Avg Wet Bulb	Heating	Cooling	Sunrise LST		Sunset LST	1200 UTC	1800 UTC	2400 LST	2400 LST	Avg. Station	Avg. Sea Level	Resultant Speed	Res Dir	Avg. Speed	max 5-second	max 2-minute			
1	2	3	4	5	6	7	8	9	10	11		13	14	15	16	17	18	19	20	21	22	23	24	25	26
01	54	47	51	M	50	51	14	0	-	-	RA BR	M	M	M	0.98	29.72	29.77	10.7	35	13.2	35	320	26	350	01
02	61	44	53	M	44	48	12	0	-	-		M	M	M	0.00	29.87	29.88	8.2	32	10.4	31	330	25	350	02
03	57	43	50	M	40	45	15	0	-	-		M	M	M	0.00	30.14	30.14	8.4	02	9.5	24	020	18	020	03
04	48	35	42	M	34	37	23	0	-	-	RA SN BR	M	M	M	0.16	30.26	30.26	16.4	36	16.7	37	360	28	360	04
05	49	27*	38*	M	34	38	27	0	-	-		M	M	M	0.00	30.17	30.22	4.9	05	5.8	28s	340	12	030	05
06	63	45	54	M	54	55	11	0	-	-	RA FG+ BR	M	M	M	T	29.91	29.95	0.8	35	2.3	17	160	10	150	06
07	60	54	57	M	57	57	8	0	-	-	RA BR	M	M	M	T	29.92	29.96	7.2	04	7.8	18	040	15	030	07
08	73	56	65	M	63	63	0	0	-	-	FG+ FG BR	M	M	M	T	29.67	29.72	0.7	09	5.5	25	240	20	230	08
09	60	42	51	M	44	49	14	0	-	-	FG+ FG BR HZ	M	M	M	0.00	29.94	29.93	13.0	01	13.2	33	040	28	030	09
10	51	38	45	M	35	41	20	0	-	-		M	M	M	0.00	30.13	30.13	10.9	03	11.1	28	050	17	010	10
11	54	47	51	M	45	47	14	0	-	-	RA BR	M	M	M	0.15	30.05	30.09	14.2	04	14.4	26	040	20	050	11
12	56	50	53	M	51	52	12	0	-	-	RA FG+ FG BR	M	M	M	T	30.01	30.04	4.6	33	5.6	17	020	15	030	12
13	55	50	53	M	52	52	12	0	-	-	FG+ FG BR	M	M	M	0.00	30.01	30.05	2.1	02	3.5	12s	050	9	050	13
14	68	54	61	M	61	61	4	0	-	-	FG+ FG BR	M	M	M	T	29.91	29.95	1.8	04	2.3	12	050	8	030	14
15	65	49	57	M	52	54	8	0	-	-	FG+ FG BR	M	M	M	T	30.12	30.11	14.0	01	14.2	33	010	26	010	15
16	49	44	47	M	44	45	18	0	-	-	RA BR	M	M	M	0.65	30.26	30.28	11.9	36	12.1	29	030	22	030	16
17	51	46	49	M	47	48	16	0	-	-	RA BR	M	M	M	T	30.06	30.11	9.8	36	10.0	20	340	16	340	17
18	64	47	56	M	48	50	9	0	-	-	BR	M	M	M	0.00	30.01	30.04	3.6	30	5.0	87s	090	29s	360	18
19	66	46	56	M	43	49	9	0	-	-	BR	M	M	M	0.00	30.16	30.17	5.7	35	5.9	183s	090	24	040	19
20	61	39	50	M	42	46	15	0	-	-		M	M	M	0.00	30.26	30.28	3.1	10	4.6	32s	340	24	070	20
21	71	40	56	M	52	55	9	0	-	-	FG	M	M	M	0.00	30.12	30.17	5.4	13	5.8	23	060	13	140	21
22	73	57	65	M	61	62	0	0	-	-	BR	M	M	M	0.00	29.85	29.91	6.4	16	6.5	21	180	14	170	22
23	73*	60	67*	M	64	65	0	2	-	-	RA BR HZ	M	M	M	T	29.61	29.68	6.5	16	6.9	24	180	15	170	23
24	66	44	55	M	41	48	10	0	-	-	RA BR	M	M	M	T	29.82	29.81	18.2	30	19.9	44	310	30	320	24
25	50	38	44	M	26	37	21	0	-	-	RA BR	M	M	M	0.00	30.06	30.08	7.0	36	9.3	33	340	28	340	25
26	56	44	50	M	44	47	15	0	-	-		M	M	M	T	30.01	30.04	9.8	03	10.0	24	140	15	040	26
27	62	41	52	M	36	45	13	0	-	-		M	M	M	0.00	30.22	30.21	9.3	03	9.7	21	350	16	020	27
28	57	41	49	M	35	42	16	0	-	-		M	M	M	0.00	30.39	30.40	10.0	04	10.2	28	010	22	030	28
29	51	44	48	M	42	45	17	0	-	-	RA BR VCTS	M	M	M	0.22	30.22	30.27	9.7	03	10.1	22	070	17	060	29
30	60	46	53	M	47	49	12	0	-	-	RA FG+ FG BR	M	M	M	0.00s	30.06	30.10	3.4	32	7.0	20	330	16	330	30
31	64	43	54	M	52	53	11	0	-	-		M	M	M	T	30.09	30.09	4.0	02	5.5	39	210	22	350	31
	59.6	45.2	52.4		46.5	49.5	12.4	0.1	<-----Monthly Averages / Totals----->										5.7	01	8.8	<Monthly Average			

Degree Days		Monthly	Season to Date	Time	
Total Departure		385	M	Sea Level	Pressure Date (LST)
Heating: 385		M	M	Maximum	30.50 28 1108
Cooling: 2		M	M	Minimum	29.51 24 0108
Number of Days with ----->				Precipitation >= .01 inch: 0s	
				Precipitation >= .10 inch: 0	
				Snowfall >= 1.0 inch: 8	
				Thunderstorms: 0	
				Data Version: VER2	

* EXTREME FOR THE MONTH - LAST OCCURRENCE IF MORE THAN ONE.

