United States Department of the Interior

FISH AND WILDLIFE SERVICE
Southwest Region
Division of Refuges

CLEAN UP POLICIES FOR SOUTHWEST REGION LAND ASSESTS

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The USFWS Southwest Region has 4 National Wildlife Refuge Complexes (NWRC) consisting of 10 National Wildlife Refuges (NWR) along the Gulf Coast (See attached Figure 1). These land assets will require special attention during post-impact assessment, monitoring, and remediation activities. There are various sensitive areas where extreme care must be exercised during these activities.

It is extremely important that **a FWS representative be on site when assessment/monitoring and cleanup crews are on all FWS lands in order to prevent damage to these nationally significant resources.**

The following general considerations below apply to all Region 2 NWR's along the Gulf Coast.

General Considerations:

1. Generally, all the FWS lands have a single low tide and a single high tide during a 24-hour period. This may extend the time period available for clean-up prior to oil potentially being buried by sand deposition during the subsequent tidal cycle. Many areas of the refuges have reduced access at low tide and interior lands can be severely impacted if traversed.
2. FWS prefers manual removal (sorbents, shovels, rakes, etc.) over the use of mechanized equipment to minimize impacts. Should mechanical equipment be needed, use of the smallest possible equipment is preferred. For example, the use of ATVs/UTVs, skid steer (bobcat loaders) and light weight trailers is preferred over full size graders, dozers or backhoes. Due to the sensitive nature of these FWS lands, the trigger to advance to a higher level of equipment use will be an increased amount or depth of penetration of oil on the beaches whereby cleanup crews are overwhelmed. Prior approval by the FWS is required for all remediation program equipment upgrades.
3. Unless otherwise directed by a FWS representative, clean-up crews and equipment will be restricted to the unvegetated beach strand within the intertidal zone. All vegetated areas are to be avoided unless directed otherwise. This may mean that the entire portion of the refuge is not able to be used for transport or cleanup by the crews. Crews may need to retrace their direction of travel/work as opposed to making a complete circuit. Additionally, tide levels may dictate when areas are open to access.
4. Access points to most areas are very limited due to water depth, tidal levels, and presence of sensitive resources, including sea grass beds, shorebird nesting habitat, and significant

cultural resources. A FWS representative can direct crews into channel access points or explain buoyed access channels.

5. Bird nesting areas are very sensitive to human disturbance. This may require that an area be entered only once per day in order to minimize disturbance. This issue will be analyzed on a case-by-case basis in consultation with FWS staff prior to cleanup crew entry into or adjacent to nesting areas.
6. Vegetated areas are off limits unless a designated travel route exists.
7. Storage of collected oil needs to be in impervious containers and removed from the site on a regular basis (preferably daily).
8. Transport of removed and collected oil needs to be conducted with effective leak prevention measures in place to prevent secondary contamination.
9. Cleanup crews should not remove dead wildlife. All observed injured or oiled wildlife should be reported.
10. Beach profiles are commonly characterized with a trough below the low tide line. Removal of subaqueous oil from this zone is a concern. The FWS requests consultation on methods to be proposed for remediation work in this area.

South Texas National Wildlife Refuge Complex

Complex Manager- Kelly McDowell Office 956/784-7591 x7591 Cell 956/566-3664

Introduction:

The South Texas NWRC consists of three NWR's, Lower Rio Grande Valley NWR, Laguna Atascosa NWR and Santa Ana NWR. Santa Ana is located more inland and we do not anticipate any clean up for that area, therefore they will not be included in this document.

The Lower Rio Grande Valley National Wildlife Refuge (LRGV-NWR) was established on February 2, 1979, to acquire, protect, and enhance the biodiversity of the Lower Rio Grande Valley as well as to provide wildlife-oriented recreational opportunities for the public. Currently, the Refuge manages approximately 90,000 acres in more than 125 units located from Starr to Cameron Counties, Texas. Along the Gulf Coast, the Refuge manages approximately 9,247 acres consisting of the Boca Chica, Boca Chica State Park, Brazos Island, Clark Island, and the Loma Preserve. Along the beachfront, the Refuge manages 7.48 miles.

The beaches provide habitats for important fish and wildlife resources such as endangered sea turtles and shorebirds. Further inland, sensitive estuaries and wind tidal flats, such as at South Bay and Loma Tidal Preserve, occur. In fact, South Bay, a 3,420-acres estuary, is a designated Texas Coastal Preserve containing mangroves, seagrasses, algal flats, and oyster beds. Therefore, the use of any mechanized equipment for oil cleanup activities will be minimized as much as possible and/or limited to existing travel corridors on the beach and behind the dunes that access the inland bays and tidal flats.

Laguna Atascosa National Wildlife Refuge (LANWR) consists of four main units. Three of these units are susceptible to habitat contamination and damages from oil spills and associated response/cleanup efforts. The South Padre Island Unit includes 9.2 miles of island beach fronting the Gulf of Mexico and 11.7 miles of Laguna Madre Bay frontage totaling 19,452 acres of tidal mudflats. The Laguna Atascosa Unit includes over 22 miles of Laguna Madre Bay frontage and 9.1 miles of frontage along the Harlingen Ship Channel totaling 10,452 acres of tidal mudflats. The Bahia Grande Unit includes 10,000 acres of tidally influenced open water basins and tidal flats receiving flows from inlets connected to the Brownsville Ship Channel.

The LANWR has two Research Natural Areas and one National Natural Landmark Designation. The Refuge is designated as a Western Hemisphere Shorebird Reserve Network Site, a Globally Important Bird Area, and a Marine Protected Area. It is also the first established Sister Protected Area (Canada-United States-Mexico Trilateral Commission). LANWR beaches, shorelines and tidal flats are seasonally sensitive areas for various threatened and endangered species and species of concern. Many of these areas are not accessible with mechanized earth-moving equipment because of the soft sediments that compose the substrate. The sandy beaches and shorelines are sand-starved and shall therefore require minimal sand removal. Identified sensitive areas will require extreme care during post-impact assessment/monitoring and remediation activities and will preclude the usage of mechanized equipment.

LOWER RIO GRANDE VALLEY NATIONAL WILDLIFE REFUGE
Refuge Manager- Bryan Winton Office 956/784-7521 x7521 Cell 956/874-4304

Boca Chica Beach
Sensitive Resources

- Sea turtle nesting sites (April through September) for such species as Kemp's Ridley sea turtle (*Lepidochelys kempii*).
- Serves as foraging or loafing areas for many other shorebirds such as piping plovers (*Charadrius melodus*).
- Wilson's plover (*Charadrius wilsonia)* and snowy plover (*Charadrius alexandrius*) nest sites occur in the washover areas between the dune lines and South Bay.

Access

- Access is primarily via State Highway 4. On the beach, vehicle access should be restricted to the foreshore zone (i.e., below the Mean High Tide line), the area just above the swash zone, or where normal vehicular beach traffic is already occurring.

Staging and Temporary Storage

- Staging and temporary storage should occur at the unvegetated area just at the terminus of State Highway 4, above the Mean High Tide line. Refer to attached Figure 2 for all staging areas at Lower Rio Grande Valley NWR.

South Bay
Sensitive Resources

- Wilson's and snowy plover nest sites
- Mangroves
- Oyster beds
- Seagrasses
- Wind Tidal flats

Access

- From State Highway 4, travel north on the beach to the Jetties (4.5 miles), then west from the Jetties (1 mile) to the mouth of South Bay.
- Water Access is via the Brownsville Ship Channel.

Staging and Temporary Storage

- Immediately west and along the south edge of the Jetties.

Mouth of Rio Grande
Sensitive Resources

- Mangroves
- Shorebird and Wading bird areas

- Blue land crab (*Cardisoma guanhumi*) populations

Access

- For access take State Highway 4, to the terminus, travel south along the beach to the mouth of the Rio Grande.

Staging and Temporary Storage

- In the unvegetated area above the Mean High Tide line, just north of the Rio Grande.

Brownsville Ship Channel

Sensitive Resources

- Finfish and Shellfish occurrence areas providing access to estuaries

Access

- Via State Highway 4 (south of the Ship Channel) or State Highway 48 (north of the Ship Channel).
- Water Access, via the Ship Channel.

Staging and Temporary Storage

- At various locations along State Highway 48; to be determined based on location of cleanup efforts.

LAGUNA ATASCOSA NATIONAL WILDLIFE REFUGE

Refuge Manager- Sonny Perez Office 956/748-3607 x104 Cell 956/367-1004

Specific Considerations:

1. The Laguna Madre and near shore areas to the refuge are covered with sea grasses. These areas are very sensitive to prop damage by boats. Areas with seas grass will be mapped and avoided while traveling to and from oil damaged areas. Anchoring in sea grass beds is prohibited.

2. Mechanized earth-moving equipment will not be allowed in sensitive areas. They will be allowed at identified staging and loading areas.

3. Access routes will be identified around nesting areas after the completion of a nesting bird survey of proposed ingress and egress routes.

4. The shallow bays will likely require the offloading of equipment by hand or helicopter. A FWS representative will identify and approve access points and direct crews to ingress and egress locations.

5. Nesting bird locations will be provided at the time of the spill. All other areas will need to be searched by monitors in advance of spill crews entering an area to prevent impacts to nesting birds. FWS may place limits on the number of times an area is entered and amount of exposure in specific areas.

Laguna Atascosa Unit

Sensitive Resources (See attached Figures 3 and 4)

- Exposed and sheltered tidal flats important to nesting Snowy and Wilson's plovers
- Spoil islands important to nesting shorebirds and colonial water birds
- Mangrove stands which are productive nursery habitats for fish and shellfish

Access

- Access is severely limited to all these areas by land and precludes the use of any mechanized equipment.
- Shallow draft boats are necessary to access tidal flat and spoil island sites with hand cleanup crews on Unit 4 (north of the Harlingen Ship Channel).
- FWS Service two-track roads (County, Last Gate, Horse Island, North Point, and West Lake Roads) may be available dependent upon weather for vehicular transportation of hand crews to locations nearby tidal flat sites on Units 3, 5, and 8 (south of the Harlingen Ship Channel).
- FWS Service paved road (Bayside Drive) is available for transportation of hand crews to locations nearby shoreline and tidal flat sites on Unit 7 (southern half of LANWR).
- Mangrove stands adjacent to the southernmost portion of this unit are accessible only by shallow draft boat.
- The nearest public boat ramp is located along the Harlingen Ship Channel at Adolph Thomae, Jr. County Park. A privately-owned boat ramp is located within the Buena Vista Ranch approximately two miles north of the Refuge Office.

Staging and Temporary Storage

- Coordination with the private property owner will be required for access to the privately-owned boat ramp.
- FWS clearance and oversight will be required for the use of FWS Service roads to deter conflicts and impacts to other Refuge resources.
- Temporary staging and storage may be permitted within the Refuge's maintenance ware yard. No long term staging will be permitted.
- Texas General Land Office spill response trailer staged at Refuge's maintenance ware yard.

Bahia Grande Unit

Sensitive Resources (See attached Figures 5 and 6)

- Exposed and sheltered tidal flats important to nesting Snowy and Wilson's plovers
- Clay loma islands important to nesting shorebirds and colonial waterbirds that are species of concern such as Gull-billed tern (*Gelochelidon nilotica*) and Reddish egret (*Egretta rufescens*)
- Mangrove stands which are productive nursery habitats for fish and shellfish

- Silt deposition islands associated with historic railroad important to shorebirds and water birds

Access

- Access is severely limited to all of these areas by land.
- Shallow draft boats are necessary to access tidal flat and clay loma island sites with hand cleanup crews.
- Refuge Service two-track roads (Red Gate and Yellow Gate Roads) may be available dependent upon weather for vehicular transportation of hand crews to shoreline locations.
- Refuge Service channels (C2 and D) may be available for shallow draft boat use dependent upon water levels and containment booms for ingress and egress between basins.
- Mangrove stands within the San Martin Lake portion of this unit are accessible only by shallow draft boat.
- A FWS boat ramp is located within the unit and may be available dependent upon weather for boat transportation of hand crews to locations.
- Bridge heights of two Highway 48 bridges along the southern boundary of the unit restrict the passage of most motorized vessels from the Brownsville Ship Channel into the unit.
- Refuge Service bridge heights on Service channels (C1 and B2) restrict the passage of motorized vessels from the Bahia Grande basin into other basins.

Staging and Temporary Storage

- FWS clearance and oversight will be required for the use of Refuge Service roads and boat ramp to deter conflicts and impacts to other Refuge resources.
- Temporary staging and storage may be permitted within the unit as identified by FWS personnel. No long term staging will be permitted.

South Padre Island Unit

Sensitive Resources (See attached Figures 7 and 8)

- Gulf of Mexico frontage to this barrier island is used by nesting sea turtles, particularly the Kemp's Ridley sea turtle.
- Dunes and bayside tidal flats are used by migrating Peregrine falcons (*Falco peregrinus)* and Neotropical songbirds.
- Bayside tidal flats are important feeding habitat for Snowy and Wilson's Plovers and Reddish Egrets.
- Areas surrounding bayside tidal mudflats are used by nesting Wilson's and Snowy Plovers.
- Tidal flats are heavily utilized by shorebirds for feeding and roosting.
- Wash-over sites (cuts through the dune system from gulf to bay side of island) are often used by Wilson's and Snowy Plovers for nesting.

Access

- Primary access is restricted to four wheel drive vehicles, ATVs or UTVs along the Gulf beachfront during low tide cycles.
- Some accessibility by shallow draft boats during high tides. The best boat access is at the Port Mansfield Cut on the north end of the refuge.
- Activity through the area should be severely limited to prevent contamination of other areas and to prevent the mixture of oil deeper into the sediments by traffic.
- Manual cleanup rather than mechanized cleanup is advised to minimize the volume of sand removed from the shore.
- Shallow draft boats are needed for access to bayside tidal flats for the deployment of sorbents or deflection booms or open water skimmers because of the soft substrates.

