



DRAFT

**ENVIRONMENTAL ASSESSMENT
FOR THE PROPOSED NEW CORPUS CHRISTI BORDER PATROL AND
OFFICE OF FIELD OPERATIONS STATION
U.S. BORDER PATROL, RIO GRANDE VALLEY SECTOR**

**Department of Homeland Security
U.S. Customs and Border Protection
U.S. Border Patrol**



AUGUST 2010

1 **DRAFT**
2 **FINDING OF NO SIGNIFICANT IMPACT**
3 **FOR THE PROPOSED NEW CORPUS CHRISTI BORDER PATROL AND**
4 **OFFICE OF FIELD OPERATIONS STATION**
5 **U.S. BORDER PATROL, RIO GRANDE VALLEY SECTOR**
6

7 **Project History:** United States (U.S.) Border Patrol (USBP) and Office of Field Operations
8 (OFO) are law enforcement entities of U.S. Customs and Border Protection (CBP) within the
9 Department of Homeland Security (DHS). USBP's priority mission is to prevent the entry of
10 terrorists and their weapons of terrorism and to enforce the laws that protect the U.S. homeland.
11 This is accomplished by the detection, interdiction, and apprehension of those who attempt to
12 illegally enter or smuggle any person or contraband across the sovereign borders of the U.S.
13 between the land ports of entry. The addition of new agents and personnel, as per Presidential
14 mandates, will facilitate the primary goals and objectives of USBP's national strategy.
15 Increasing trends in illegal border activity require additional USBP agents and other resources to
16 enhance the operational capabilities of USBP.
17

18 OFO also has full Border Search Authority granted by the U.S. Congress. OFO agents primarily
19 deal with cargo and persons who enter the U.S. through ports of entry. Ports of entry are
20 responsible for daily port specific operations. OFO enforces the import and export laws and
21 regulations, conducts immigration policy and programs of vessel crews and visitors, and perform
22 agriculture inspections to prevent the entry of potential carriers of animal and plant pests or
23 diseases that could cause serious damage to America's crops, livestock, pets, and the
24 environment. Commercial customs brokers are required to pay cargo fees/duties to the OFO
25 when vessels dock at Port Corpus Christi. Such activities typically generate 20 to 25 visits from
26 the public on a daily basis. In addition, the customs brokers will also visit the OFO to clear a
27 crew member for immigration purposes.
28

29 A larger station is needed to accommodate the increasing USBP and OFO agent force and to
30 provide a safe and efficient working environment for the agents and support staff. This
31 Environmental Assessment (EA) was prepared in accordance with the National Environmental
32 Policy Act (NEPA) and analyzes the project alternatives and potential impacts to the human and
33 natural environment from three selected alternative sites.
34

35 **Purpose and Need:** The purpose of the Proposed Action is to accommodate the addition of new
36 agents and personnel to increase border security within the USBP Corpus Christi area of
37 responsibility, with an ultimate objective of increasing the probability of apprehension of those
38 that have entered into the U.S. illegally. The need for the Proposed Action is to provide adequate
39 space and facilities for the current agents and staff currently operating out of the existing station;
40 additional space and facilities for expansion of the agent force up to 130 personnel including
41 agents and staff; facilities necessary for an increased effectiveness of USBP agents in the
42 performance of their duties; opportunity for future expansion as necessary; and, a more safe,
43 effective, and efficient work environment for agents.
44

45 **Proposed Action:** The Proposed Action includes the construction, operation, and maintenance
46 of a new station near Corpus Christi. The Preferred Alternative is to construct the station at a

1 site located at the junction of Clarkwood Road and Agnes Street. This site is an approximately
2 37-acre tract of agriculture land located approximately 6.5 miles southwest of the downtown
3 area, and 1.5 miles west of the Corpus Christi International Airport. Access to the Preferred
4 Alternative site would be from Agnes Road (a frontage road of State Route 44) and Clarkwood
5 Road. The staff from the existing USBP Station and OFO facility would relocate to the new
6 station once the construction is completed. The new station would provide over 32,000 square
7 feet of office and administrative space.

8
9 The station would also include a vehicle service and maintenance facility; a fuel bay island with
10 one 4,000-gallon diesel and two 12,000-gallon above ground storage tanks (ASTs) for unleaded
11 gasoline and E85 (ethanol) fuel; a car wash with an oil water separator component; sensor shop;
12 vehicle impound lot; a 5-acre stormwater detention basin; communication tower; and short-stay
13 canine kennels for up to eight dogs.