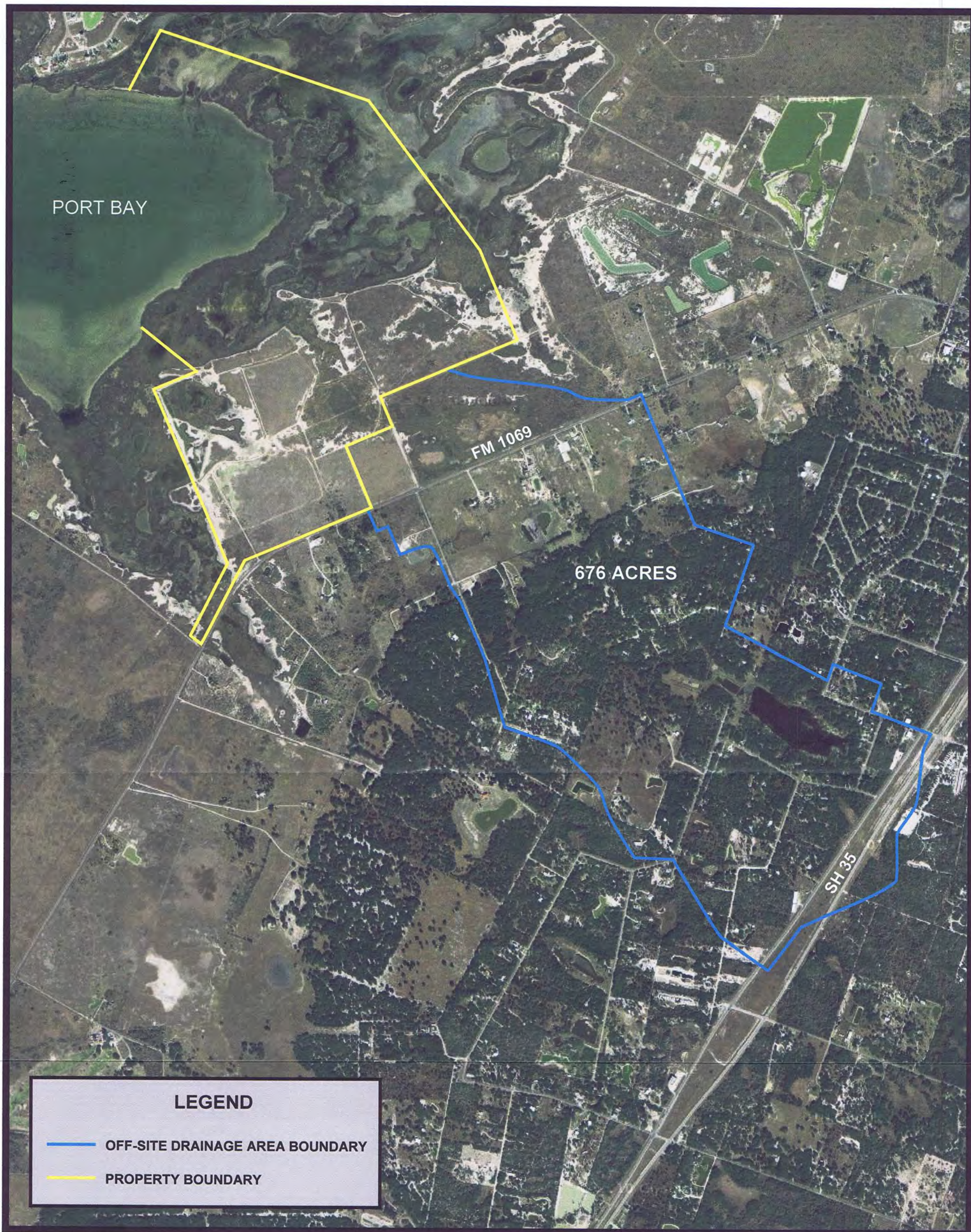
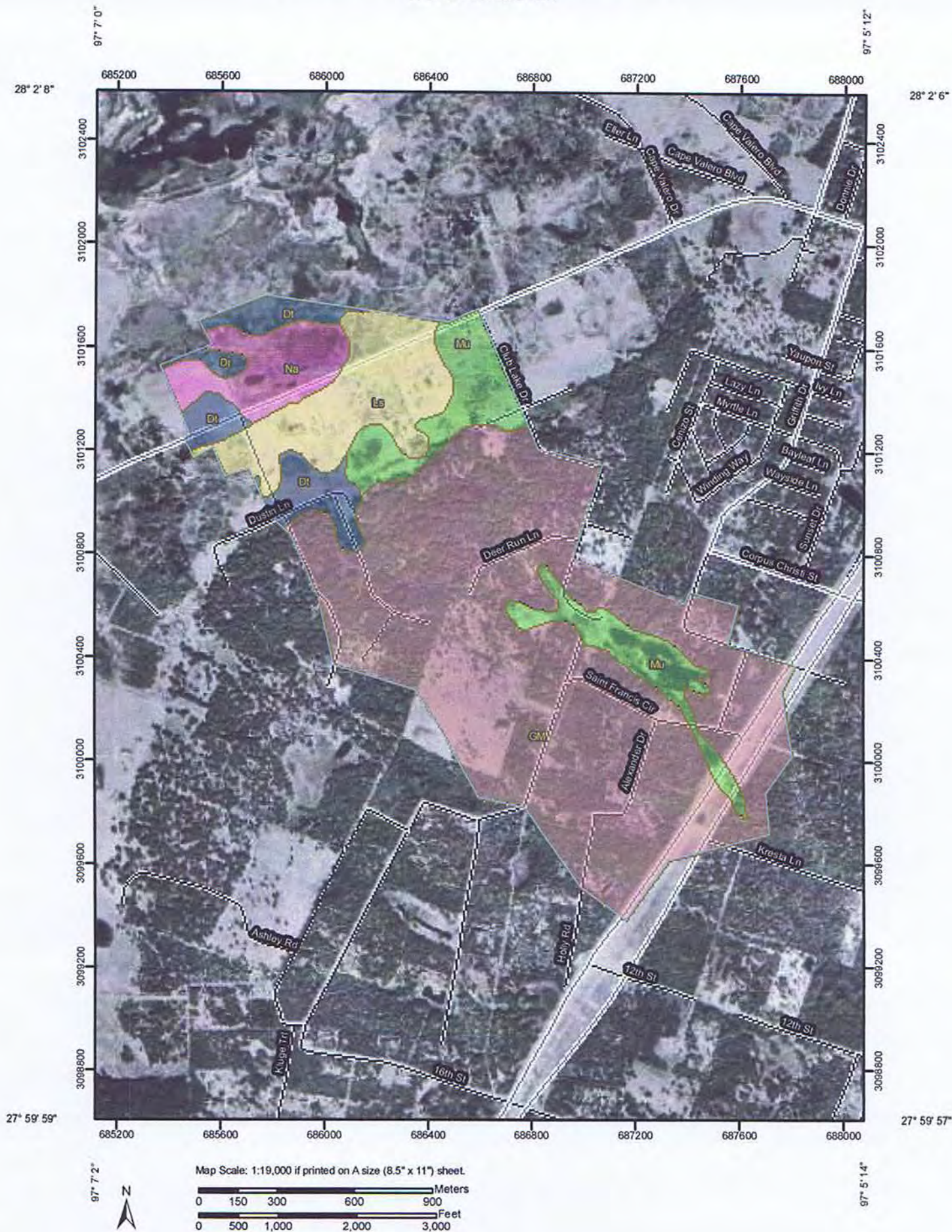


EXHIBIT B – OFF-SITE DRAINAGE AREA

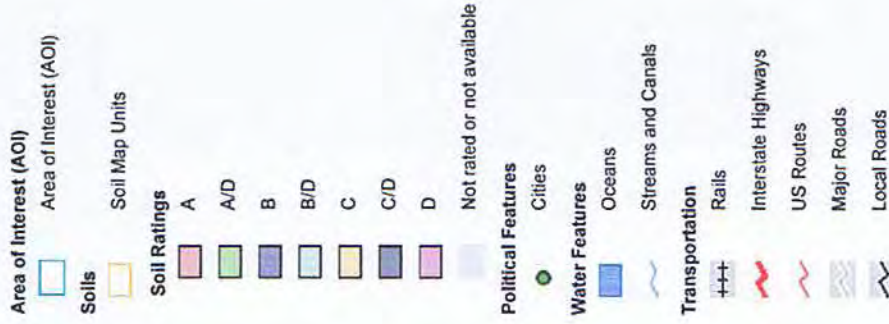
EXHIBIT C

Soil Survey Report – Hydrologic Groups for Off-site Drainage Area

Hydrologic Soil Group—San Patricio and Aransas Counties, Texas (Off-site Drainage Area)