Staging and Temporary Storage

- No long term staging or storage is permitted on this unit. Daily staging and storage is permitted on the gulf side.

Aransas National Wildlife Refuge Complex

Complex Manager- Dan Alonso Office 361/286-3559 x225 Cell 361/550-5077

Introduction:

The Aransas National Wildlife Refuge (NWR) comprises a total of 115,240 acres of wildlife habitat in Aransas, Calhoun, and Refugio Counties, along the Texas Coastal Bend. The beaches and tidal marshes of Aransas NWR contain sensitive habitat for birds, marine turtle and various threatened, endangered and sensitive species, including the critically endangered whooping crane (*Grus americana).*

Aransas NWR is composed of five management units: Blackjack Peninsula, Matagorda Island, Tatton, Lamar, and Myrtle-Foester Whitmire. There are various sensitive areas where extreme care must be exercised during these activities.

Specific Considerations:

1. Staging and storage may be best provided through the use of deck barges or other vessels.

Blackjack Peninsula Unit

Sensitive Resources

- Whooping crane wintering territories are located throughout the marshes along the bays (See attached Figure 9).
- Colonial waterbird and shorebird nesting exist along the tidal zones and spoil islands.
- Sensitive areas include the tidal flats and marshes, which are easily impacted by motorized equipment.

Access

- Primary and best access to the marshes is via boat. A boat ramp is located along the northeastern side of the peninsula and Goose Island State Park
- Secondary access is located along the eastern shore of the peninsula via fire breaks or 2-tracks.

Staging and Temporary Storage

- The best staging and temporary storage area for the Blackjack Peninsula Unit will be the Refuge Headquarters and at the Refuge boat ramp.

Lamar Unit

Sensitive Resources

- Whooping crane wintering territories are located throughout the marshes along the bays.
- Colonial waterbird and shorebird nesting exist along the tidal zones and spoil islands.
- Sensitive areas include the tidal flats and marshes, which are easily impacted by motorized equipment.

Access

- Primary and best access to the marshes is via boat. The closest boat ramp is located at Goose Island State Park.

Staging and Temporary Storage

- The best staging and temporary storage area for the Lamar Unit will be the at the entrance gate to the Lamar Unit.

Matagorda Island Unit

Sensitive Resources

- Whooping crane wintering territories are located throughout the marshes along the bays.
- Mottled ducks (*Ana fulvigula*) and the endangered Aplomado Falcon (*Falco femoralis*) nest across the interior uplands of the island.
- Colonial waterbird and shorebird nesting exist along the tidal zones and spoil islands.
- Sensitive areas include the tidal flats, shell ridges and marshes, which are easily impacted by motorized equipment.

Access

- Primary access to the marshes along the island is via boat, with boat docks on the south and north end of the island. Barge ramps are located at Port O'Connor and the north boat dock for mobilizing equipment. Boat ramps are located on the Blackjack Peninsula and at Port O'Connor.
- Vehicles are permissible on the beach (non-vegetated areas only) and a road down the middle of the island. Beach access roads are located near the southern and northern headquarters.

Staging and Temporary Storage

- The best staging and temporary storage location on Matagorda Island will be at the north and south boat ramps on the Island.

Myrtle-Foester Whitmire Unit

Sensitive Resources

- Important wetland habitat for migrating and wintering waterfowl
- Vital nesting habitat for resident mottled ducks.

Access

- Primary and best access to the marshes is via boat, with boat docks on the south and north end of the island. A boat ramp is located at Port O'Connor.
- Vehicle use is permissible on pre-identified roads (see attached Figure 10).

Staging and Temporary Storage

- The best staging and temporary storage area on the Whitmire Unit will be at the entrance gate to the Unit.

Tatton Unit

Sensitive Resources

- Important tidal flats and marshes for nesting shorebirds
- Historically whooping crane territories.

Access

- Primary and best access to the marshes is via boat. The closest boat ramp is located at Goose Island State Park.

Staging and Temporary Storage

- The best staging and temporary storage area on the Tatton will be at the entrance gates along Hwy 35.

Texas Mid-Coast National Wildlife Refuge Complex

Complex Manager- Jennifer Sanchez Office 979/964-4011 Cell 979/299-8514

Introduction:

Texas Mid-Coast NWRC is comprised of Brazoria, San Bernard and Big Boggy National Wildlife Refuges. Located in Brazoria, Matagorda, and Fort Bend Counties, all three refuges lie on the Texas Gulf Coast. The primary purpose for the refuges is to provide "involiate sanctuaries for migratory birds".

The refuges generally consist of bay and estuary marshes. The San Bernard NWR has a short section of beach between the mouth of the San Bernard River and a natural cut at the fourth Cedar Lake (approximately 5.5 miles). Except for the beach, where oil can be physically removed, all other habitats will require the protection of shorelines by distributing sorbents, preventing the flow of oil into interior marshes via booming, burning or enhanced biological breakdown of hydrocarbons. The San Bernard Beach is the only part of the refuge with immediate proximity to the Gulf of Mexico. Oil from the Gulf can impact the interior of San Bernard NWR through entering the Gulf Intracoastal Waterway (GIWW). The most immediate access from the Gulf into the GIWW is from the mouth of the Brazos River (near Freeport, TX), mouth of the San Bernard River (adjacent to the refuge), Cedar Lakes Cut (adjacent to the refuge), and Brown's Cut (located south of Caney Creek).

Big Boggy NWR is located in Matagorda County near the end of Chinquapin Road. The refuge is bounded on the west by Boggy Creek; which opens into East Matagorda Bay. Big Boggy consists of approximately 2,500 acres of tidal marsh, 1,000 acres of managed freshwater ponds and 1,000 acres of salty/coastal prairie. In addition, Dressing Point Island, located 1.5 miles offshore in East Matagorda Bay is part of the Refuge. This island is a Colonial Waterbird Rookery.

Brazoria NWR is bounded on the east by Chocolate Bay and on the south and southeast by West Galveston, Bastrop, and Christmas Drum Bays. The refuge is traversed by Bastrop Bayou and bounded by both Austin Bayou and Oyster Creeks to the west. The two primary openings for Gulf Waters to enter the bays and the GIWW are through San Luis Pass, which is located between Galveston and Follets Islands and the Freeport jetties, between the villages of Surfside and Quintana. The Army Corp of Engineers maintains locks on the GIWW at the Port of Freeport.

SAN BERNARD NATIONAL WILDLIFE REFUGE

Refuge Manager- Shane Kasson Office 979/964-3639 Cell979/299-9231

For all sensitive resources on San Bernard NWR refer to attached Figure 11.

San Bernard Beach

Sensitive Resources

- Protection of dune vegetation.

- The Cedar Lake Cut end of the island has high colonial waterbird use.

Access

- The San Bernard beach is generally inaccessible to larger equipment. Smaller equipment (ATV's, UATV's) can obtain access with appropriate loading/unloading platform off the front of a boat. The need to act quickly should oiling occur on the beach habitat is essential so that oil can be picked up and removed before it permeates into the beach strata.
- Access to the beach can be obtained at three locations; from the mouth of the San Bernard River and the cut into the fourth Cedar Lake and from the channel leading to the beach from the Cedar Lake productions wells. The Cedar Lake Cut is the only place where equipment and people may cross the dune line. All other access is restricted to unvegetated beach strata between the surf and the vegetated foredunes.

Staging and Storage

- Staging and storage areas must be off-refuge either from a deck barge or other vessel or on private lands or public lands (county boat ramps).

Cedar Lakes

Sensitive Resources

- Colonial waterbird colonies are present on a dredge spoil site in the first Cedar Lake, on oil pilings in the second Cedar Lake, and several small islands in the Cow Trap Lakes.
- The mouth of the San Bernard River was re-dredged moving the mouth into a somewhat straight line with the river rather than the nearly 2 mile long mouth meandering to the southeast. The beach sand and estuaries which had accreted on the upper side of the meandering are heavily used by shorebirds on a seasonal basis.
- Preventing oil from moving into the Cow Trap Lakes area is essential for protecting the oyster beds within the lakes and productivity of interior marshes.
- Preventing oil from moving into Cedar Lake Creek is essential for protecting the oyster bed in the lower part of this watershed. This creek is the source of freshwater for the Wolfweed Wetlands, including the Reservoir Rookery.
- The fourth Cedar Lake, through a storm surge, is now open to the Gulf Waters. Sand flats located on both sides of the opening are extremely valuable habitats for shorebirds on a seasonal basis. The area is designated critical habitat for the endangered Piping plover.

Access

- Cedar Lakes are generally accessed from the GIWW. A county boat ramp is located at the end of the FM2918; near the mouth of the San Bernard River.

Staging and Storage

- Staging and storage areas must be off-refuge either from a deck barge or other vessel or on private lands or public lands (county boat ramps).

Sargent and Smith Marsh

Sensitive Resources

- Multiple tidal inlets lead into interior marshes on the Sargent (including Pentagon Marsh) and Smith Marsh. The combination of upper marsh and freshwater in this area provide essential nesting, brooding and molting habitat for mottled ducks.

Access

- The Sargent and Smith Marsh areas are accessed from the GIWW. A county boat ramp is located 1 mile south of the swing bridge to Sargent Beach at the end of FM457.

Staging and Storage

- Staging and storage areas must be off-refuge either from a deck barge or other vessel or on private lands or public lands (county boat ramps).

BIG BOGGY NATIONAL WILDLIFE REFUGE

Refuge Manager- Shane Kasson Office 979/964-3639 Cell979/299-9231

Sensitive Resources (See attached Figure 12)

- Dressing Point Island is approximately 6 acres in size. This island is an extremely productive colonial waterbird rookery and includes brown pelicans (*Pelecanus occidentalis*) and reddish egrets.
- Several tidal inlets (including Boggy Creek) lead into the interior marshes of the refuge from the GIWW.

Access

- A small private-owned boat ramp is located at Chinquapin Road.

Staging and Storage

- Staging and storage areas must be off-refuge either from a deck barge or other vessel or on private lands or public lands (county boat ramps).

BRAZORIA NATIONAL WILDLIFE REFUGE

Refuge Manager- Cody (James) Dingee Office 979/922-1037 Cell 979/236-8955

Sensitive Resources (See attached Figure 13)

- Although they are not on refuge lands, several Colonial Waterbird Rookeries are located in the adjacent bays. The Drum Bay Rookery, Bastrop Bay Rookery, Alligator Point

Rookery and the Bird Island (San Luis Pass) Rookery are nest sites for the wading birds and terns that are found on Brazoria NWR during the summer months.

- The Slop Bowl area is a tidally influenced estuary that supports a vast nursery groud for all marine life. Essex Bayou and additional cuts along the GIWW are the main inlets into this remote area. The area is an important staging and feeding area for shorebirds and wading birds at Brazoria NWR. Reddish egrets are commonly noted there during the nesting season. This is also a heavily used foraging ground for winter raptors such as Osprey (*Pandion haliaetus*), Peregrine Falcon, Merlin (*Falco columbarius*), and other raptors that feed on fish or wetland birds.
- Wolf Lake Rookery has a direct connection to the GIWW through Nick's cut and several small inlets along the GIWW. This lot is an extremely productive rookery and includes Black skimmer (*Rynchops niger*), Royal terns (*Thalasseus maximus*), Gull-billed terns, and Least terns (*Sternula antillarum*).
- Bastrop Bayou and Oyster Creek are the two largest tidally influenced inlets which filter into the Refuge.
- Additional tidal inlets that lead into the interior marshes and estuaries of the Refuge from the GIWW and open bays are Wharton Bayou, Mud Cut, Cold Pass, Titlum Tatlum Bayou, Oyster Lake Bayou, Alligator Slough, Alligator Lake and Middle Bayou.

Access

- Three boat ramps (one public and two private) are located along CR 227 for access to Bastrop Bayou.
- Two public boat ramps are located along FM 2004 for access to Chocolate Bay and Austin Bayou.
- One public boat ramp (Swan Lake) is located along Blue Water Highway in the village of Surfside for access into GIWW.
- Two public boat ramps are located only by Blue Water Highway (Follets Island) with access to Christmas Bay and San Luis Pass.

Staging and Storage

- Staging and storage areas must be off-refuge either from a deck barge or other vessel or on private lands or public lands (county boat ramps).

Texas Chenier Plains National Wildlife Refuge Complex

Complex Manager- Tim Cooper Office 409/267-3337 Cell 832/577-5176

Introduction:

The coastal marshes, prairies and woodlots of the Chenier Plain region of southwestern Louisiana and southeast Texas comprise a hemispherically important biological area. Coastal marshes in the region are an important part of the primary wintering area for Central Flyway waterfowl. Hundreds of thousands shorebirds, wading birds, and other marsh and waterbirds also winter or migrate through the region. Coastal prairie and coastal woodlots in the region support over 150 migratory and resident landbird species. Two plant associations in the region's native tallgrass prairie are assigned a global conservation status rank of "Critically Imperiled" (G1) by The Nature Conservancy.

The Texas Chenier Plain Refuge Complex includes Anahuac, McFaddin, Texas Point, and Moody NWRs. The Refuge Complex protects over 105,000 acres of estuarine and palustrine coastal wetlands, coastal prairie, and coastal woodlands along the upper Gulf Coast of Texas. In addition to its high value for migrating and wintering waterfowl, the Refuge Complex comprises a core area for mottled ducks, an important resident waterfowl species whose population in Texas is in decline. Habitats on and adjacent to the Refuge Complex support 9 threatened and endangered species, 37 of the 48 avian species listed by the Service as Species of Conservation Concern in the Gulf Prairies Bird Conservation Region, and over 50 species identified as needing conservation action in the U.S. Shorebird Management Plan and North American Waterbird Conservation Plan.