14
15 Additionally, the continued maintenance as well as potential renovations of or minor additions to
16 the new station would be expected. Such activities could include, but are not limited, to minor
17 renovations and additions to buildings such as realigning interior spaces of an existing building,
18 adding a small storage shed to an existing building, installing a small antenna on an already
19 existing antenna tower that does not cause the total height to exceed 200 feet, kennels, security
20 systems, lighting, parking areas, and stormwater detention basins. Other maintenance activities
21 could include routine upgrade, repair, and maintenance of the new station buildings, roofs,
22 parking area, grounds, or other facilities which would not result in a change its functional use
23 (e.g., replacing door locks or windows, painting interior or exterior walls, resurfacing a road or
24 parking lot, culvert maintenance, grounds maintenance, or replacing essential station components
25 such as an air condition unit).

26
27 **Alternatives Considered:** Four alternatives were identified and considered during the planning
28 stages of the proposed project: the No Action Alternative, Alternative 1—Clarkwood Site A;
29 Alternative 2—Clarkwood Site B (Preferred Alternative); and Alternative 3—Twin River Site.
30 The No Action Alternative would preclude the construction, operation, and maintenance of a
31 new station. The existing USBP station and OFO facility, located in downtown Corpus Christi,
32 would continue to be inadequate for the support of their respective operations, and would not be
33 able to accommodate the projected increase in USBP agents necessary to operate effectively.

34
35 The Clarkwood alternatives are located essentially on the same parcel of land, but have different
36 conceptual layouts/designs. The Twin River Site is located north of Interstate 37 and adjacent to
37 Twin River Boulevard. This site has been disturbed by past and current activities.

38
39 Three other alternatives were also considered, but eliminated from further analysis. Two of these
40 were different layouts at the Clarkwood Site. Alternative Site C was the preferred alternative
41 during the early planning stages. However, this site was eliminated due to the greater impacts
42 and the 100-year floodplain associated with this conceptual layout. Alternative Site D was
43 eliminated because the footprint would be within the 100-year floodplain and would require
44 relocation of a public water supply line easement. The other alternative that was eliminated was
45 expansion of the existing USBP station. Expansion and renovation of the existing station is not
46 possible because of lease restrictions, as well as a lack of adequate space for expansion.

1 **Affected Environment and Consequences:** The construction and operation of the new station
2 would potentially result in minimal to moderate impacts including temporary increased air
3 pollution from soil disturbance, permanent loss of 37 acres of prime farmlands, minor alterations
4 within the 100-year floodplain, minor and temporary increase in ambient noise, and slight
5 increases in local traffic volumes. Residences occur near both of the alternative sites; thus, the
6 station construction and operation would have no effect relative to environmental justice or
7 protection of children issues.

8
9 The Preferred Alternative would develop approximately 37 acres of land that is currently in
10 agricultural production (cotton and corn) to construct the building, parking areas, stormwater
11 detention basin, and other associated facilities. Alternative 2 would require similar amount of
12 land and result in similar effects. Alternative 3 would require less area (16 acres) than the other
13 alternatives, but the potential effects to vegetation and wildlife would be greater since the Twin
14 River site supports a native and non-native grassland community, as opposed to the row crops
15 present at the Clarkwood site.

16
17 The potential impacts resulting from the Proposed Action, in combination with impacts resulting
18 from other development in Nueces County and the City of Corpus Christi, would result in
19 permanent and minimal cumulative effects to floodplains, air quality, transportation, and loss of
20 prime farmland soils.

21
22 **Best Management Practices:** Best management practices (BMP) that will be implemented
23 during the construction and operation of the new station are described in Section 5 of the EA and
24 are incorporated by reference to this Finding of No Significant Impact. Some of the more
25 pertinent measures include, but are not limited to, the following:

- 26
27
- 28 1. Prepare and implement a Spill Prevention, Control and Countermeasures Plan (SPCCP)
29 to prevent and manage accidental spills that might occur during construction of the
30 station. Operation of the station will also require a SPCCP due to the presence of
31 hazardous materials associated with the vehicle maintenance shop.
 - 32 2. Prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) to control
33 stormwater erosion and sedimentation during construction.
 - 34 3. Conduct bird surveys, in accordance with the Migratory Bird Treaty Act, in the event
35 clearing and grubbing activities occur during the normal migratory bird breeding and
36 nesting season.
 - 37 4. Provide immediate notification to the Texas Historical Commission in the event any
subsurface cultural resources are uncovered during the construction.