MAP LEGEND



MAP INFORMATION

Map Scale: 1:19,000 if printed on A size (8.5" x 11") sheet.
 The soil surveys that comprise your AOI were mapped at 1:20,000.
 Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 14N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Patricio and Aransas Counties, Texas
 Survey Area Data: Version 6, Oct 27, 2009
 Date(s) aerial images were photographed: 1995

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — San Patricio and Aransas Counties, Texas				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Dt	Dietrich fine sand	C/D	45.4	6.7%
GM	Galveston-Mustang association	A	446.6	65.8%
Ls	Leming loamy fine sand	C	73.8	10.9%
Mu	Mustang fine sand	A/D	72.5	10.7%
Na	Narta fine sandy loam	D	40.4	5.9%
Totals for Area of Interest			678.7	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: All Components

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "All Components" returns the lowest or highest attribute value among all components of the map unit, depending on the corresponding "tie-break" rule. In this case, the "tie-break" rule indicates whether the lowest or highest value among all components should be returned. For this aggregation method, percent composition ties cannot occur.

The result returned by this aggregation method represents either the minimum or maximum value of the corresponding attribute throughout the map unit. The result may well be based on a map unit component of very minor extent.

Component Percent Cutoff: 1

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

CLR, Inc.

EXHIBIT D - PBC Wetlands
Off-site Drainage to Woodson Tract
Aransas County, Texas

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Off-site	Pasture, grassland or range	(fair)	A	144	49
	Pasture, grassland or range	(fair)	C	29	79
	Pasture, grassland or range	(fair)	D	30	84
	Farmsteads		A	337	59
	Farmsteads		C	68	82
	Farmsteads		D	68	86
	Total Area / Weighted Curve Number			676	64
				===	==

EXHIBIT E
Thornthwaite Estimates of Potential Evapotranspiration

Site: PBC Wetlands

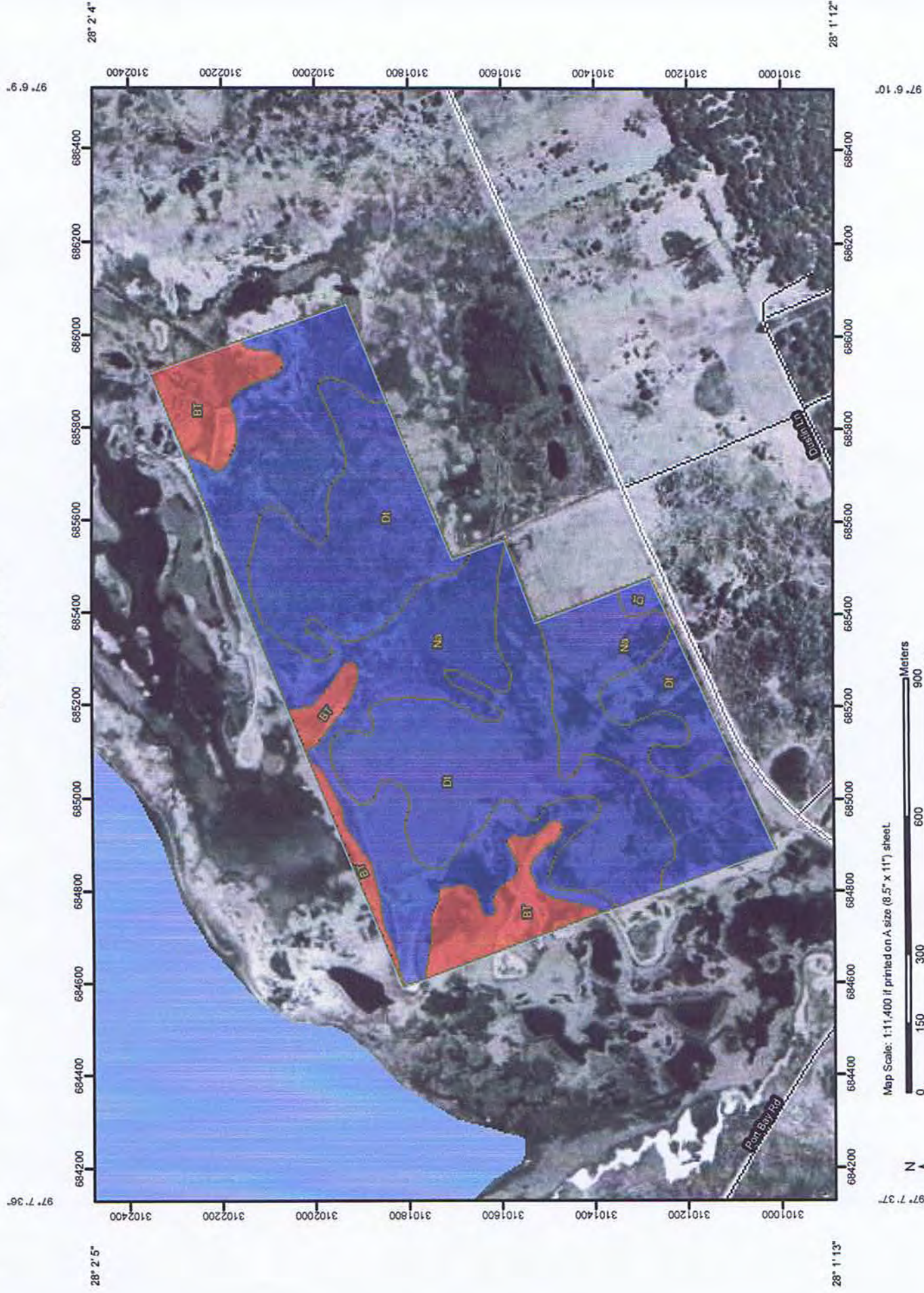
Latitude: 28.1

Hemisphere: N

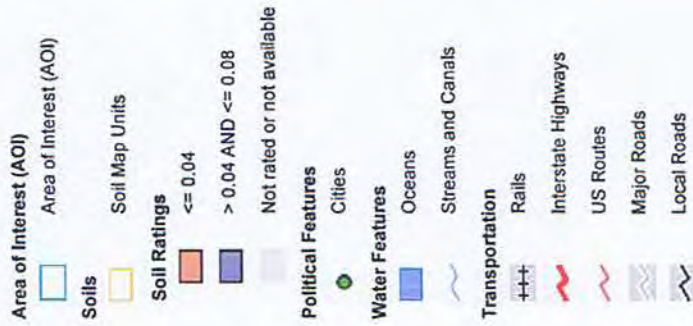
month	mean monthly		unadj PET	adj coeff	Thornthwaite estimates	
	air temp °F	air temp °C			adj PET mm	adj PET in
Jan	56.7	13.7	25	0.88	22	0.87
Feb	60.0	15.6	35	0.94	32	1.28
Mar	65.9	18.8	57	1.00	57	2.22
Apr	72.4	22.4	88	1.07	94	3.71
May	78.1	25.6	124	1.13	140	5.51
June	82.4	28.0	153	1.16	177	6.96
July	84.2	29.0	160	1.15	184	7.25
Aug	84.5	29.2	162	1.10	178	7.01
Sept	81.1	27.3	146	1.03	150	5.92
Oct	74.2	23.4	99	0.96	95	3.75
Nov	65.4	18.6	54	0.90	49	1.92
Dec	58.8	14.9	31	0.86	27	1.05
Annual Total		-	1134	-	1206	47.47
annual heat index constant		I = a =	114.94 2.56			