TEXAS POINT NATIONAL WILDLIFE REFUGE (See attached Figure 14)

Refuge Manager- Michelle Chappel Office 409/736-2371 Cell 409/392-5217

Sensitive Resources

- Colonial waterbird nesting sites may exist on isolated locations on the Refuge, but verification will be conducted prior to implementation of response activity in the immediate area.
- Sensitive resource sites exist on interior marshlands and could be taken into the Refuge through Texas Bayou and another unnamed crossing near Pilot Station from the Sabine Ship Channel. Penetration could also occur by Gulf Waters overtopping the 6 miles of hurricane damaged dune system during high tide events.

Access

- Primary and best access is via a relatively damaged Pilot Station road. The road is passable under most tidal conditions, but it is difficult to navigate in low-ground clearance vehicles.
- Secondary access is available on the beach shoreline. However, beach access is tide dependent and begins on private land, crossing various property ownerships. The Texas Open Beaches Act allows public access below the mean high tide line on all area beaches.

- Interior areas of the refuge should be accessed by airboat only. Prop impacts to Submerged Aquatic Vegetation (SAVs) and marshlands must not occur. Marsh Buggies and other access to interior marshes must be coordinated with the refuge manager prior to planned deployment.

Staging and Temporary Storage

- FWS will coordinate staging if required at this location on an as needed basis. Most logical staging sites occur on areas under FWS jurisdiction.

MCFADDIN NATIONAL WILDLIFE REFUGE

Refuge Manager- Dean Bossert Office 409/736-2371 Cell 409/540-0499

For all sensitive areas and access points for McFaddin NWR refer to Figures 15-21.

Sensitive Resources

- Colonial waterbird nesting sites may exist on isolated locations on the Refuge, but verification will be conducted prior to implementation of response activity in the immediate area.
- Extremely sensitive resource sites exist on interior marshlands. Penetration into this system could occur by Gulf waters overtopping the hurricane damaged dune system during high tide events. Approximately 11 miles of the 18 mile shoreline may be low enough to provide this type of breach during high tide events. Gulf water access to interior marshlands on the Refuge would create the potential to expand the impact of this spill to thousands of acres of interior marsh.

Access

- Primary and best access is via the east access off Highway 87. The road posted as closed by an access point allows motor vehicle access to the beach. This beach access is passable for a few miles on low tide conditions. Sand deposits are lost within a few miles and clay beach is exposed beyond that area. These sites are accessible only by ATV.
- Secondary access is available on the beach shoreline from the west access off Highway 87 near High Island, TX. The road continues up Highway 124, but a beach access point allows motor vehicle access to the beach. This beach access is passable for a few miles on low tide conditions. Sand deposits are lost within a few miles and clay beach is exposed beyond that area. These sites are accessible only by ATV but a clear and defined connection with oil spill response is required to avoid issues with refuge law enforcement efforts. However, beach access is tide dependent and crossing various property ownerships.
- Interior areas of the refuge should be accessed by airboat only. Prop impacts to Submerged Aquatic Vegetation (SAVs) and marshlands must not occur. Marsh Buggies and other access to interior marshes must be coordinated with the Refuge Manager prior to planned deployment. Access to FWS ramps will be provided is assessment or clean-up needs warrant and will be coordinated by the Refuge Manager.

Staging and Temporary Storage

- FWS will coordinate staging if required at this location on an as needed basis. Most logical staging sites occur on areas under FWS jurisdiction.

MOODY NATIONAL WILDLIFE REFUGE (See attached Figure 22)
Refuge Manager- Jimmy Laurent Office 409/267-3337 Cell 409/284-2710

Sensitive Resources

- The edge of East Bay is the prime concern on this refuge.
- The edge interior marshes are also an important area for wildlife resources and serve as a critical nursery area for fisheries resources.
- The Refuge holds a conservation easement and cleanup activities need to be coordinated with the landowner and FWS. Access permission should be coordinated through the refuge office (409) 267-3337.

Access

- Primary access should be from Easy Bay. A shallow water boat launch on Anahuac NWR provides shoreline access from Easy Bay.
- Secondary rough terrain access is potentially available along an interior ATV road. The Refuge owns a conservation easement on this Refuge and clean-up activities will need to be coordinated with the landowner and FWS. Access permission should be coordinated through the refuge office (409) 267-3337.

Staging and Temporary Storage

- The staging at this site would need to be coordinated with the landowner if needed. Reliable access should be pursued from East bay rather from the interior.

ANAHUAC NATIONAL WILDLIFE REFUGE (See attached Figure 23)
Refuge Manager- Jimmy Laurent Office 409/267-3337 Cell 409/284-2710

Sensitive Resources

- Shorebird nesting areas and osprey nests exist on the island, and sea grass beds are located near the northern shoreline of the island.
- The edge of East Bay and the GIWW are prime concerns on this refuge.
- The edge interior marshes are also an important area for wildlife resources and serve as a critical nursery area for fisheries resources. Several ditches and interior waterways may serve as access to interior waters in the event of a spill.

Access

- Primary access is provided from refuge interior roads to East Bay. Two access locations can be assessed by most response equipment
- A shallow water boat launch exists on East Bay that provides access under normal tide conditions. There is limited parking at this site.
- Secondary boat access is from another launch up Oyster Bayou. This launch is about two miles inland from East Bay.

Staging and Temporary Storage

- The developed area at Frozen Point near the East Bay can be made available for use as a staging area. With the approval of the Refuge Manager the Boat Ramp may be closed to use as a dedicated access point for response activities.