1 **Findings and Conclusions:** No significant adverse impacts are anticipated for any resource
2 analyzed within this document. Therefore, no further analysis or documentation (*i.e.*,
3 Environmental Impact Statement) is warranted. CBP, in implementing this decision, would
4 employ all practical means to minimize the potential adverse impacts on the human and
5 biological environment.
6
7
8
9

10 **Project Proponent:**

11 _____ Date _____
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13 Acting Chief, Facilities Branch
14 Office of Border Patrol
15
16
17

18 **Project Proponent:**

19 _____ Date _____
20 Jon Batt
21 Director, Facilities Division
22 Office of Field Operations
23
24
25

26 **Approved:**

27 _____ Date _____
28 Gregory L. Giddens
29 Executive Director
Facilities Management and Engineering

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August 2010

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EXECUTIVE SUMMARY

INTRODUCTION: United States (U.S.) Border Patrol (USBP) and Office of Field Operations (OFO) are law enforcement entities of U.S. Customs and Border Protection (CBP) within the Department of Homeland Security (DHS). USBP's priority mission is to prevent the entry of terrorists and their weapons of terrorism and to enforce the laws that protect the U.S. homeland. This is accomplished by the detection, interdiction, and apprehension of those who attempt to illegally enter or smuggle any person or contraband across the sovereign borders of the U.S. between the land ports of entry. The addition of new agents and personnel, as per Presidential mandates, will facilitate the primary goals and objectives of USBP's national strategy. Increasing trends in illegal border activity require additional USBP agents and other resources to enhance the operational capabilities of USBP.

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A larger station is needed to accommodate the increasing USBP and OFO agent force and to provide a safe and efficient working environment for the agents and support staff. This Environmental Assessment (EA) was prepared in accordance with the National Environmental Policy Act (NEPA) and analyzes the project alternatives and potential impacts to the human and natural environment from three selected alternative sites.

PURPOSE AND NEED: The purpose of the Proposed Action is to accommodate the addition of new agents and personnel to increase border security within the USBP Corpus Christi area of responsibility, with an ultimate objective of increasing the probability of apprehension of those that have entered into the U.S. illegally. The need for the Proposed Action is to provide adequate space and facilities for the current agents and staff currently operating out of the existing station; additional space and facilities for expansion of the agent force to 130 personnel including agents and staff; facilities necessary for an increased effectiveness of USBP agents in the performance of their duties; opportunity for future expansion as

necessary; and, a more safe, effective, and efficient work environment for agents.

DESCRIPTION OF PROPOSED ACTION:

The Preferred Alternative includes the construction, operation, and maintenance of a new station near Corpus Christi. The proposed site is an approximately 37-acre tract of agriculture land located approximately 6.5 miles southwest of the downtown area, and 1.5 miles west of the Corpus Christi International Airport. Access to the Preferred Alternative site would be from Agnes Street (a frontage road of State Route (SR) 44) and Clarkwood Road. The staff from the existing USBP Station and OFO facility would relocate to the new station once the construction is completed.

PROPOSED ACTION AND ALTERNATIVES CONSIDERED:

Four alternatives were identified and considered during the planning stages of the proposed project: the No Action, Alternative 1—Clarkwood Site A Alternative); Alternative 2—Clarkwood Site B (Preferred Alternative); and Alternative 3—Twin River Site. The No Action Alternative would preclude the construction, operation, and maintenance of a new station. The existing USBP station and OFO facility, located in downtown Corpus Christi, would continue to be inadequate for the support of their respective operations, and would not be able to accommodate the projected increase in USBP agents necessary to operate effectively.

The Clarkwood alternatives are located essentially on the same parcel of land, but have different conceptual layouts/designs. The Twin River Site is located north of Interstate 37 and adjacent to Twin River Boulevard. This site has been disturbed by past and current activities.

AFFECTED ENVIRONMENT AND CONSEQUENCES:

The construction and operation of the new station would potentially result in minimal to moderate impacts including temporary increased air pollution from soil disturbance, permanent loss of 37 acres of prime farmlands, minor alterations within the 100-year floodplain, minor and temporary increase in ambient noise, and slight increases in local traffic volumes. Residences occur near both of the alternative sites; thus, the station construction and operation would have no effect relative to environmental justice or protection of children issues.

The Preferred Alternative would develop approximately 37 acres of land that is currently in agricultural production (cotton and corn) to construct the building, parking areas, stormwater detention basin, and other associated facilities. Alternative 2 would require similar amount of land and result in similar effects.

Alternative 3 would require less area (16 acres) than the other alternatives, but the potential effects on vegetation and wildlife would be greater since the Twin River site supports a native and non-native grassland community, as opposed to the row crops present at the Clarkwood site.