EXHIBIT F

Soil Survey Report – Available Water Capacity for On-site Mitigation Area



MAP LEGEND



MAP INFORMATION

Map Scale: 1:11,400 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 14N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Patricio and Aransas Counties, Texas
Survey Area Data: Version 6, Oct 27, 2009

Date(s) aerial images were photographed: 1995

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Available Water Capacity

Available Water Capacity— Summary by Map Unit — San Patricio and Aransas Counties, Texas				
Map unit symbol	Map unit name	Rating (centimeters per centimeter)	Acres in AOI	Percent of AOI
BT	Barrada-Tatton association	0.04	27.0	11.9%
Dt	Dietrich fine sand	0.08	94.6	41.7%
Na	Narta fine sandy loam	0.08	105.0	46.4%
Totals for Area of Interest			226.5	100.0%

Description

Available water capacity (AWC) refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in centimeters of water per centimeter of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure, with corrections for salinity and rock fragments. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. It is not an estimate of the quantity of water actually available to plants at any given time.

Available water supply (AWS) is computed as AWC times the thickness of the soil. For example, if AWC is 0.15 cm/cm, the available water supply for 25 centimeters of soil would be 0.15×25 , or 3.75 centimeters of water.

For each soil layer, AWC is recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters per centimeter

Aggregation Method: Weighted Average

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Weighted Average" computes a weighted average value for all components in the map unit. Percent composition is the weighting factor.

The result returned by this aggregation method represents a weighted average value of the corresponding attribute throughout the map unit.

Component Percent Cutoff: 1

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Interpret Nulls as Zero: No

This option indicates if a null value for a component should be converted to zero before aggregation occurs. This will be done only if a map unit has at least one component where this value is not null.

Layer Options: Depth Range

For an attribute of a soil horizon, a depth qualification must be specified. In most cases it is probably most appropriate to specify a fixed depth range, either in centimeters or inches. The Bottom Depth must be greater than the Top Depth, and the Top Depth can be greater than zero. The choice of "inches" or "centimeters" only applies to the depth of soil to be evaluated. It has no influence on the units of measure the data are presented in.

When "Surface Layer" is specified as the depth qualifier, only the surface layer or horizon is considered when deriving a value for a component, but keep in mind that the thickness of the surface layer varies from component to component.

When "All Layers" is specified as the depth qualifier, all layers recorded for a component are considered when deriving the value for that component.

Whenever more than one layer or horizon is considered when deriving a value for a component, and the attribute being aggregated is a numeric attribute, a weighted average value is returned, where the weighting factor is the layer or horizon thickness.

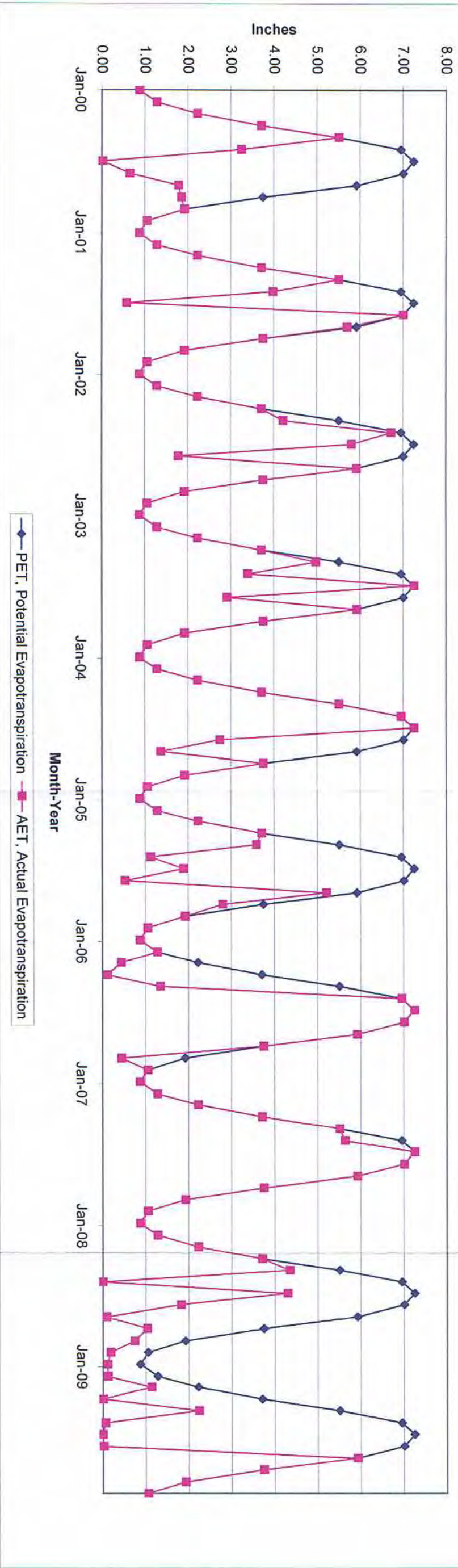
Top Depth: 0

Bottom Depth: 6

Units of Measure: Inches

EXHIBIT G

Water Balance 2000-2009



2000													2001												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
P																									
	Precipitation (in.)	3.02	1.15	6.69	1.61	1.81	0.57	0.02	0.65	1.78	1.85	6.54	2.19	2.43	0.71	2.07	0.05	2.18	2.08	0.58	7.16	1.47	3.12	5.47	1.23
	Upstream Runoff	0.04	0.00	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.50	0.00	0.12	0.97	0.00
I	Surface Inflow	0.36	0.00	18.80	0.00	0.00	0.00	0.00	0.00	0.01	0.00	6.31	0.00	0.00	0.00	0.00	0.00	1.14	0.00	0.00	4.09	0.00	0.95	7.98	0.00
PET	Potential Evapotranspiration	0.87	1.28	2.22	3.71	5.51	6.96	7.25	7.01	5.92	3.75	1.92	1.05	0.87	1.28	2.22	3.71	5.51	6.96	7.25	7.01	5.92	3.75	1.92	1.05
P + I - ET	Water Balance	2.51	(0.13)	23.27	(2.10)	(3.70)	(6.39)	(7.23)	(6.36)	(4.14)	(1.90)	10.93	1.14	1.56	(0.57)	(0.15)	(3.66)	(2.19)	(4.88)	(6.67)	4.24	(4.45)	0.32	11.53	0.18
ST	Storage = SWS + SMS	8.48	8.35	8.48	6.38	2.67	0.00	0.00	0.00	0.00	0.00	8.48	8.48	8.48	7.91	7.76	4.10	1.90	0.00	0.00	4.24	0.00	0.32	8.48	8.48
AET	Actual Evapotranspiration	0.87	1.28	2.22	3.71	5.51	3.24	0.02	0.65	1.79	1.85	1.92	1.05	0.87	1.28	2.22	3.71	5.51	3.98	0.58	7.01	5.71	3.75	1.92	1.05
D	Deficit	0.00	0.00	0.00	0.00	0.00	3.71	7.23	6.36	4.14	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.97	6.67	0.00	0.22	0.00	0.00	0.00
R	Excess Runoff (in.)	2.51	0.00	23.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.45	1.14	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.37	0.18	