Figure 1. USFWS Southwest Region Gulf Coastal Refuges

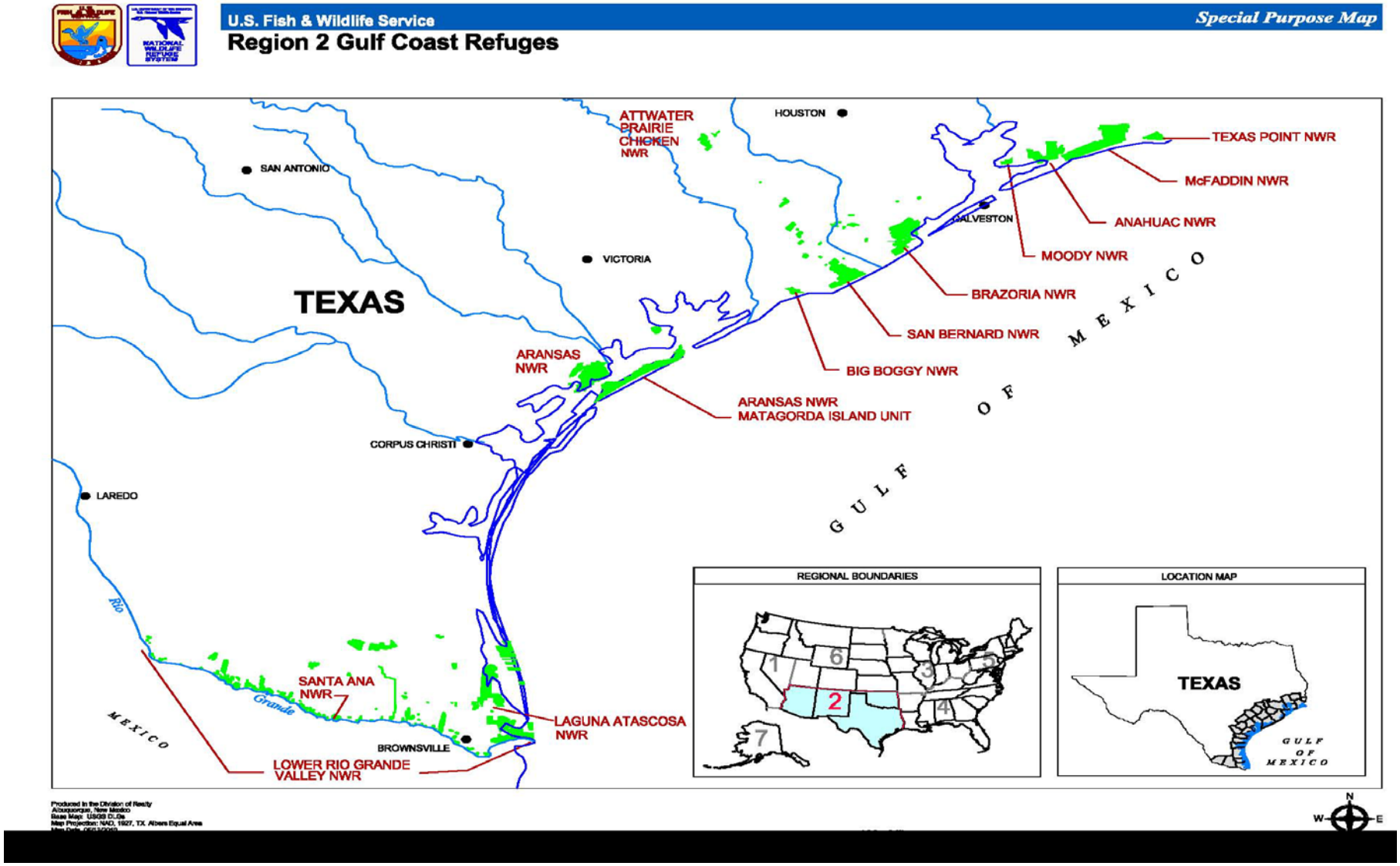

Figure 2. Staging Areas at Lower Rio Grande Valley NWR

Figure 3. Critical Areas on the Northern Half of Laguna Atascosa NWR

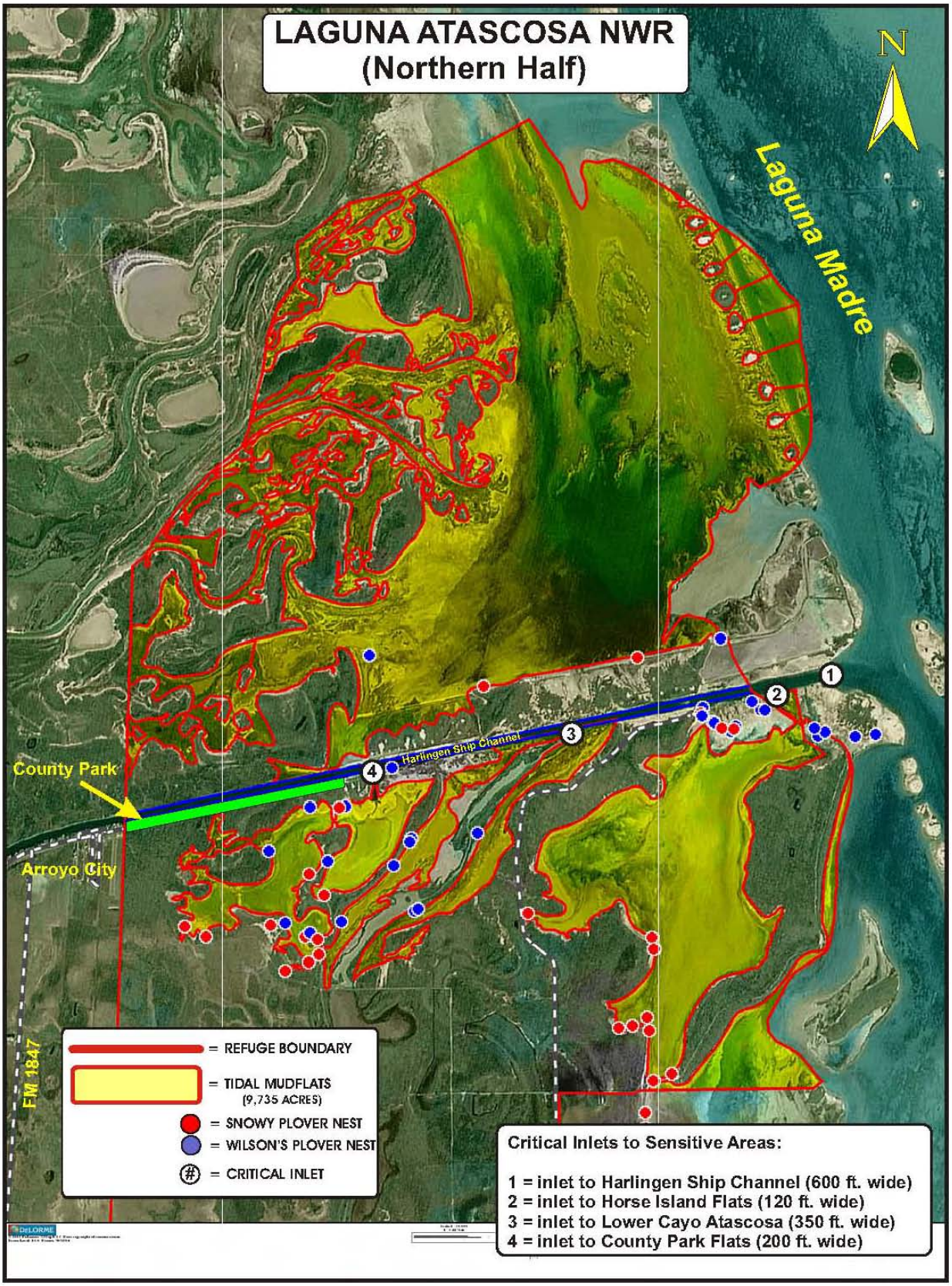

Figure 4. Critical Areas on the Southern Half of Laguna Atascosa NWR

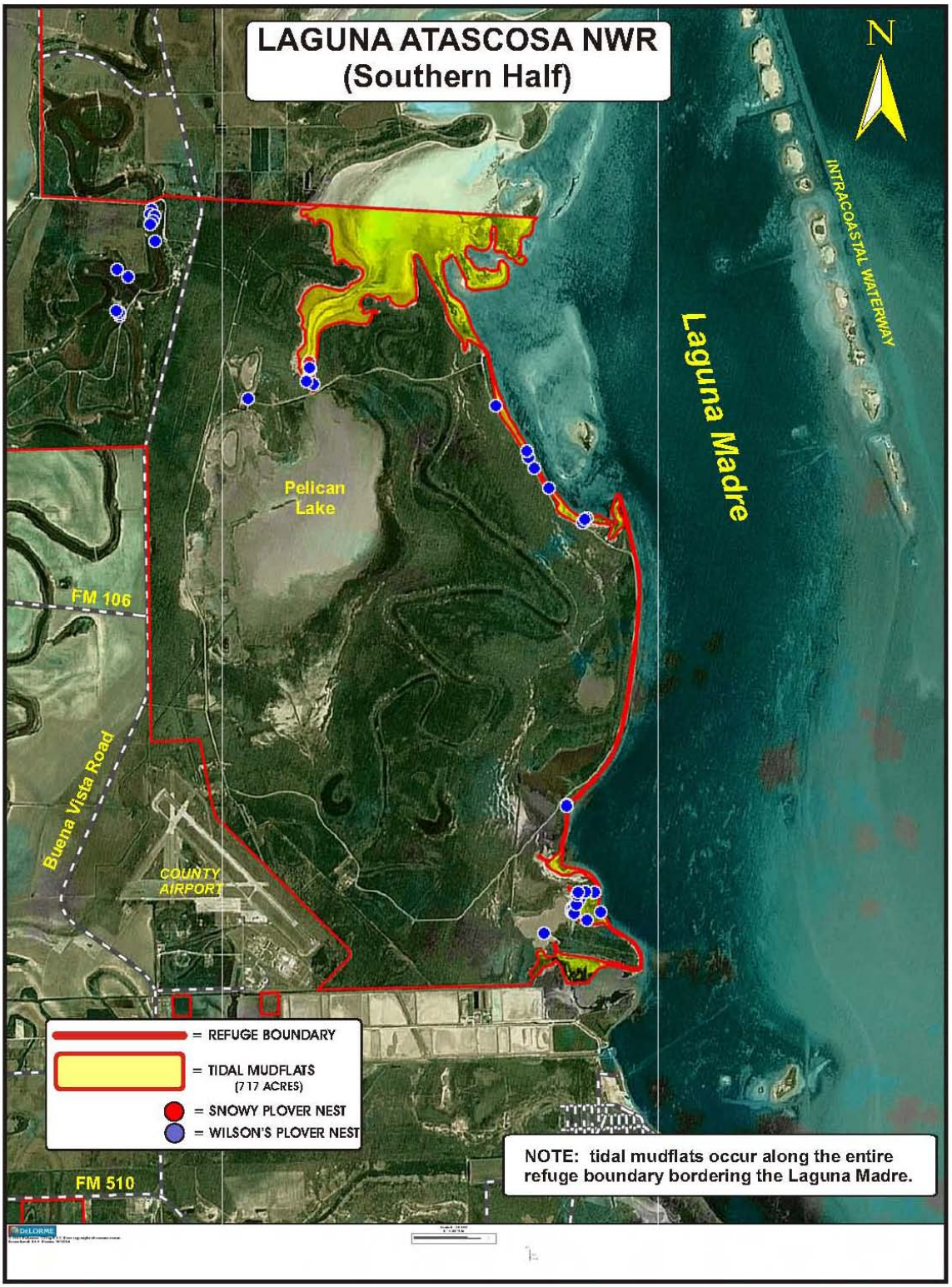

Figure 5. Critical Areas on the Bahia Grande Unit of Laguna Atascosa NWR

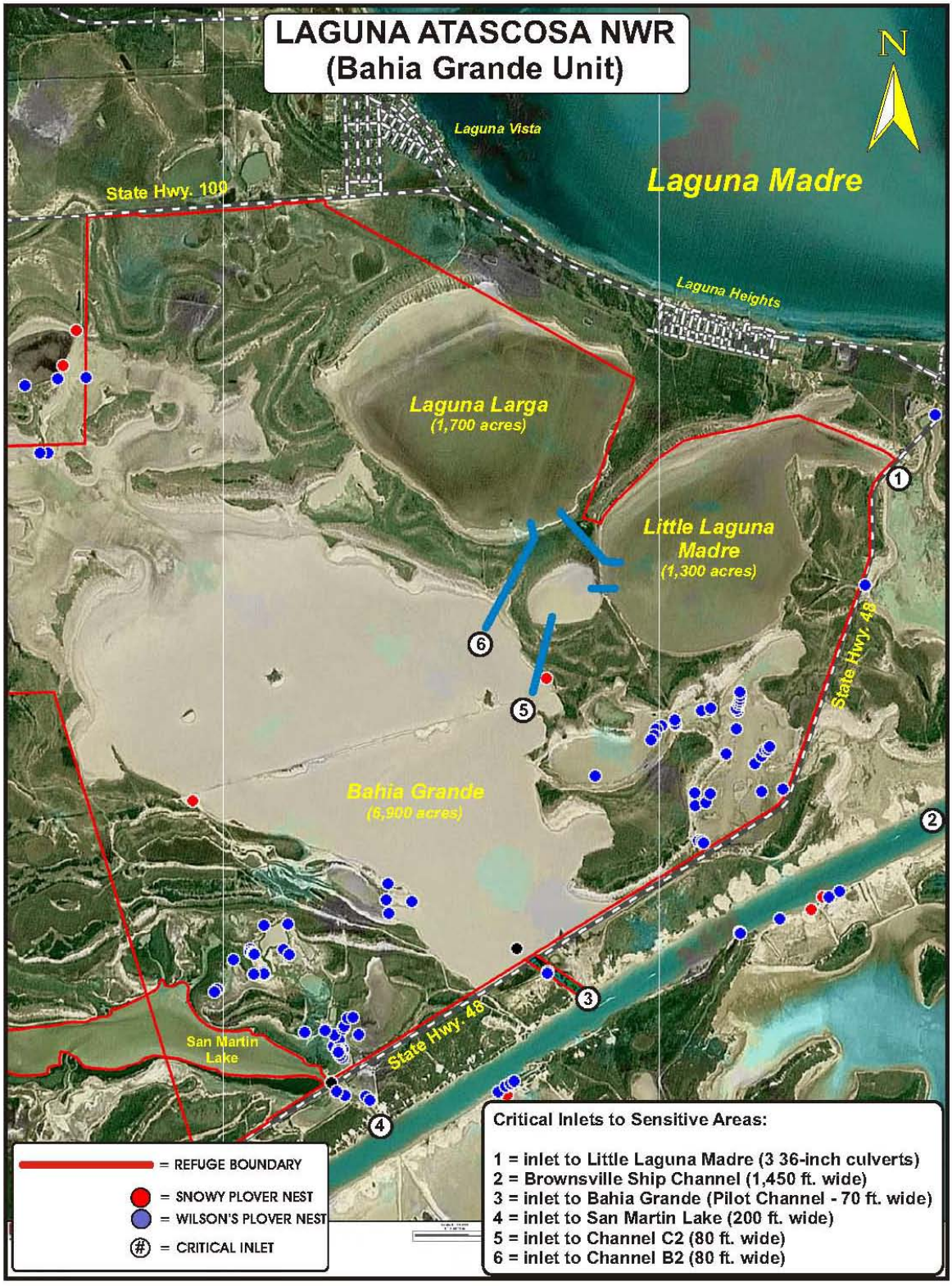

Figure 6. Critical Areas on the Bahia Grande Unit- San Martin Lake of Laguna Atascosa NWR