The potential impacts resulting from the Proposed Action, in combination with impacts resulting from other development in Nueces County and the City of Corpus Christi, would result in permanent and minimal cumulative effects on floodplains, air quality, transportation, and loss of prime farmland soils.

**FINDINGS AND
CONCLUSIONS:**

No significant adverse impacts are anticipated for any resource analyzed within this document. Therefore, no further analysis or documentation (i.e., Environmental Impact Statement) is warranted. CBP, in implementing this decision, would employ all practical means to minimize the potential adverse impacts on the human and biological environment.

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SECTION 1.0
INTRODUCTION



1.0 INTRODUCTION

1.1 BACKGROUND

In 1924, Congress created the United States (U.S.) Border Patrol (USBP) to serve as the law enforcement entity of the Immigration and Naturalization Service (INS), and it did so until November 25, 2002, when Congress transferred all INS responsibilities to the newly created Department of Homeland Security (DHS) with the passage of the Homeland Security Act of 2002 (Public Law [PL] 107-296). USBP was officially transferred into the Office of Border Patrol, under DHS and Customs and Border Protection (CBP), on March 1, 2003.

CBP has prepared this Environmental Assessment (EA) to address the potential effects, beneficial and adverse, resulting from the proposed construction, operation, and maintenance of a new USBP station in Corpus Christi, Texas. The proposed new station would be constructed to accommodate existing USBP staff, as well as the anticipated increase in agent force in support of the National Border Patrol Strategy to gain and maintain effective control of the U.S. borders (CBP 2005). In addition, staff from CBP's Office of Field Operations (OFO) would also be collocated at the new station.

The current USBP station in Corpus Christi is located in an industrial/commercial building on Leopard Drive between the Corpus Christi Airport and Interstate 37 (I-37). The existing station does not provide adequate space for the 52 agents and support staff currently operating from the station. USBP anticipates an increase to 110 USBP personnel and OFO anticipates their staff to increase to 19. By providing additional space and facilities, the new station would substantially enhance the overall safety and efficiency of current and future operations within the USBP Corpus Christi Station's Area of Responsibility (AOR).

The OFO's Corpus Christi Seaport Office currently leases space in downtown Corpus Christi. This building does not afford the required security for the OFO agents, nor is it conducive for interactions with the public and commercial vendors who frequent the OFO Corpus Christi Seaport Office.

1.2 STUDY LOCATION

The proposed new USBP station and OFO facility would be constructed within or near the City of Corpus Christi (Figure 1-1). The sites being considered for the new station are located within 5 miles of the existing station (Figure 1-2). Corpus Christi is located in Nueces County, Texas, on the coast of the Gulf of Mexico. Nueces County is bordered by San Patricio County to the north, Kleberg County to the south, and Jim Wells County to the west.

1.3 PURPOSE AND NEED

CBP proposes the construction, operation, and maintenance of a new USBP station for the purpose of facilitating the primary goals and objectives of USBP's strategy, which includes the addition of new agents and personnel as per Presidential mandates. Increasing trends in illegal border activity require additional USBP agents and other resources to enhance the