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
P	Precipitation (in.)	0.76	0.56	0.24	0.08	1.83	4.35	5.12	1.78	9.67	8.70	5.74	2.48	2.41	2.05	2.44	0.18	0.03	3.39	6.52	2.39	10.93	2.83	1.07	0.69
	Upstream Runoff	0.00	0.00	0.00	0.00	0.04	0.29	0.08	0.00	0.52	1.37	0.35	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.15	0.00	1.27	0.01	0.00	0.00
I	Surface Inflow	0.00	0.00	0.00	0.00	0.36	2.38	0.69	0.00	4.33	11.29	2.87	0.00	0.00	0.00	0.05	0.00	0.00	0.00	1.25	0.00	10.45	0.08	0.00	0.00
PET	Potential Evapotranspiration	0.87	1.28	2.22	3.71	5.51	6.96	7.25	7.01	5.92	3.75	1.92	1.05	0.87	1.28	2.22	3.71	5.51	6.96	7.25	7.01	5.92	3.75	1.92	1.05
P + I - ET	Water Balance	(0.11)	(0.72)	(1.98)	(3.63)	(3.33)	(0.23)	(1.44)	(5.23)	8.08	16.24	6.69	1.43	1.54	0.77	0.26	(3.53)	(5.48)	(3.57)	0.52	(4.62)	15.46	(0.84)	(0.85)	(0.36)
ST	Storage = SWS + SMS	8.37	7.65	5.67	2.03	0.00	0.00	0.00	0.00	8.08	8.48	8.48	8.48	8.48	8.48	8.48	4.95	0.00	0.00	0.52	0.00	8.48	7.64	6.79	6.43
AET	Actual Evapotranspiration	0.87	1.28	2.22	3.71	4.22	6.73	5.81	1.78	5.92	3.75	1.92	1.05	0.87	1.28	2.22	3.71	4.98	3.39	7.25	2.91	5.92	3.75	1.92	1.05
D	Deficit	0.00	0.00	0.00	0.00	1.29	0.23	1.44	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	3.57	0.00	4.10	0.00	0.00	0.00	0.00
R	Excess Runoff (in.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.83	6.69	1.43	1.54	0.77	0.26	0.00	0.00	0.00	0.00	0.00	6.98	0.00	0.00	0.00

EXHIBIT G

2004											
P	Precipitation (in.)	1.91	2.46	0.97	6.30	12.99	8.46	0.97	0.54	1.36	4.95
	Upstream Runoff	0.00	0.00	0.00	0.26	3.82	1.06	0.00	0.00	0.00	0.04
I	Surface Inflow	0.00	0.00	0.00	2.14	31.50	8.73	0.00	0.00	0.00	0.36
PET	Potential Evapotranspiration	0.87	1.28	2.22	3.71	5.51	6.96	7.25	7.01	5.92	3.75
P + I - ET	Water Balance	1.04	1.18	(1.25)	4.73	38.97	10.24	(6.28)	(6.47)	(4.56)	1.55
ST	Storage = SWS + SMS	7.47	8.48	7.23	8.48	8.48	8.48	2.20	0.00	0.00	1.55
AET	Actual Evapotranspiration	0.87	1.28	2.22	3.71	5.51	6.96	7.25	2.74	1.36	3.75
D	Deficit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.27	4.56	0.00
R	Excess Runoff (in.)	0.00	0.17	0.00	3.47	38.97	10.24	0.00	0.00	0.00	0.00
2005											
P	Precipitation (in.)	1.06	1.71	0.30	0.00	2.46	1.12	1.89	0.53	4.06	2.80
	Upstream Runoff	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00
I	Surface Inflow	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.15	0.00
PET	Potential Evapotranspiration	0.87	1.28	2.22	3.71	5.51	6.96	7.25	7.01	5.92	3.75
P + I - ET	Water Balance	0.19	0.44	(1.92)	(3.71)	(3.05)	(5.84)	(5.36)	(6.48)	(0.71)	(0.95)
ST	Storage = SWS + SMS	6.32	6.76	4.84	1.13	0.00	0.00	0.00	0.00	0.00	2.49
AET	Actual Evapotranspiration	0.87	1.28	2.22	3.71	5.51	6.96	7.25	1.89	0.53	5.21
D	Deficit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
R	Excess Runoff (in.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2006											
P	Precipitation (in.)	0.61	0.16	0.20	0.12	1.34	6.13	11.74	0.51	4.43	2.37
	Upstream Runoff	0.00	0.00	0.00	0.00	0.00	1.94	0.65	0.00	0.12	0.00
I	Surface Inflow	0.00	0.00	0.00	0.00	0.00	16.03	5.40	0.00	0.99	0.00
PET	Potential Evapotranspiration	0.87	1.28	2.22	3.71	5.51	6.96	7.25	7.01	5.92	3.75
P + I - ET	Water Balance	(0.26)	(1.12)	(2.02)	(3.59)	(4.17)	15.20	9.89	(6.50)	(0.51)	(1.38)
ST	Storage = SWS + SMS	1.35	0.24	0.00	0.00	0.00	8.48	8.48	1.98	1.47	0.09
AET	Actual Evapotranspiration	0.87	1.28	0.44	0.12	1.34	6.96	7.25	7.01	5.92	3.75
D	Deficit	0.00	0.00	1.79	3.59	4.17	0.00	0.00	0.00	0.00	0.00
R	Excess Runoff (in.)	0.00	0.00	0.00	0.00	0.00	6.72	9.89	0.00	0.00	0.00
2007											
P	Precipitation (in.)	5.33	0.04	4.04	1.86	1.58	3.54	13.94	2.68	6.80	1.64
	Upstream Runoff	0.01	0.00	0.27	0.00	0.00	0.00	1.60	0.00	1.05	0.00
I	Surface Inflow	0.11	0.00	2.20	0.00	0.00	0.00	13.18	0.00	8.69	0.00
PET	Potential Evapotranspiration	0.87	1.28	2.22	3.71	5.51	6.96	7.25	7.01	5.92	3.75
P + I - ET	Water Balance	4.57	(1.24)	4.02	(1.85)	(3.93)	(3.42)	19.87	(4.33)	9.56	(2.11)
ST	Storage = SWS + SMS	5.11	3.87	7.88	6.03	2.10	0.00	8.48	4.15	8.48	6.37
AET	Actual Evapotranspiration	0.87	1.28	2.22	3.71	5.51	5.64	7.25	7.01	5.92	3.75
D	Deficit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
R	Excess Runoff (in.)	0.00	0.00	0.00	0.00	0.00	0.00	11.39	0.00	5.23	0.00
2008											
P	Precipitation (in.)	3.16	0.32	0.75	2.77	0.26	0.00	3.43	1.82	0.09	1.03
	Upstream Runoff	0.00	0.00	0.00	0.04	0.00	0.00	0.11	0.00	0.00	0.00
I	Surface Inflow	0.00	0.00	0.00	0.29	0.00	0.00	0.87	0.00	0.00	0.00
PET	Potential Evapotranspiration	0.87	1.28	2.22	3.71	5.51	6.96	7.25	7.01	5.92	3.75
P + I - ET	Water Balance	2.29	(0.96)	(1.47)	(0.65)	(5.25)	(6.96)	(2.95)	(5.19)	(5.83)	(2.72)
ST	Storage = SWS + SMS	7.17	6.22	4.74	4.09	0.00	0.00	0.00	0.00	0.00	0.00
AET	Actual Evapotranspiration	0.87	1.28	2.22	3.71	4.35	0.00	4.30	1.82	0.09	1.03
D	Deficit	0.00	0.00	0.00	0.00	1.16	6.96	2.95	5.19	5.83	2.72
R	Excess Runoff (in.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2009											
P	Precipitation (in.)	0.11	0.12	1.13	0.01	2.00	0.06	0.00	0.02	5.12	3.03
	Upstream Runoff	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.15	0.04
I	Surface Inflow	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	1.23	0.34
PET	Potential Evapotranspiration	0.87	1.28	2.22	3.71	5.51	6.96	7.25	7.01	5.92	3.75
P + I - ET	Water Balance	(0.76)	(1.16)	(1.09)	(3.70)	(3.28)	(6.90)	(7.25)	(6.99)	0.43	(0.38)
ST	Storage = SWS + SMS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.05
AET	Actual Evapotranspiration	0.11	0.12	1.13	0.01	2.24	0.06	0.00	0.02	5.92	3.75
D	Deficit	0.76	1.16	1.09	3.70	3.28	6.90	7.25	6.99	0.00	1.92
R	Excess Runoff (in.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.33