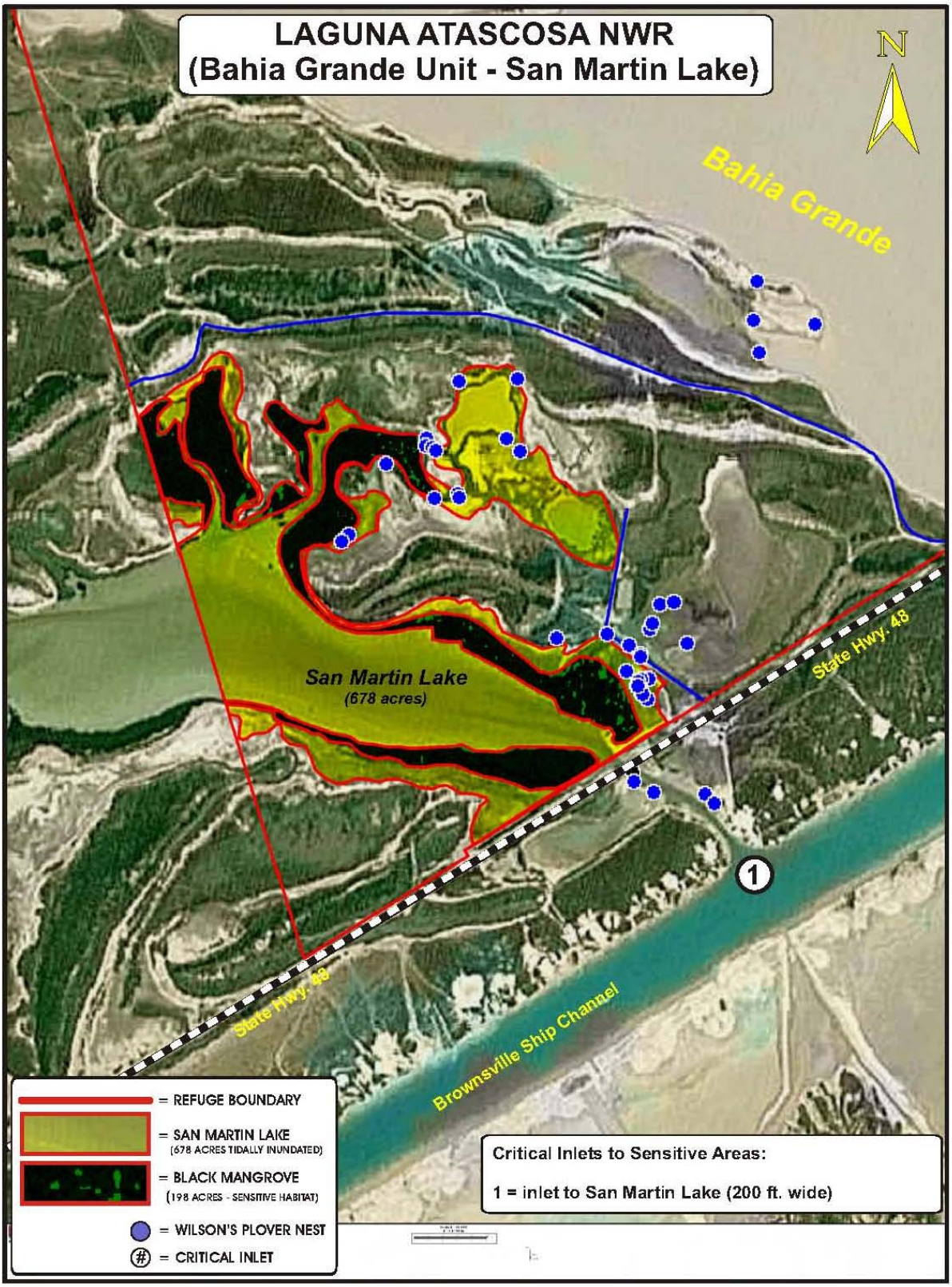

Figure 7. Critical Areas on the South Padre Island Unit of Laguna Atascosa NWR

Figure 8. Critical Areas on the South Padre Island Unit of Laguna Atascosa NWR

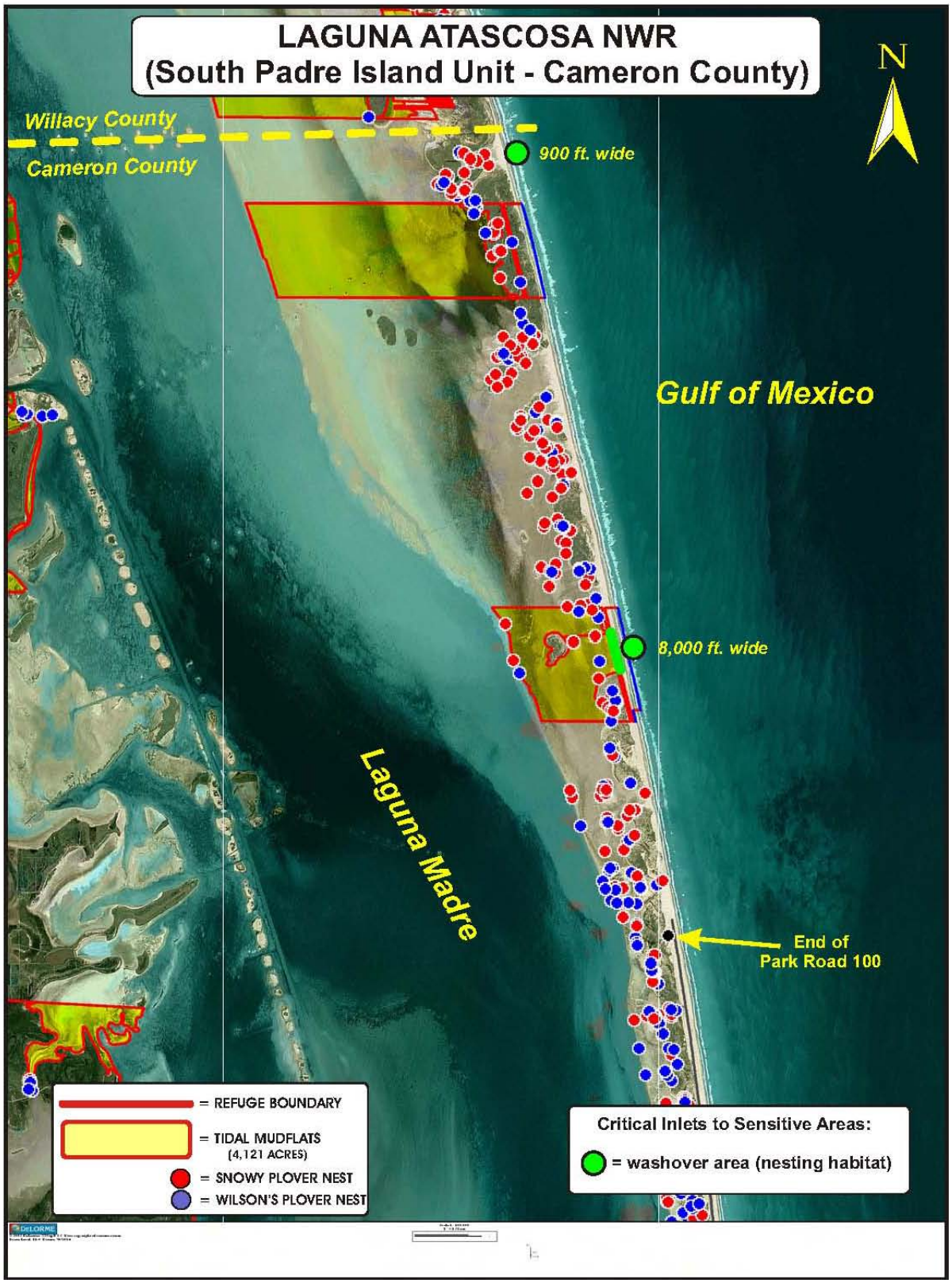

Figure 9. Whooping Crane Core Wintering Area and Corridors at Aransas NWR

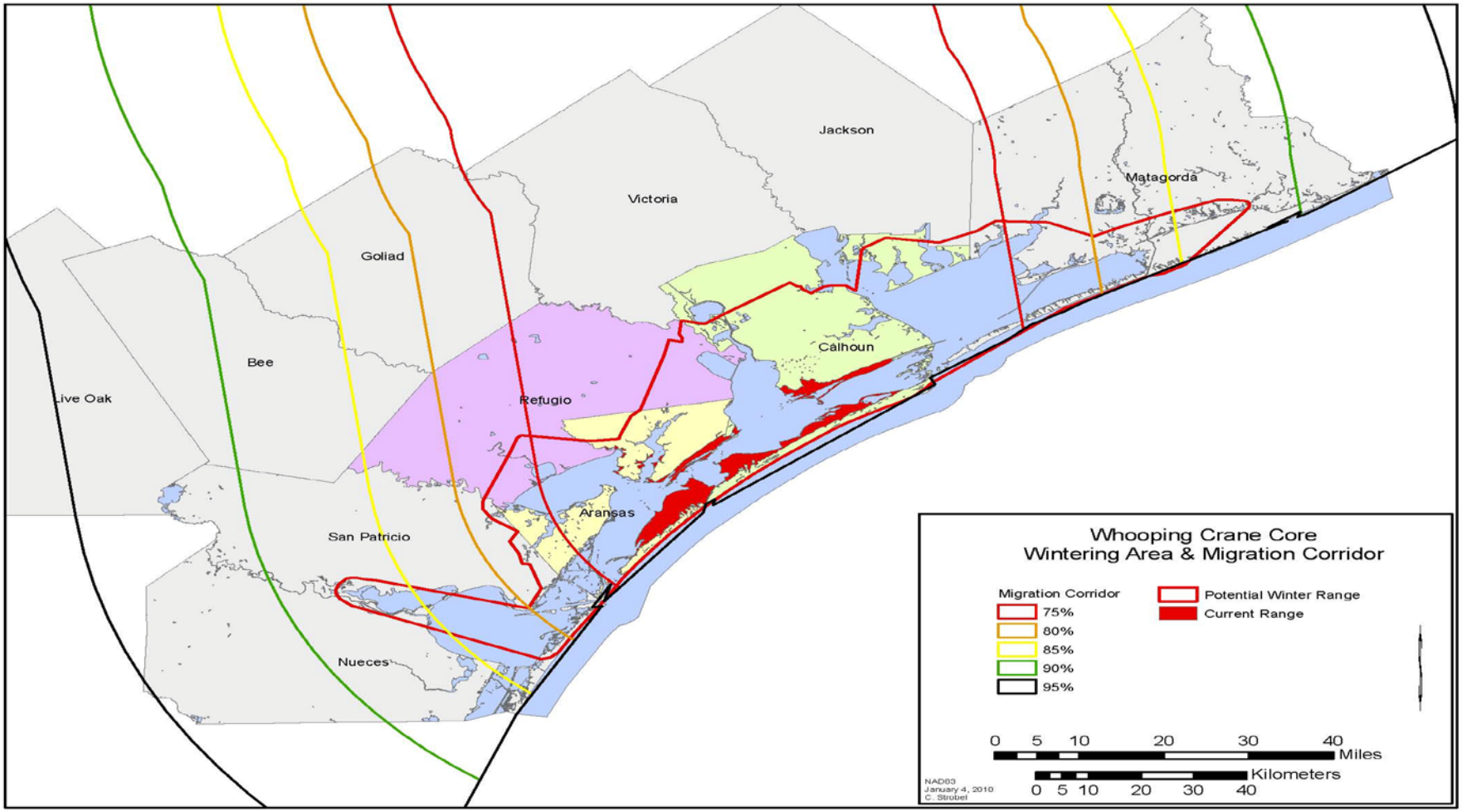

Figure 10. Access Roads for the Myrtle Foester-Whitmire Unit of Aransas NWR