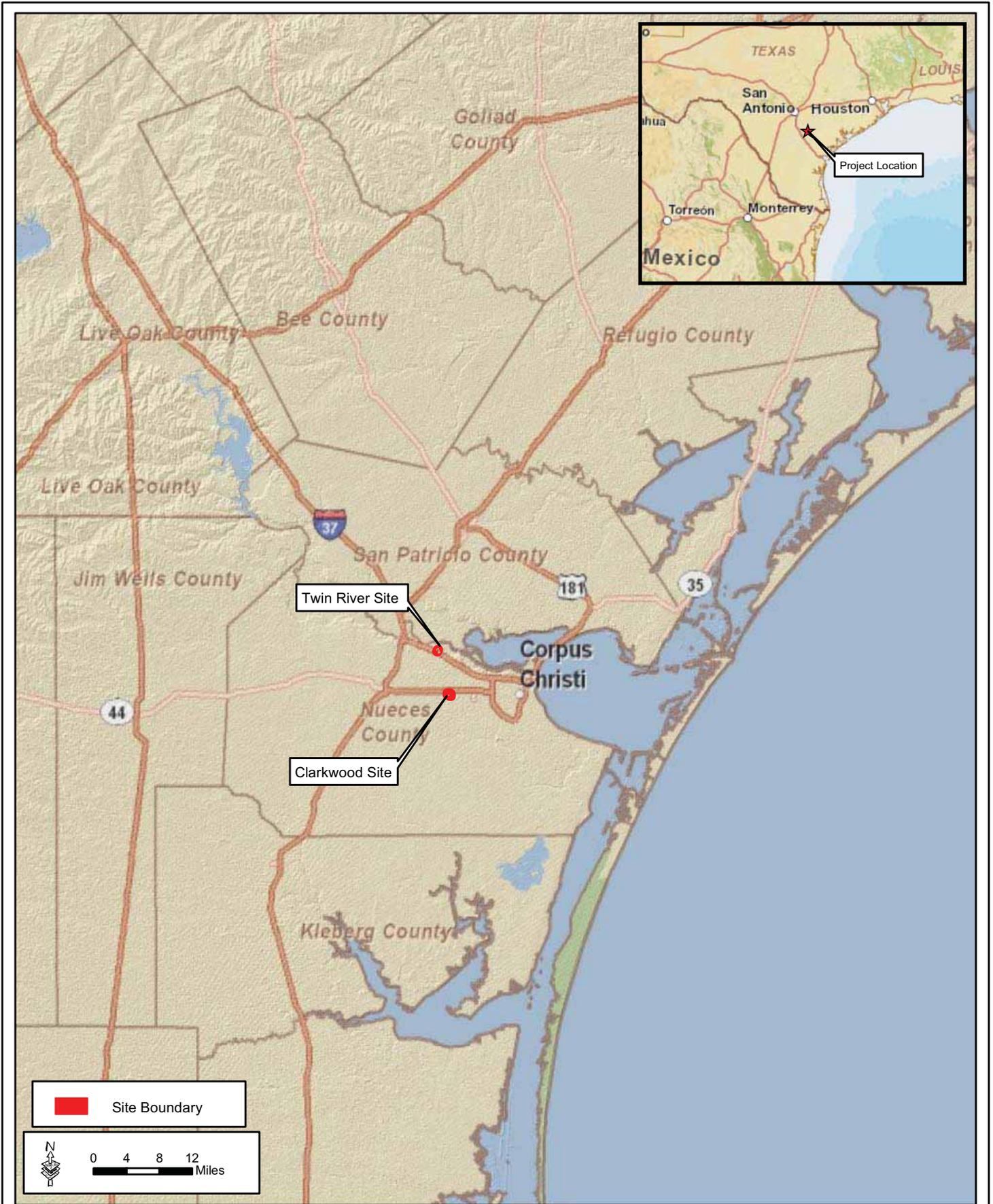


Figure 1-1: Vicinity Map

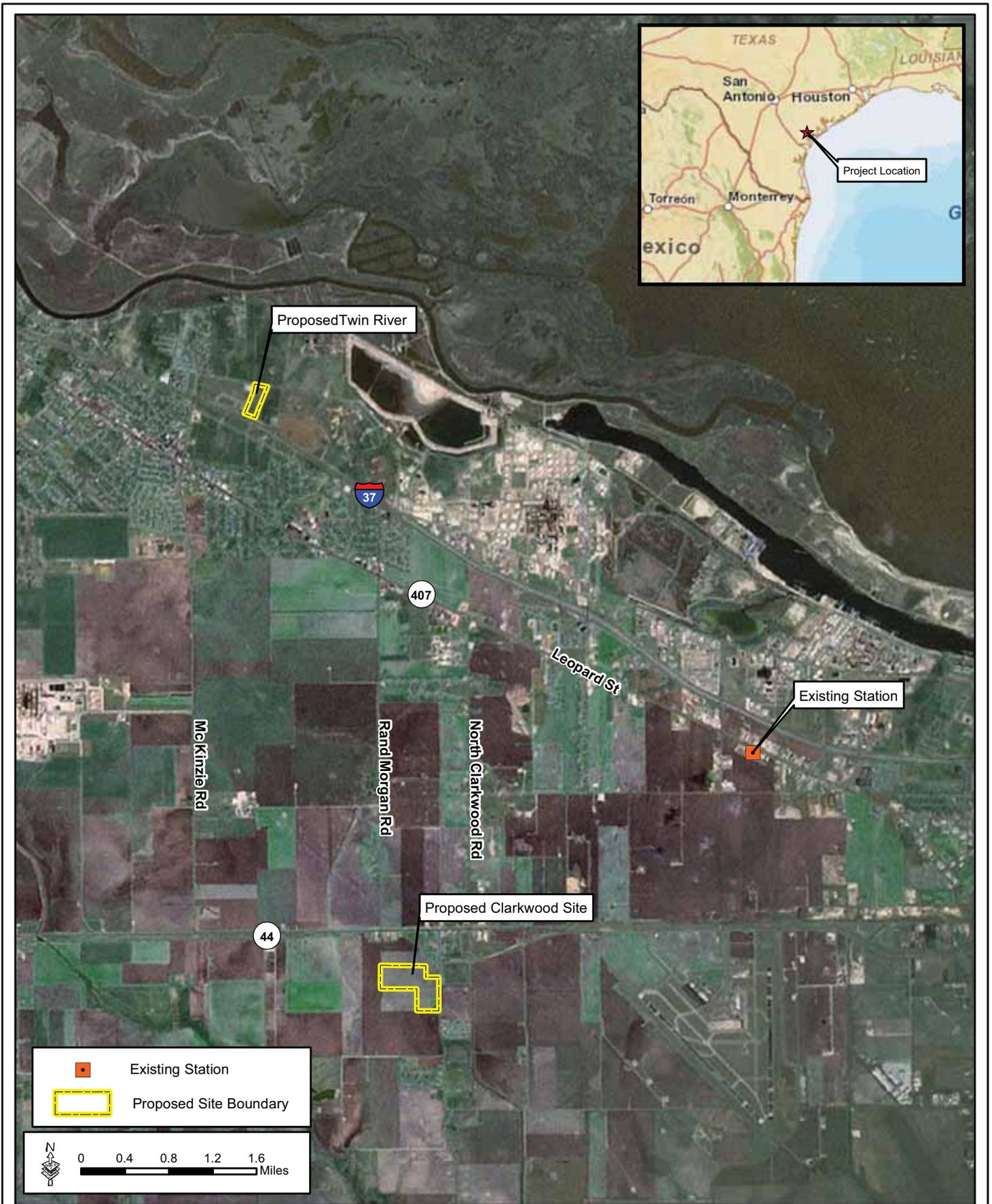


Figure 1-2: Existing and Proposed Station Locations

1 operational capabilities of USBP. The new station would also provide a collocated facility for
2 the OFO Corpus Christi Seaport Office. The need for the proposed action is to provide the
3 following:

- 4
- 5 • adequate space and facilities (e.g., administrative, special operations, and patrol
6 command offices, squad room, and staff showers and lockers) for the 52 agents and staff
7 currently operating out of the existing station and for the 9 OFO agents that are operating
8 out of the rented space in downtown Corpus Christi;
- 9 • additional space and facilities for expansion of the agent force up to
10 100 USBP agents, 10 USBP support staff and 19 OFO agents and support staff;
- 11 • facilities necessary for an increased effectiveness of USBP agents in the performance of
12 their duties (e.g., vehicle maintenance shop, short-term stay dog kennels, etc.);
- 13 • limited opportunity for future expansion as necessary;
- 14 • a more safe, effective, and efficient work environment;
- 15 • adequate holding rooms for detainees; and
- 16 • adequate parking for privately owned vehicles (POV) and Government owned vehicles
17 (GOV).
- 18

19 **1.4 REGULATORY AUTHORITY**

20

21 The primary sources of authority granted to USBP agents are the Immigration and Nationality
22 Act (INA) of 1959 (PL 82-414) contained in Title 8 of the U.S. Code (USC) “Aliens and
23 Nationality” and other statutes relating to the immigration and naturalization of aliens. The
24 secondary sources of authority are administrative regulations implementing those statutes,
25 judicial decisions, and administrative decisions of the Board of Immigration Appeals. In