1. Orange numbers indicate that Surface Water Storage is depleted, but Soil Moisture Storage is Available.
2. Red numbers indicate that Storage is depleted and that there is a water deficit.

K. Other

WORK PLAN

CONSTRUCTION MONITORING AND METHODS FOR PIPING PLOVER, RED KNOT, EASTERN BLACK RAIL, NORTHERN APLOMADO FALCON, &WHOOPING CRANE

COASTAL BEND WETLAND MITIGATION BANK

PERMIT NO. SWG-2008-00922

ARANSAS COUNTY, TEXAS

APRIL 2023

INTRODUCTION

This Work Plan addresses current concerns of federally listed threatened and endangered species and their habitat near the proposed Coastal Bend Wetland Mitigation Bank (CBWMB; 'The Bank') in Aransas County, Texas. Piping plover and red knot individuals and their wintering habitat have been recorded along much of the beach. Potential eastern black rail habitat is also noted within portions dominated by drooping gulf cordgrass (*Spartina spartinae*). The site location also lends itself as potential temporary foraging location for whooping cranes as they travel to their wintering preferred location at the Aransas Wildlife Refuge. In addition, this plan includes construction avoidance and minimization methods to reduce disturbance of species during active construction. Therefore, Berg-Oliver Associates, Inc., on behalf of PBC Wetlands, L.L.C., has prepared this Work Plan to present protocol and control measures for monitoring the site during construction and ensuring compliance with Section 7 of the Threatened and Endangered Species Act. If modifications to construction methods and/or scheduling are needed as the project progresses, the United States Fish and Wildlife Service (USFWS) will be consulted prior to any modification to ensure continued avoidance of all listed threatened and endangered species.

DESCRIPTION OF PROJECT

The CBWMB property has historically been used for cattle grazing and hunting. This use remains in place until such time the CBWMB mitigation bank proposal is approved by the regulatory agencies. The goal of the CBWMB is to restore, enhance, establish, and protect tidal marsh, and coastal tidal fringe wetland habitats throughout the Bank property to satisfy the needs of the watershed. The Bank proposes to enhance a total of 25.51 acres of existing high marsh wetlands, enhance a total of 14.85 acres of existing low marsh, establish a total of 22.43 acres of adjacent wetlands, and enhance a total of 1.78 acres of existing sand flats to marsh habitat. The enhancement and establishment will be separated into two (2) phases: Phase I - establish 13.00 acres of high marsh tidal fringe wetlands; enhance 3.35 acres of low marsh tidal fringe wetlands; enhance 5.95 acres of high marsh tidal fringe wetlands and enhance 0.48 acres of sand flats. Phase II will consist of establishing 9.43 acres of high marsh tidal fringe wetlands; enhancing 11.50 acres of low marsh tidal fringe wetlands; enhancing 19.56 acres of high marsh tidal fringe wetlands and enhancing 1.30 acres of sand flats. Additionally, improvements to the subject property include removing a man-made barrier to increase tidal flux to the enhanced wetlands and removing a man-made ditch to further improve hydrology to the area.

CONSTRUCTION DETAILS

Phase I

Phase I lies in the northeastern most portion of the Bank property (**Appendix D**) Construction is scheduled to begin immediately upon execution of this MBI. Construction start date will be contingent upon existing lease agreements and current weather conditions but will begin no later than two years upon execution of the MBI. Weather permitting, construction is anticipated to be completed within one (1) calendar year from the construction start date. Coordination efforts with USFWS will occur for endangered species if construction is proposed to commence during mid-May through mid-July.

Phase I is proposed to consist of approximately 13.00 acres of established high marsh tidal fringe wetlands, 5.95 acres of enhanced high marsh tidal fringe wetlands, 3.35 acres of enhanced low marsh tidal fringe wetlands, and 0.48 acres of enhanced sand flats.

- a. Tidal fringe wetlands and sand flats proposed to be enhanced will be created by mechanically removing the hydrological barriers presented by existing berms and roadway restrictions (**Appendices C-D**). Tidal fringe wetlands proposed to be established will be created by the excavation of earthen material, ranging between six (6) and twelve (12) inches. These elevations are based on LIDAR (**Appendix B**) and will be verified prior to work commencing. Established tidal fringe wetlands will be planted with up to 5,600 plants per acre on three (3) foot centers, depending upon the specific hydrology and seed source and/or transplant species availability. It is a goal of the Bank to utilize on-site native vegetation by transplanting select species from within the Bank property to the establishment and enhanced areas. If on-site sources are insufficient, additional transplant resources from adjacent properties may be utilized. A regionally specific plant list has been created through the review of representative wetlands both on the Bank property and throughout the immediate Texas gulf coast region (**Appendix I**).
- b. High marsh wetlands will be established through the removal of existing earthen material in order to create a concave topographic shape which will allow for various water depths within the established wetlands. Approximately three (3) to six (6) inches of the top soil will be removed and redistributed within the established wetlands in order to utilize the valuable organic matter, nutrients, and seed source. Topsoil within the proposed establishment areas will be temporarily side-cast and evenly redistributed across the bottom of the establishment area, upon completion of the achieved excavated depth. All other excavated side-cast material not to be redistributed back in the establishment areas will be moved off of the Bank property and disposed of properly. Additionally, any existing high marsh wetlands proposed for enhancement that will require cattail removal efforts to be performed throughout the wetland boundary and will be planted with other native plant species to be determined upon consultation with the USFWS.
- c. Low marsh enhancement may include reestablishment of hydrology by the removal of portions of the abandoned oil and gas roadway access points.