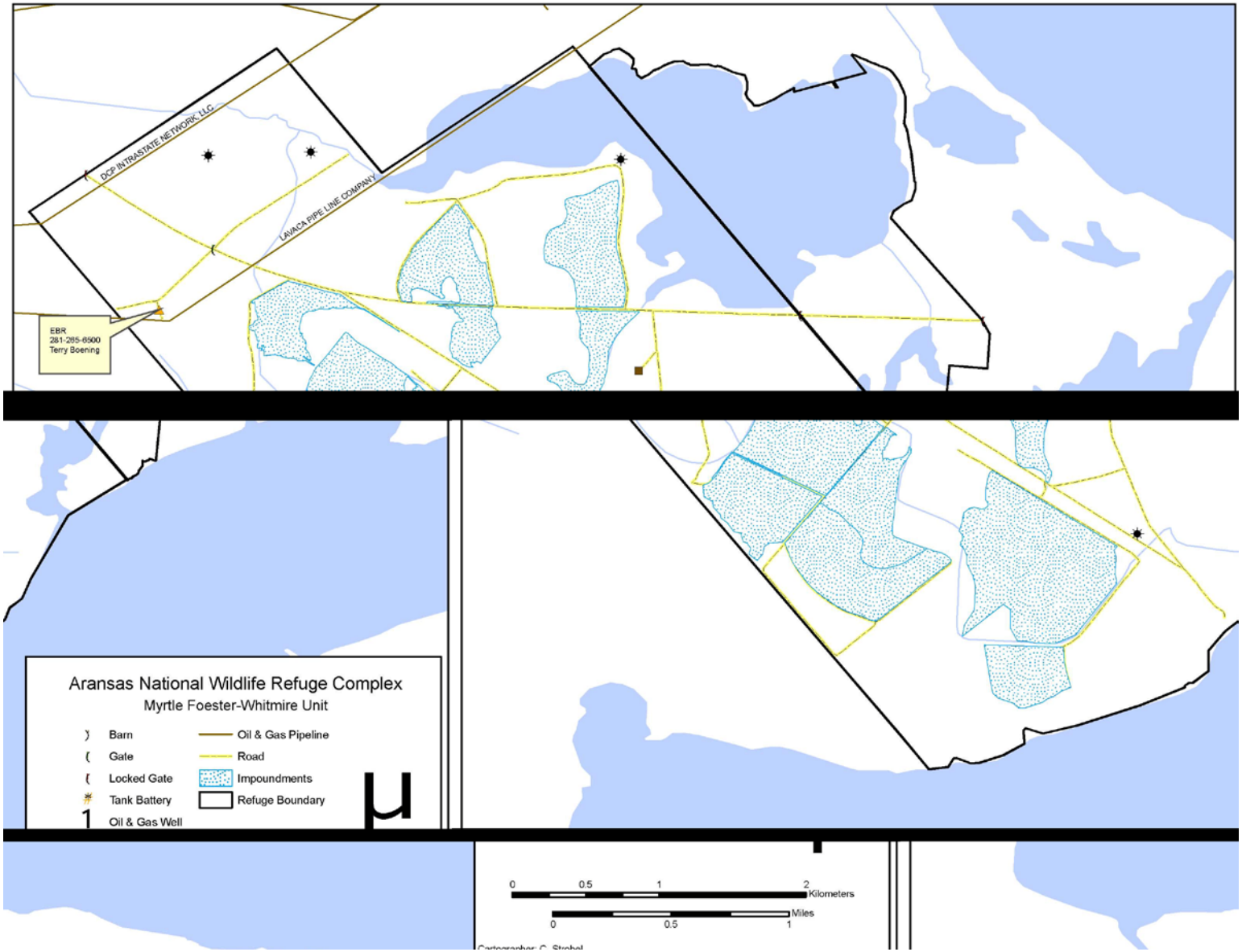

Figure 11. Sensitive Areas on San Bernard NWR

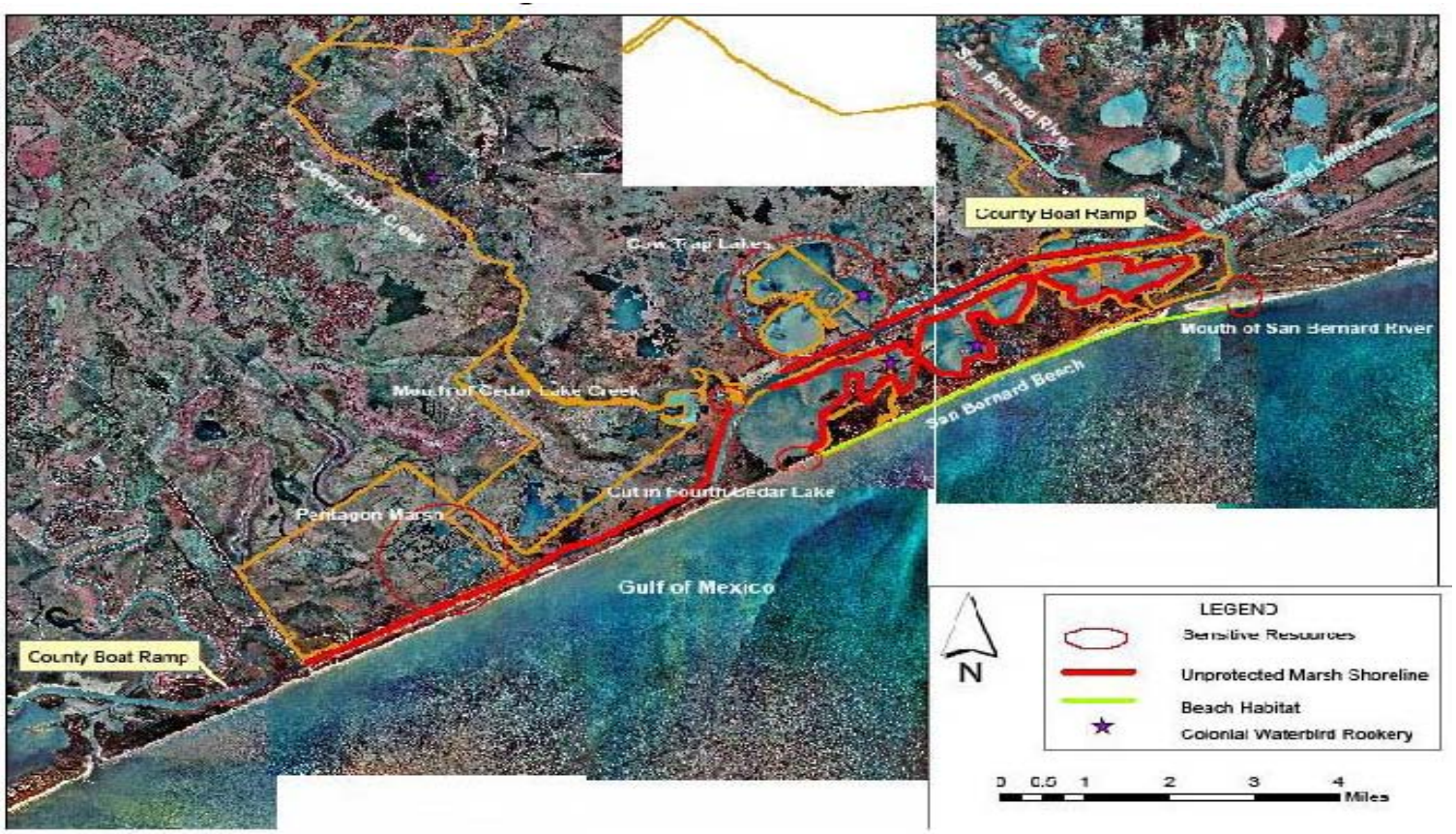

Figure 12. Sensitive Areas on Big Boggy NWR

Figure 13. Sensitive Areas on Brazoria NWR

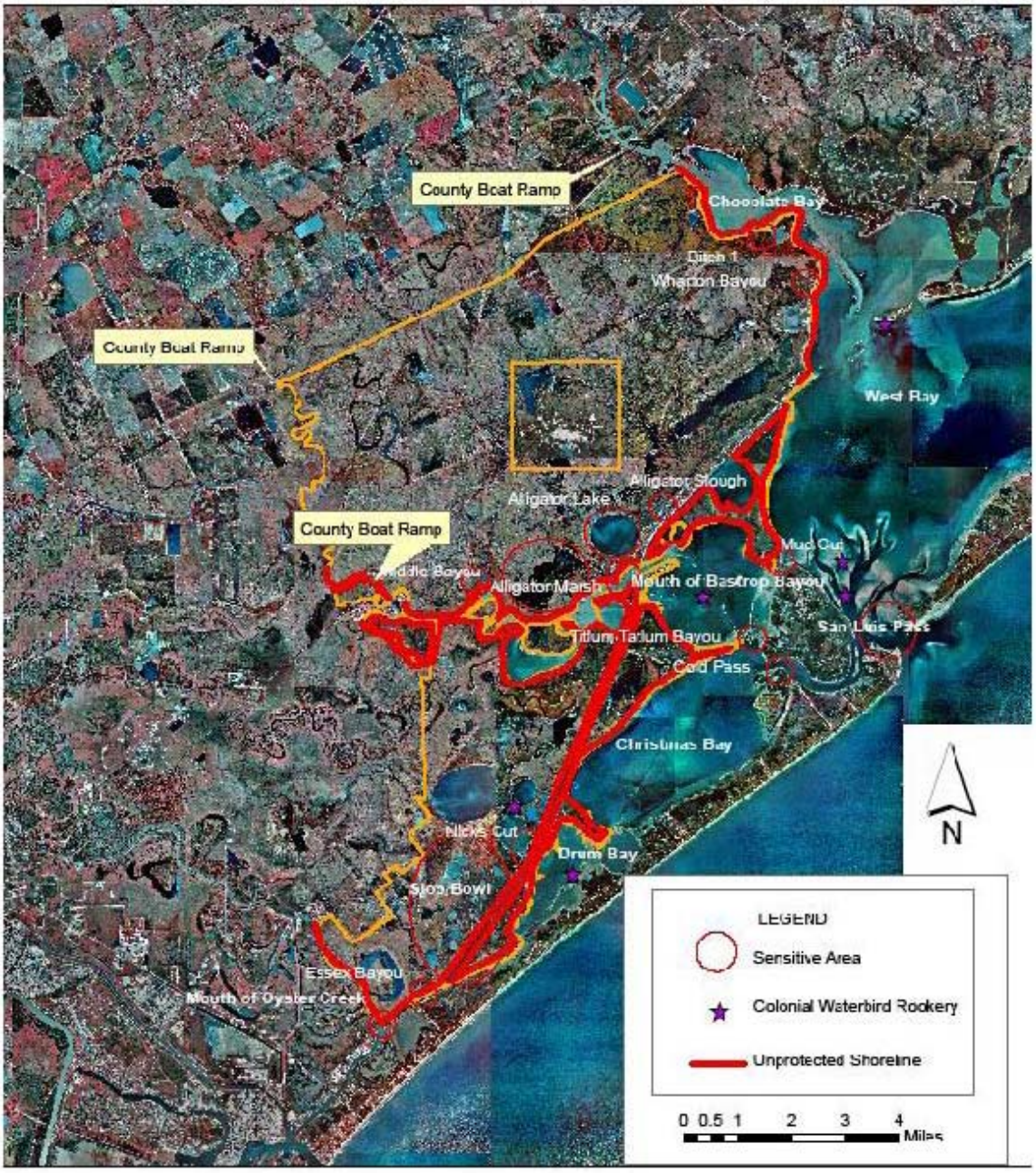

Figure 14. Sensitive Areas and Access Points at Texas Point NWR

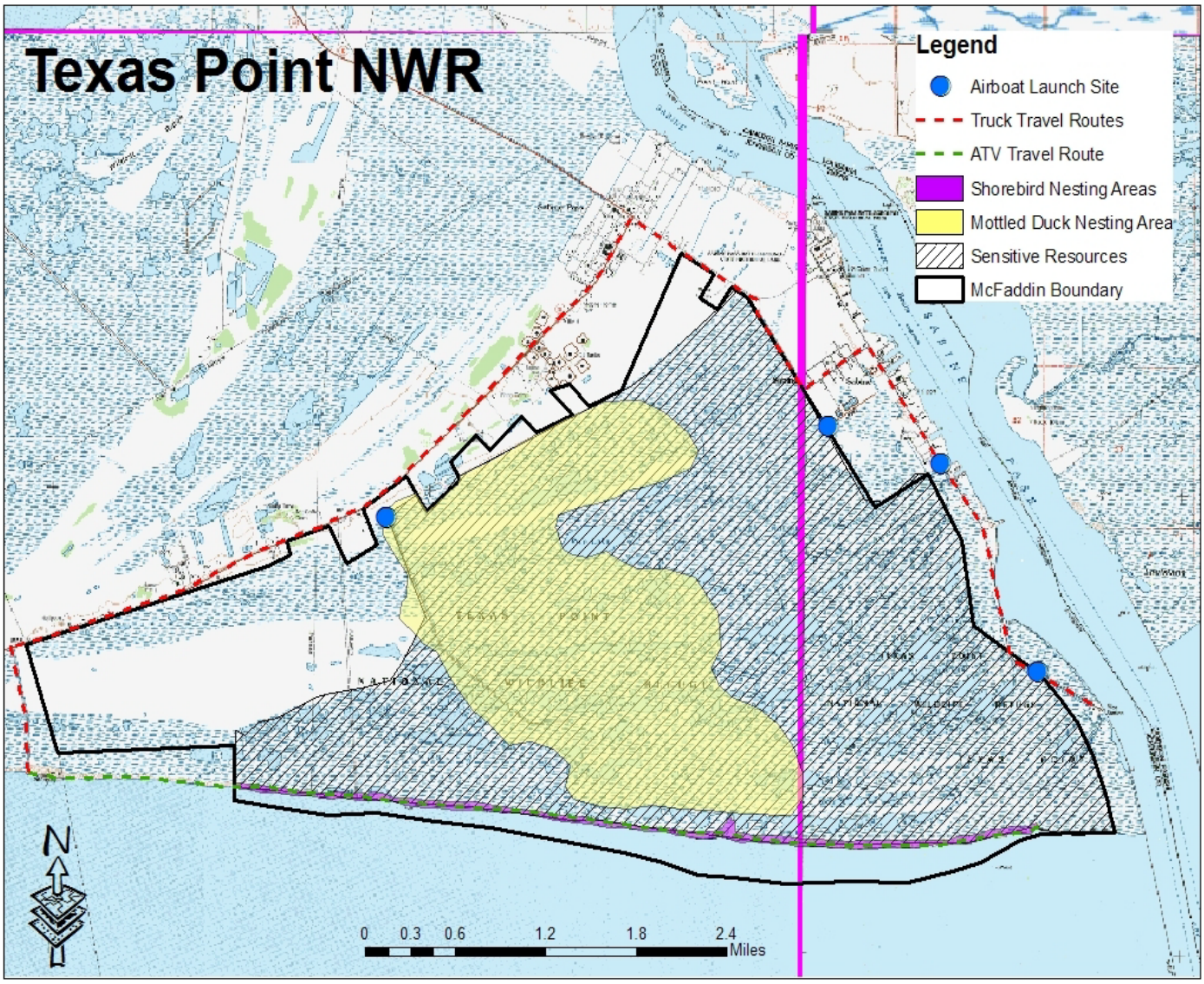

Figure 15. Sensitive Areas and Access Points at McFaddin NWR