26 addition, the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (PL 104-
27 208) and subsequently the Homeland Security Act of 2002 (PL 107-296) mandate that DHS
28 acquire and improve equipment and technology along the border, hire and train new agents for
29 the border region, and develop effective border enforcement strategies.

30 **1.5 PUBLIC INVOLVEMENT**

31

32

33 Consultation and coordination with Federal and state agencies has occurred during preparation of
34 this document. Included are contacts that were made during the development of the action
35 alternatives and writing of the EA. Copies of correspondence are provided in Appendix A.
36 Formal and informal coordination were conducted with the following agencies:

- 37
- 38 • U.S. Fish and Wildlife Service (USFWS)
- 39 • U.S. Environmental Protection Agency (USEPA)
- 40 • Natural Resource Conservation Service (NRCS)
- 41 • Texas Parks and Wildlife Department (TPWD)
- 42 • Texas Commission on Environmental Quality (TCEQ)
- 43 • Texas State Historical Preservation Officer (SHPO)
- 44 • Texas Historical Commission
- 45 • Texas Department of Transportation (TxDOT)
- 46 • Native American Tribes

- 1 • City of Corpus Christi
- 2 • Nueces County

3
4 The draft version of the EA will be made available for public review for 30 days and the Notice
5 of Availability (NOA) will be published in the *Corpus Christi Caller* and *Corpus Christi Daily*
6 on XX August 2010. The EA will also be available electronically at the USACE Galveston
7 District's website: <http://www.swg.usace.army.mil/pao/HotTopic.asp>. In addition, the draft EA
8 will be available for review at Corpus Christi Northwest Branch Library, located at 3202
9 McKinzie Lane, Corpus Christi, Texas from August 27 to September 27, 2010.