Phase II

Phase II is located immediately adjacent and northwest of Phase I. Phase II is proposed to consist of the establishment of 9.43 acres of high marsh tidal fringe wetland, 19.56 acres of high marsh tidal fringe enhancement, 11.50 acres of low marsh tidal fringe wetland enhancement, and 1.30 acres of enhanced sand flats (**Appendix E**). Phase II construction will begin once it is determined that Phase I performance standards have been adequately met and the Sponsor has had the opportunity to implement corrective measures with any issues that may arise with Phase I success. Weather permitting, Phase II construction is anticipated to be completed within one (1) calendar year from the construction start date. Coordination efforts with USFWS will occur for endangered species if construction is proposed to commence during mid-July through mid-May.

- a. Tidal fringe wetlands and sand flats proposed to be enhanced will be created by mechanically removing the hydrological barriers presented by existing berms and roadway restrictions (**Appendices C & E**). Further enhancement will be accomplished by shallow excavation to a maximum depth of six (6) inches to model coastal depressions. These elevations are based on LIDAR (**Appendix B**) and will be verified prior to work commencing. If the Sponsor lacks the financial resources to do so, the Service reiterates its concern that this plan is at high risk of

failure due to under capitalization. Established tidal fringe wetlands will be planted with up to 5,600 plants per acre on three (3) foot centers, depending upon the specific hydrology and seed source and/or transplant species availability. It is a goal of the bank to utilize the existing plant species composition currently on the Bank property. A regionally specific plant list has been created through the review of representative wetlands both on the Bank property and throughout the immediate Texas gulf coast region (**Appendix I**).

- b. High marsh wetlands will be established through the same methodology as depicted in Phase I. High marsh wetlands will be established through material being removed in order to create a concave topographic shape which will allow for various water depths within the wetland re-established by the removal of abandoned oil and gas access and other man-induced alterations. Approximately three (3) to six (6) inches of the top soil will be removed and redistributed within the newly excavated areas in order to utilize the valuable organic matter, nutrients, and seed source. All other excavated side-cast material not to be redistributed back in the establishment areas will be moved off of the Bank property and disposed of properly. Additionally, any existing high marsh wetlands proposed for enhancement that will require cattail removal efforts to be performed throughout the wetland boundary and will be planted with shrubs, including but not limited to *Baccharis sp.* and *Iva frutescens*.
- c. Low marsh wetland enhancement will be accomplished by removing the roadway access barrier as noted in Phase I, which will provide the necessary establishment of hydrology to the area.

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES

This shoreline is considered potential wintering habitat for the piping plover and the red knot (migratory birds). These species are on the current federal list of Aransas County threatened and endangered species.

Based on the preferred habitat of the listed species and conditions near Port Bay, of particular concern to the proposed mitigation bank are the piping plover and red knot (shoreline birds).

- **Piping Plovers**

While piping plovers do exist in the area, there have been no confirmed sightings within the project site. In 2002, the National Audubon Society and the Cornell Lab of Ornithology launched eBird, a citizen-based bird observation network which records and verifies abundance and distribution of birds across the world. Though according to eBird, no piping plovers have been observed on the project site in recent years, the site has restricted access, and most visitors are comprised of hunters who do not typically record sightings of non-game species. Nearby piping plover sightings according to eBird consist of 2 in 2017 approximately 5,000 feet to the north, 1 in 1993 approximately 10,000 feet to the north, and 1 in 1983 approximately 5,000 feet to the north. Nearby Rockport Beach (~5 miles east) also has a moderate amount of sightings in recent years. On Rockport Beach, the following piping plover observations have been made: 3 in 2016, 20 in 2015, 1 in 2014, 23 in 2013, 6 in 2012, 4 in 2011, and 4 in 2008. These data indicate that both suitable habitat and piping plover

individuals do exist in the general vicinity of the project site, and the potential for piping plovers to be present within the proposed project area is high.

Piping plovers would likely occur as migrants and wintering birds arriving on-site between late July and September, and may be expected to utilize the habitat to some extent throughout the winter period. Numbers may peak in October during migratory staging periods. The birds have generally vacated Texas beaches by mid-May.

- **Red Knots**

According to eBird, a red knot was observed approximately 1,000 feet to the west of the site on April 28, 2018. Though according to eBird, no red knots have been observed on the project site at any point. This location has restricted access, and most visitors are comprised of hunters who do not typically record sightings of non-game species. However, nearby Rockport Beach has had sightings of this species in recent years. On Rockport Beach, the following red knot observations have been made: 4 in 2017 and 4 in 2013. These data indicate that both suitable habitat and red knot individuals do exist in the general vicinity, and the potential for red knot to be present within the proposed project area is high.

The red knot uses Texas coastal sand flats for overwintering habitat and stopover habitat during its long migrations between the Canadian Arctic and coastal sand flats ranging from North Carolina all the way to the tip of South America. As such, the red knot may be observed along the Texas coast beginning in fall and continuing through the spring, along with migrating piping plovers.

- **Eastern Black Rail**

While a review of online birdwatching databases revealed no sightings in or around the action area in recent years, the lack of public access and the nocturnal and otherwise secretive nature of these birds makes it impossible to rule out their presence. Additionally, the nearby San Bernard Wildlife Refuge is known to harbor a sizeable population of rails (Haverland 2019). Therefore, the presence of this species within the action area is possible.

The eastern black rail is a reclusive bird, preferring to live in dense vegetation in and around wetlands of various salinities. This species is often nocturnal, and during the day has a preference to walk hidden in tall grasses instead of fly and rarely makes a call. Preferred habitat includes gulf cordgrass (*Spartina spartinae*), marshhay cordgrass (*Spartina patens*), sea-oxeye daisy (*Borrchia frutescens*), and has minimal woody cover (Oberholser 1974). No critical habitat has been designated.

- **Whooping Crane**

Whooping cranes winter on the Aransas National Wildlife Refuge, near Rockport, using the salt flats and marshes. The area's coastal prairie is dotted with swales and ponds. Their diet consists of blue crabs, clams, frogs, minnows, rodents, small birds, and berries. Whooping cranes begin their fall migration south to Texas in mid-September and begin the spring migration north to Canada in late March or early April.

There have been noted expansions of the whooping cranes wintering range immediately outside

the Aransas Wildlife Refuge. According to e-Bird, no whooping cranes have been observed within the action area. However, their wintering grounds are located approximately 10 miles to the north of the action area along the coast, and several specimens have been observed within 5 miles of the action area, hence there is a potential for cranes to rest or forage within the action area any time during November 1 through April 30 of any given year.