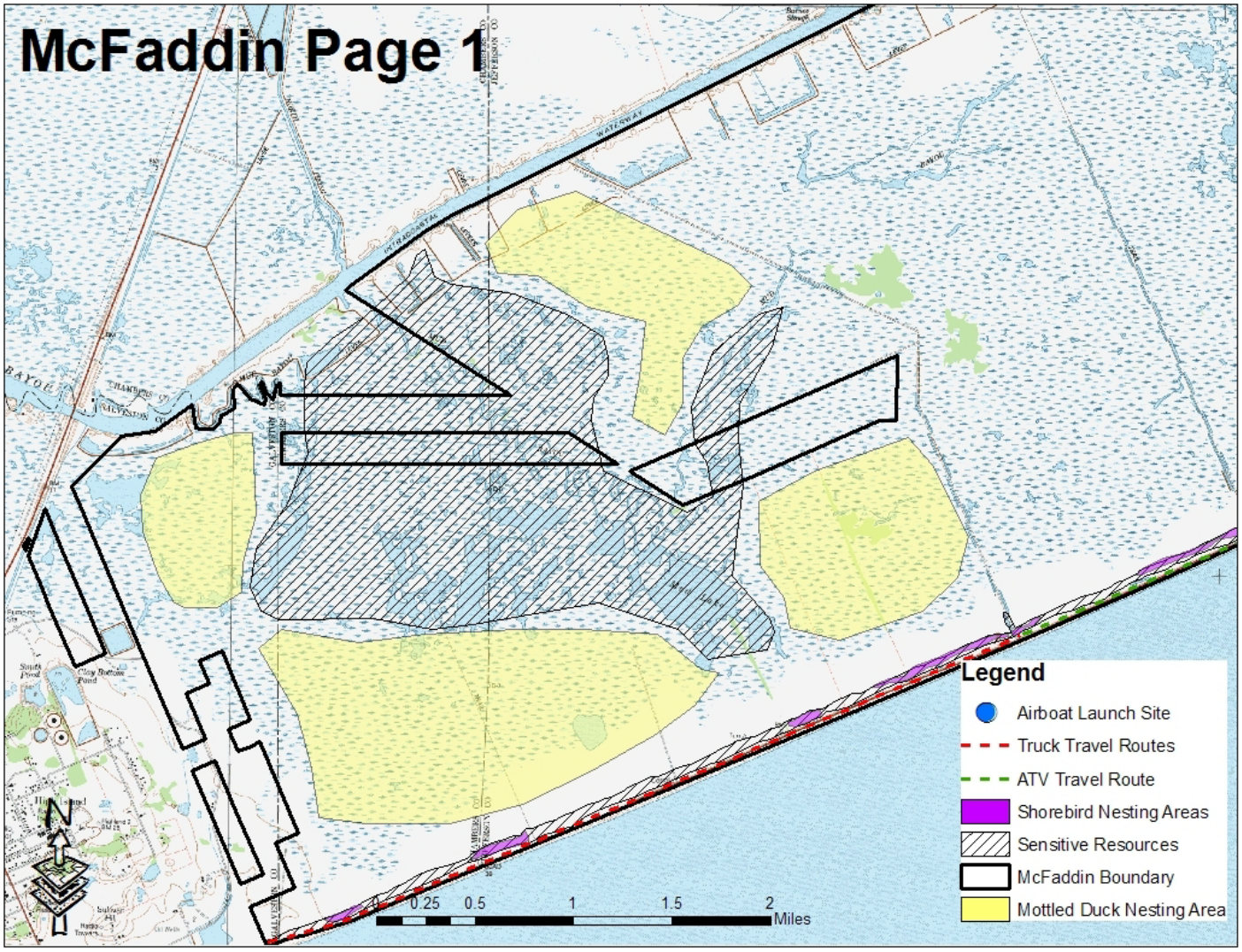

Figure 16. Sensitive Areas and Access Points at McFaddin NWR

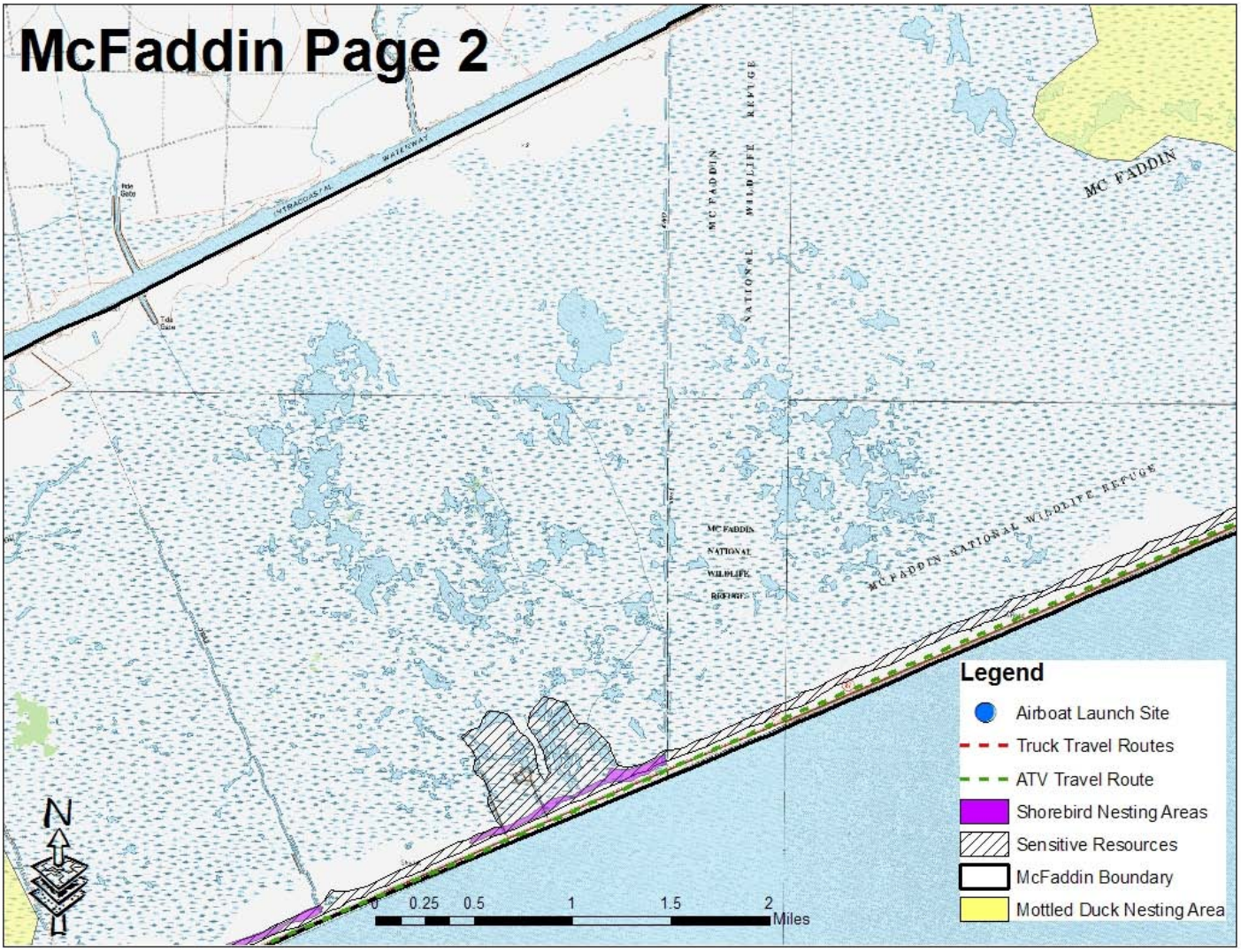

Figure 17. Sensitive Areas and Access Points at McFaddin NWR

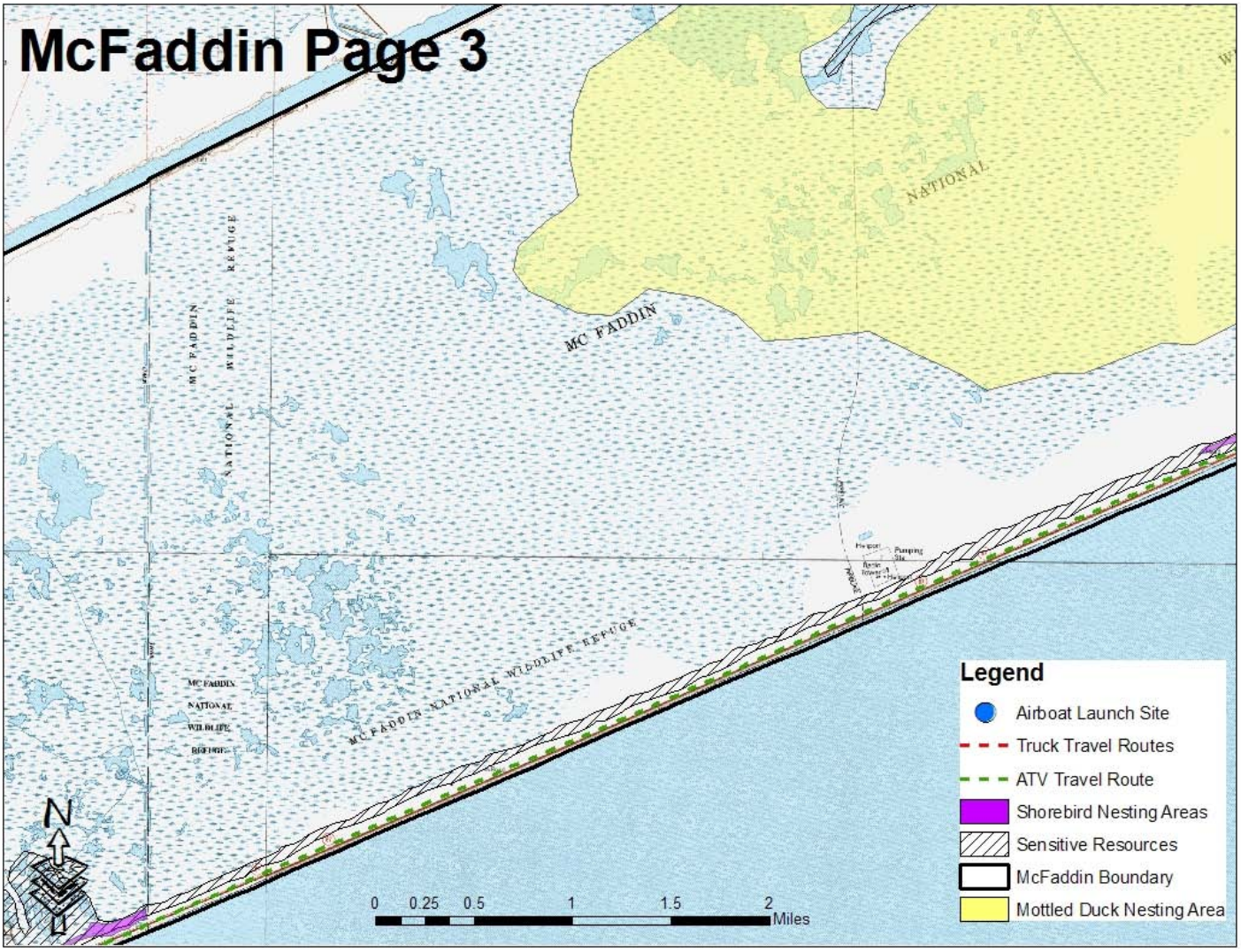

Figure 18. Sensitive Areas and Access Points at McFaddin NWR

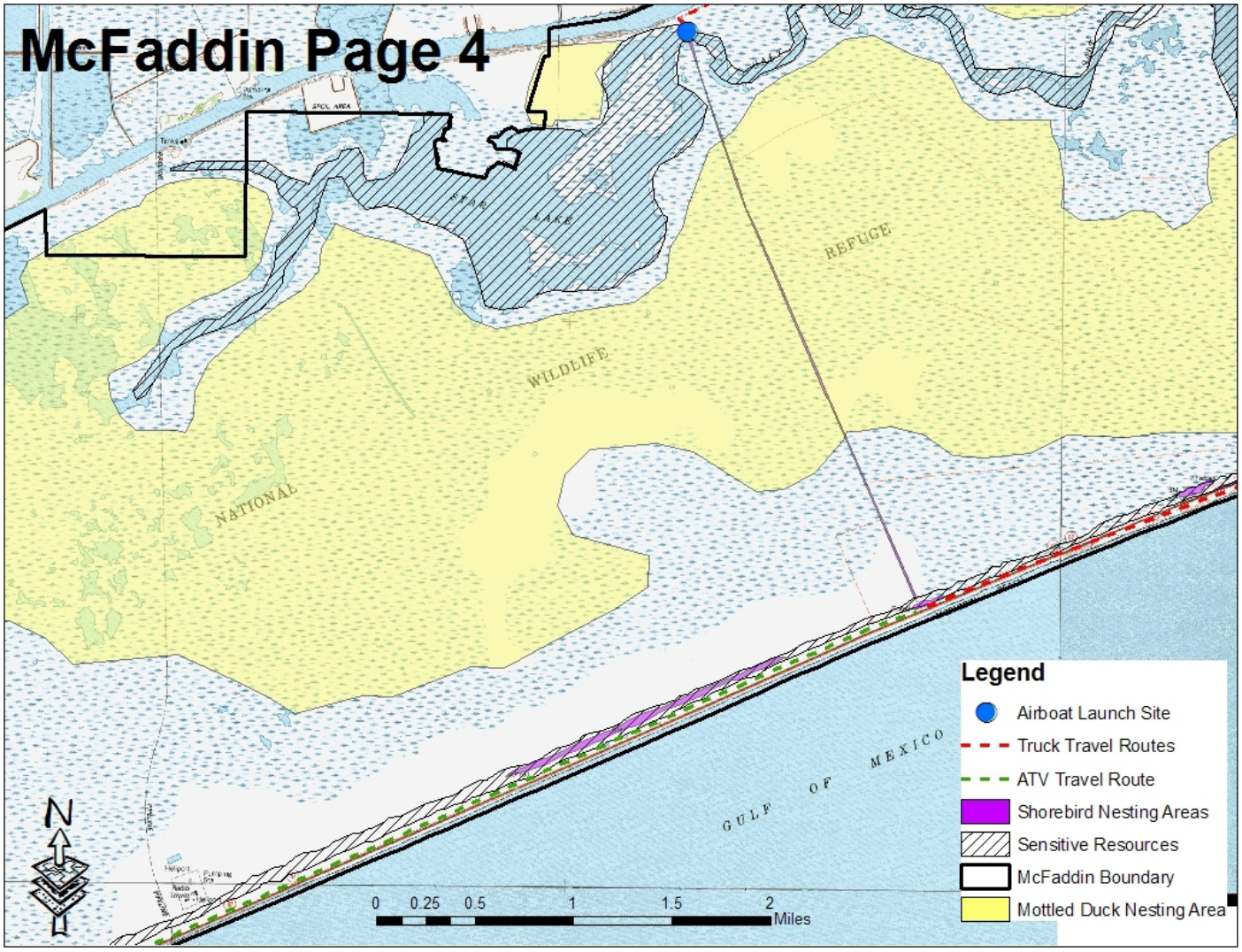

Figure 19. Sensitive Areas and Access Points at McFaddin NWR