10
11 Exhibit 1-1 is a copy of the NOA that will be published. All correspondence sent or received
12 during the preparation of this document will be included as Appendix A of the final EA.

13 **Exhibit 1-1.**

15 **NOTICE OF AVAILABILITY**

16 **DRAFT ENVIRONMENTAL ASSESSMENT FOR THE** 17 **CONSTRUCTION OF THE NEW U.S. BORDER PATROL (USBP)** 18 **AND OFFICE OF FIELD OPERATIONS (OFO) STATION,** 19 **CORPUS CHRISTI, TEXAS**

20
21
22 The public is hereby notified of the availability of the draft Environmental Assessment (EA) and
23 proposed Finding of No Significant Impact (FONSI) prepared by U.S. Customs and Border
24 Protection (CBP) for the construction, operation and maintenance of a new USBP and OFO
25 station near Corpus Christi, Texas. The proposed station is being considered to be located at one
26 of two sites, both of which are in proximity to the Corpus Christi International Airport. The draft
27 EA and proposed FONSI will be available for review at the Corpus Christi Northwest Branch
28 Library, 3202 McKinzie Lane, Corpus Christi for 30 days beginning on 27 August 2010 to 27
29 September 2010. It is also available for review and downloading from the U.S. Army Corps of
30 Engineers, Galveston District's Internet web page at the following URL address:
31 <http://www.swg.usace.army.mil/pao/HotTopic.asp>.

32
33 Correspondence regarding the EA and FONSI should be sent to: U.S. Army Corps of Engineers,
34 Galveston District, ATTN: CESWG-PM-J Mrs. R. Brown, P.O. Box 1229, Galveston, Texas
35 77553-1229, Fax: 409-766-6372 or via e-mail: Rhonda.G.Brown@usace.army.mil.

36 **1.6 SCOPE OF THE ANALYSIS**

37
38
39 The scope of this EA will include the analysis of effects resulting from the construction,
40 operation, and maintenance of a new station. This analysis does not include an assessment of
41 operations conducted in the field and away from the station. USBP and OFO operations would
42 continue unchanged regardless of whether a new station is constructed. Construction of a new
43 station and collocated OFO facility would include development of lands within the Corpus
44 Christi Station AOR in the vicinity of the City of Corpus Christi. The potentially affected

1 biological and human environment would include resources associated with the City of Corpus
2 Christi and Nueces County; however, most potential effects would be limited to the construction
3 site and immediately adjacent resources.

4 5 **1.7 APPLICABLE ENVIRONMENTAL GUIDANCE, STATUTES, AND** 6 **REGULATIONS**

7
8 This EA will be prepared by CBP in accordance with the National Environmental Policy Act
9 (NEPA) of 1969 (42 USC 4321-4347) and the Council on Environmental Quality (CEQ)
10 regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508), as well
11 as the DHS “Environmental Planning Directive” (Management Directive 023.1) and other
12 pertinent environmental statutes, regulations, and compliance requirements, as summarized in
13 Table 1-1.

14 15 **1.8 REPORT ORGANIZATION**

16
17 This EA is organized into eight major sections, including this introduction. Section 2.0 describes
18 all alternatives considered for the project. Section 3.0 discusses the environmental resources
19 potentially affected by the project and the environmental consequences for each of the viable
20 alternatives, and Section 4.0 discusses cumulative impacts. Environmental design measures are
21 discussed in Section 5.0; Sections 6.0, 7.0, and 8.0 present a list of the references cited in the
22 document, a list of acronyms and abbreviations used in the document, and a list of the persons
23 involved in the preparation of the EA, respectively. Pertinent correspondence generated during
24 the preparation of this EA can be found in Appendix A.