CONSTRUCTION PROTOCOLS / CONTROL MEASURES

- **Construction Schedule:**

- **Seasonal:**

Prior to any construction a site review for potential eastern black rail and aplomado falcon occurrence will be conducted as the vulnerable season for these species is March 1 through September 30. For all species clearing must be done in a way that allows for the escape of the birds towards refugia areas which will remain after the completion of the project. Project managers should avoid clearing in a way that creates isolated pockets of suitable black rail habitat. In part, this is accomplished by linear clearing in the direction of refugia and avoiding clearing by decreasing concentric circles (start in the middle and work toward the outside). Ground rutting and long-term surface damage (not associated with the approved construction) must be avoided in potential black rail habitat. Propagation of woody species within potential black rail habitat should also be avoided. Pre-construction surveys will occur daily in advance of construction.

Given the relatively moderate abundance of wintering Piping Plovers and Red Knots near this location, avoidance of the shorebirds' peak season will be prioritized. The full construction timeline would be approximately 30-45 days, beginning no sooner than mid-May and ending before mid-July, a timeframe when Piping Plovers and Red Knots should be absent. All construction activities involving dirt movement and machinery would be completed within the mid-May through mid-July window. Planting may occur outside this period as the plantings will be conducted manually. The seasonal Whooping crane avoidance measures include 1) only permit construction from May 1- October 30. If the construction window should approach these dates, the USFWS will be contacted, 2) if construction is necessary during the whooping crane wintering season (Nov 1 – April 30), all work crews will be trained in whooping crane identification prior to construction, 3) all habitat used by endangered species will be considered for further consultation with the Service if avoidance is unattainable by construction efforts.

Provided the protocols in this document are implemented, construction activities “**may affect, but are not likely to affect**” threatened and endangered species. If construction activities proceed beyond mid-July (due to delays beyond the applicant's control, including weather), when Piping Plovers and Red Knots begin to return to the beaches, monitors will survey the proposed project area for presence of shorebirds.

- **Daily:**

Daily monitoring will only take place if construction activities occur outside the mid-May through mid-July period. If this does occur, daily construction activity will not begin until after monitors have surveyed the construction site for any federally listed species. Monitors will survey the site, and approximately 500 feet (152 meters) in all

directions from the active work site, for a minimum of 30 minutes each morning, beginning at sunrise. If any listed species are observed within the vicinity of the active worksite, construction will not commence until all individuals have left the area on their own and the USFWS has been notified. Throughout the day, monitors will continue to survey the work zone and surrounding 500-foot survey areas. If any listed species are observed at any point throughout the day, construction will cease until all individuals have left the area on their own and the USFWS has been notified. All onshore construction will end at sunset each day. The daily Whooping crane avoidance and minimization measures include; 1) if a whooping crane is identified within 1,000 feet of an active construction area, all work shall immediately cease. When the crane has left the 1,000 foot area on its own accord, work may continue, 2) all equipment greater than 15 feet high should be laid down at dusk and overnight to avoid whooping crane strikes during times of low visibility, 3) if equipment cannot be laid down at dusk or overnight, then such equipment will be marked using surveyor flagging tape, red plastic balls, or other suitable marking devices and lighted during inclement weather conditions when low light and or fog is present, 4) all whooping crane sightings should immediately be reported to the Texas Coastal Ecological Services Field Office at (361) 533-6765.

- **Clearing and Propagation Methods:**

Clearing must be done in a way that allows for the escape of the birds towards refugia areas which will remain after the completion of the project. Project managers should avoid clearing in a way that creates isolated pockets of suitable black rail habitat. In part, this is accomplished by linear clearing in the direction of refugia and avoiding clearing by decreasing concentric circles (start in the middle and work toward the outside). Ground rutting and long-term surface damage (not associated with the approved construction) must be avoided in potential black rail habitat. Propagation of woody species within potential black rail habitat should also be avoided. Pre-construction surveys will occur daily in advance of construction.

- **Monitoring:**

PBC Wetlands, L.L.C. is responsible for ensuring that daily bird survey, protection, and monitoring program is conducted during construction activities that take place outside of the mid-May through mid-July timeframe. The USFWS should be notified of any listed threatened and endangered species sighting immediately, and DAILY LOG data will be submitted to the USFWS within 60 days of completion of the construction.

- **Monitor Credentials**

The monitoring program would be conducted only by individuals possessing appropriate expertise in the protocol trained by the USFWS. At the beginning of each work day, protected species Monitors will hold a meeting with all contractor/consultant employees to cover endangered species identification and possible locations, truck and equipment restrictions on the beach, and instructions as to stop work upon direction of the Monitor or at the sighting of any suspected threatened or endangered species.

- **Schedule**

Monitors will survey the site for a minimum of 30 minutes each morning, beginning at

sunrise, and record any observations in the attached DAILY LOG data form. To detect any Piping Plover or Red Knots that are present, the Monitor will conduct surveys **prior** to morning construction activities within 500 feet in all directions surrounding the worksite. If any listed species are observed within the vicinity of the worksite, construction will not commence until all individuals have left the area and the USFWS has been notified. Monitors will continue to survey the area throughout the day for signs of all listed species. If at any point a listed species is observed within the monitored area, USFWS will be notified immediately. All construction activity within 100 meters of a listed species will cease until the listed species has vacated on its own.

- **Observation Protocol**

Within the survey area, a site-specific buffer of 100 meters (328 feet) will be established around any location where piping plovers, red knots, or winter migrants and eastern black rail congregate in significant numbers. Previous studies have shown that a buffer distance of 100 meters sufficiently minimizes disturbance from personal watercraft, outboard motors, ATVs, and pedestrian traffic to most species of waterbirds, including plover species that are foraging and loafing (Rodgers and Smith, 1997; Valente and Fischer, 2011). Any and all construction activities, including movement of vehicles, will be prohibited in the buffer zone. If significant tides or weather conditions cause an influx of these birds, activity in that area could be delayed until the birds depart. The occurrence of one or two birds in the vicinity of the construction area, but outside of the 100-meter buffer, should not be considered significant. This activity will cause a cessation of activity within the 100-meter buffer. The width of the buffer zone should be increased if birds appear agitated or disturbed by construction or other activities in adjacent areas. The buffer zones should be posted with clearly marked signs around the perimeter, *when possible* without disturbing the birds present. These markings should be maintained until piping plovers, red knots, or other winter migrants depart and will be re-evaluated for eastern black rail. No construction activities or stockpiling of equipment will be allowed within the buffer areas. If the listed species above are observed resting or feeding within 100 meters of equipment or the work zone, operations will cease until the birds move without harassment to another area beyond this zone.

REFERENCES

- Rodgers, James A., Jr. and Henry T. Smith. 1997. Buffer zone distances to protect foraging and loafing waterbirds from human disturbance in Florida. *Wildlife Society Bulletin*, 25(1): 139-145.
- Valente, Jonathon J. and Richard A. Fischer. 2011. Reducing Human Disturbance to Waterbird Communities Near Corps of Engineers Projects. DOER Technical Notes Collection. ERDC TN DOER-E29. Vicksburg, MS: U.S. Army Engineer Research and Development Center. <<http://el.erdcl.usace.army.mil/dots/doer/doer.html>>