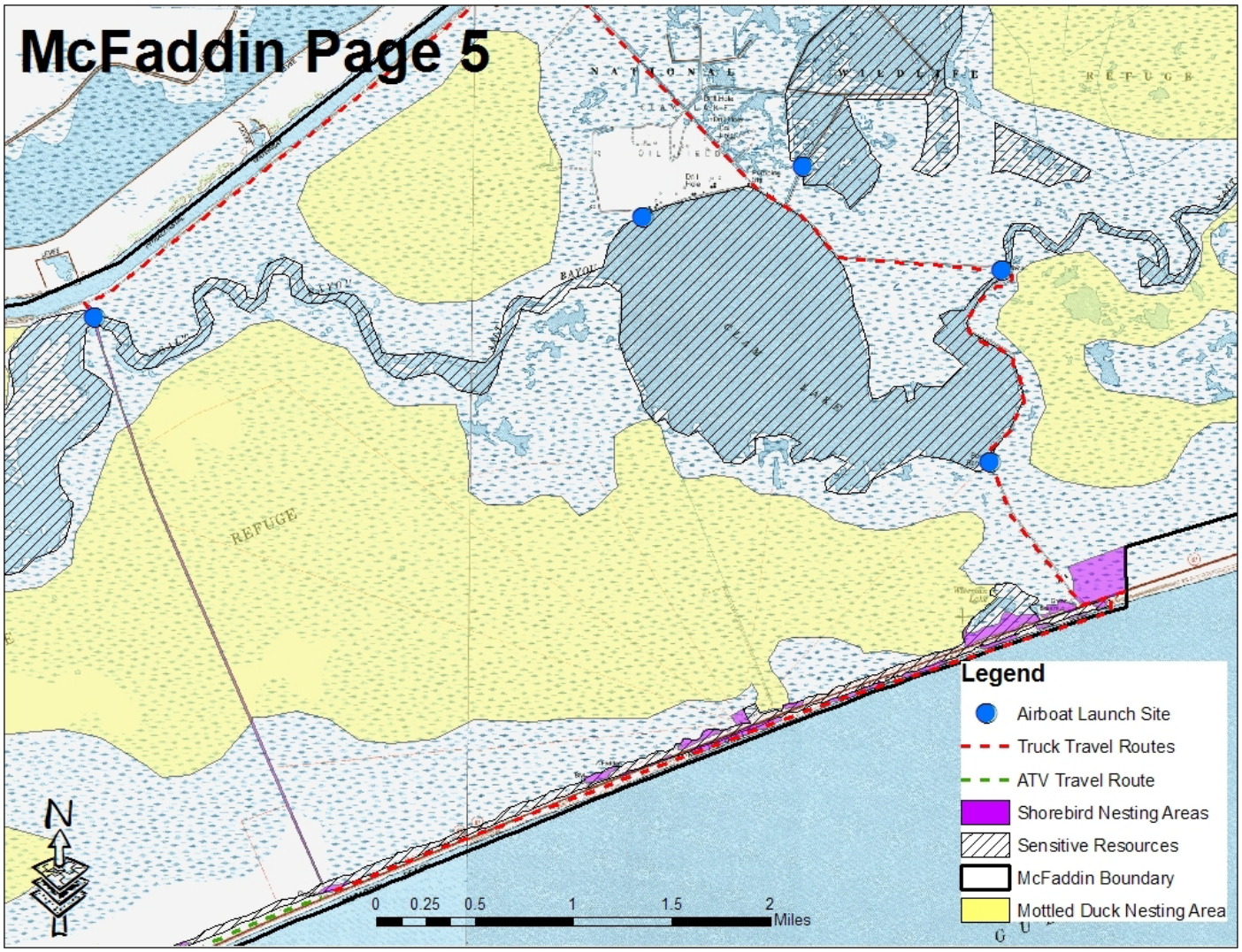

Figure 20. Sensitive Areas and Access Points at McFaddin NWR

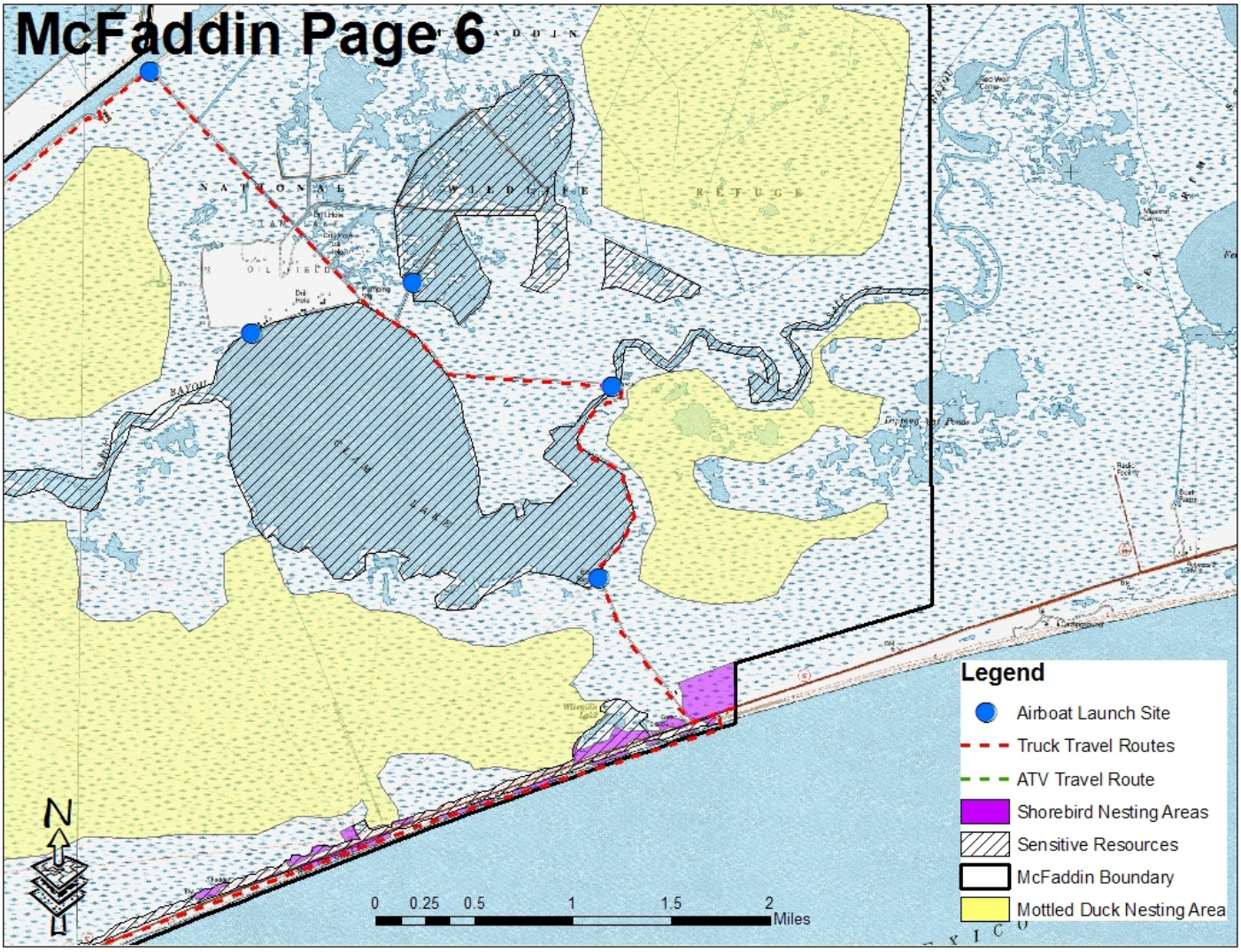

Figure 21. Sensitive Areas and Access Points at McFaddin NWR

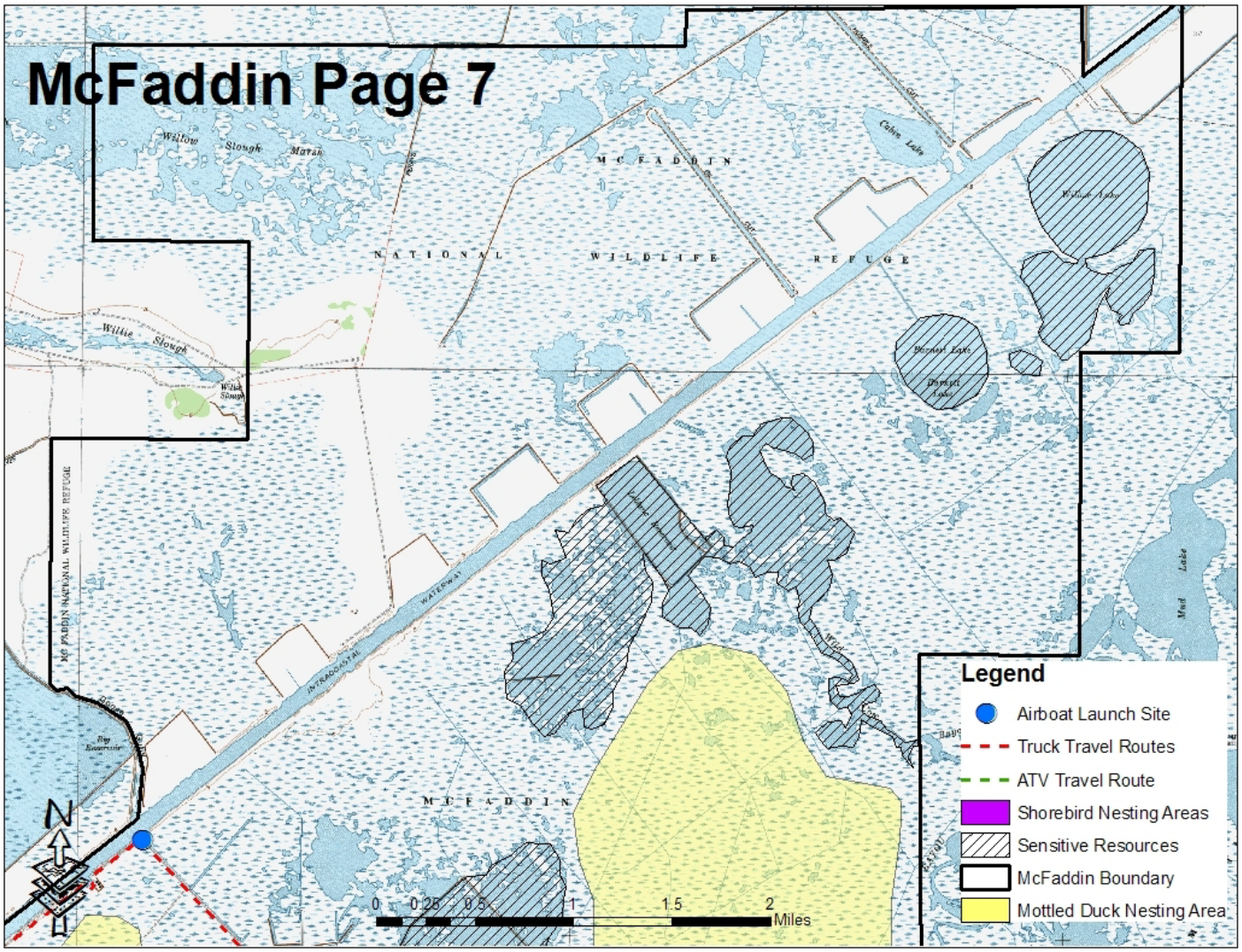

Figure 22. Sensitive Areas and Access Points at Moody NWR

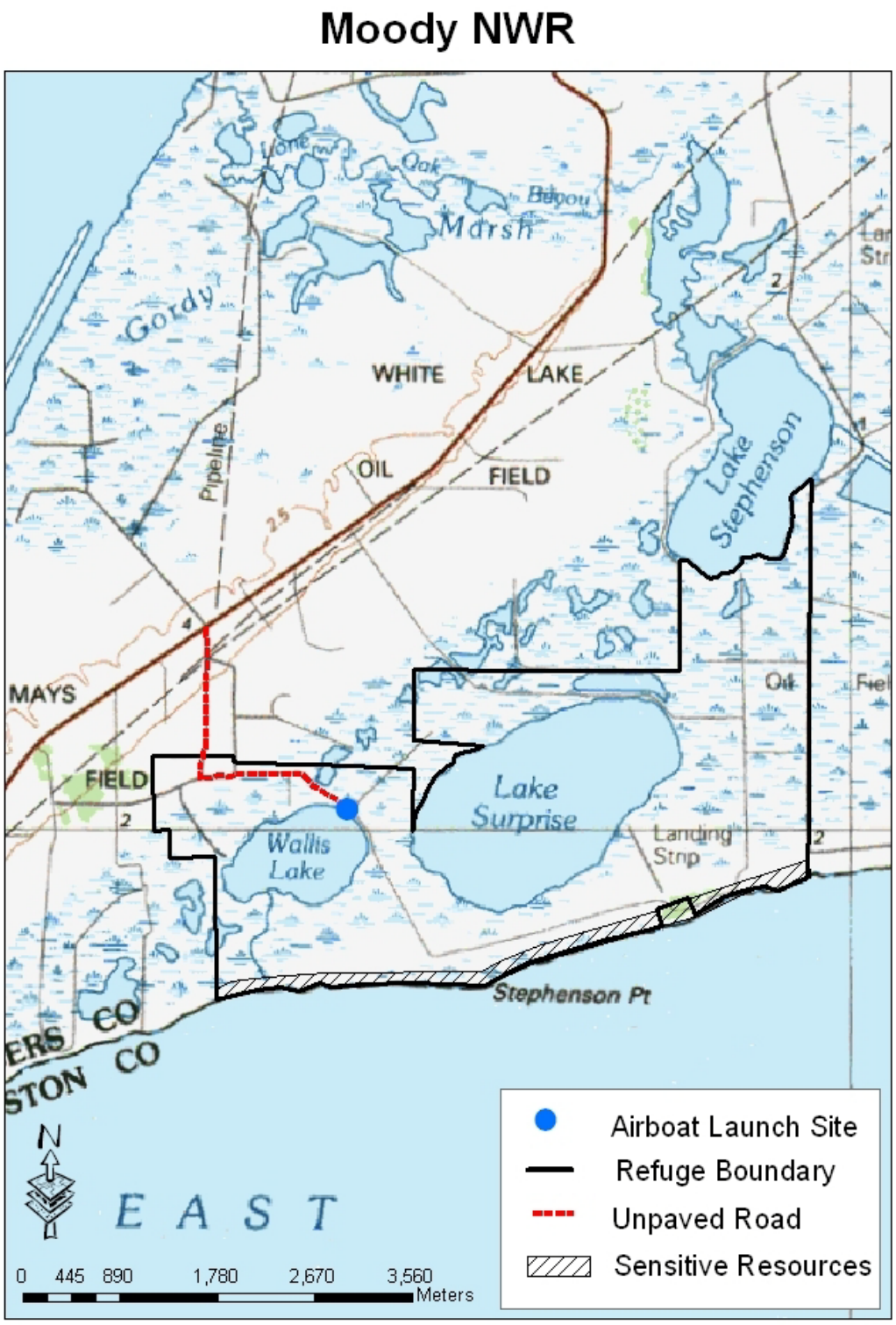
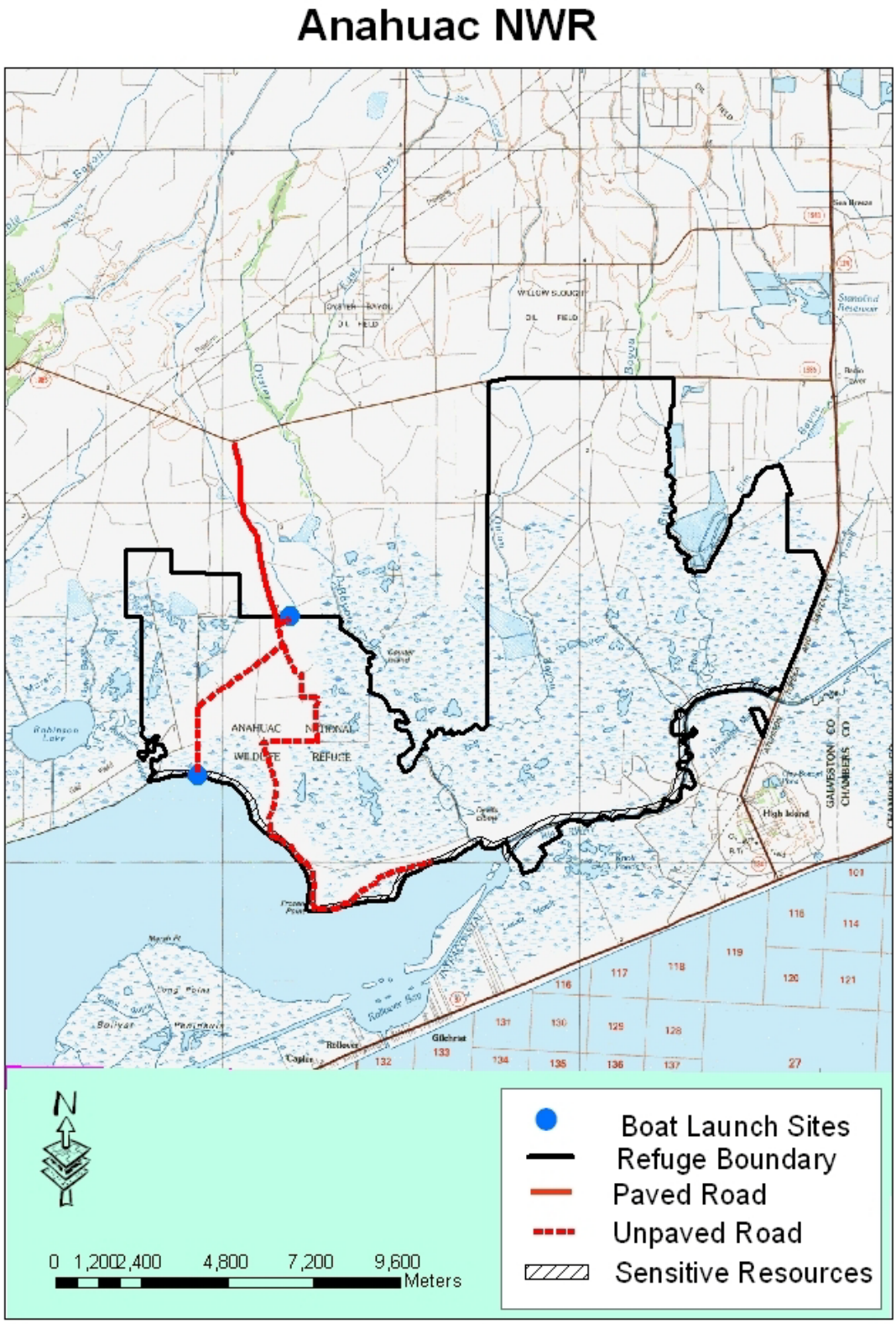
Figure 23. Sensitive Areas and Access Points at Anahuac NWR