Table 1-1. Relevant Policy Documents, Invoking Actions, Regulatory Requirements, and Status of Compliance *

Policy Document	Administrative Authority	Invoking Action	Requirements for Compliance	Status of Compliance
Archaeological Resources Protection Act of 1979 16 United States Code (USC) § 470 et seq.	Department of Interior	Excavation, removal, damage, or other alteration or defacing; or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands 43 Code Federal Regulations (CFR) 7.4	Because activities are exclusively for purposes other than the excavation and/or removal of archaeological resources, even though those activities might incidentally result in the disturbance of archaeological resources, no permit shall be required	Surveys completed and Section 106 process has been initiated
Native American Graves & Repatriation Act (NAGPRA) as amended	National Park Service (NPS)	Excavation, removal, damage, or other alteration of Native American human remains	Coordination directly with tribes claiming cultural affinity to project areas	Will be invoked if remains are discovered
American Indian Religious Freedom Act (AIRFA)	National Park Service (NPS)	Federal actions that affect current or historically used cultural properties	Coordination directly with tribes claiming cultural affinity to project areas	Full Compliance
Clean Air Act of 1963 16 USC § 470 et seq.	Environmental Protection Agency (USEPA)	Any CBP action where the total of direct and indirect emissions in a non-attainment area would equal or exceed the provided rates 40 CFR 51	Project emission levels were determined to be less than <i>de minimis</i> thresholds; therefore, a determination of conformity with applicable implementation plan is not required	Emissions are below <i>de minimis</i> ; no conformity analysis required
Comprehensive Environmental Response, Compensation and Liability Act of 1980 42 USC § 9601 et seq.	USEPA	Release or threatened release of a hazardous substance 40 CFR 302	Development of emergency response plans, notification, and cleanup	To be completed by USBP during design and operation
Energy Independence and Security Act of 2007 P.L. 110-140	U.S. Department of Energy	Federal projects with a footprint exceeding 5,000 square feet to use site planning, design, construction, and maintenance strategies to control storm water runoff.	Design and construct stormwater retention basin as required	Full compliance
Endangered Species Act (ESA) of 1973 16 USC § 1531 et seq.	United States Fish and Wildlife Service (USFWS)	All actions in which there is discretionary CBP involvement or control	Determination of no jeopardy to listed species and no destruction or adverse modification of critical habitat through consultation with the USFWS	CBP has determined no effect

Table 1-1, continued

Policy Document	Administrative Authority	Invoking Action	Requirements for Compliance	Status of Compliance
Farmland Protection Policy Act of 1981 7 USC § 9601 et seq.	Natural Resource Conservation Service	Any CBP action 7 CFR 658	Identify and take into account the adverse effects on the protection of farmland	AD 1006 has been submitted to U.S. Department of Agriculture (USDA)
Federal Water Pollution Control Act of 1977 (also known as Clean Water Act or CWA) 33 USC § 1251 et seq. Clean Water Act	USEPA	Storage, use, or consumption of oil and oil products, which could discharge oil in quantities that could affect water quality standards, into or upon the navigable waters of the U.S. (WUS) 40 CFR 112	Preparation of a Spill Prevention, Control, and Countermeasures Plan	To be completed by USBP or contractor
		Discharge of pollutants 40 CFR 122	Obtain a general National Pollutant Discharge Elimination System Permit	To be completed by USBP or contractor
Migratory Bird Treaty Act of 1918 16 USC § 703	USFWS	Any CBP action resulting in the take of any migratory bird, or the parts, nests, or eggs of such bird 50 CFR 21.11	Avoidance of take or application for permit	Surveys prior to any construction beginning during nesting season
National Historic Preservation Act (NHPA) of 1966 16 USC § 470 et seq.	Advisory Council on Historic Preservation	Any undertaking by CBP 36 CFR 800.3	Assessment of effects through consultation with the Advisory Council on Historic Preservation	Section 106 consultation has been initiated
Occupational Health and Safety Act of 1970 29 USC § 651 et seq.	Occupational Safety and Health Administration, Department of Labor	Employees performing in a workplace 29 CFR 1910.5 (a)	Adherence to occupational health and safety standards	To be completed by USBP during design and operation

Table 1-1, continued

Policy Document	Administrative Authority	Invoking Action	Requirements for Compliance	Status of Compliance
Resource Conservation and Recovery Act (RCRA) of 1976 42 USC § 6901 et seq.	USEPA	Collection of residential, commercial, and institutional solid wastes and street wastes 40 CFR 243	Adherence to guidelines for waste storage and safety and collection equipment, frequency, and management	To be completed by USBP during design and operation
		Procurement of more than \$10,000 annually of products containing recovered materials 40 CFR 247	Procure designated items composed of the highest percentage of recovered materials practicable	To be completed by USBP during design and operation
		Recovery of resources from solid waste through source separation 40 CFR 246	Recovery of high-grade paper, residential materials, and corrugated containers	To be completed by USBP during design and operation
RCRA of 1976 42 USC § 6901 et seq.	USEPA	Treatment, storage, or disposal of hazardous waste on-site 40 CFR 262.10(c)	Determination of hazardous or non-hazardous nature of solid waste, obtain an USEPA identification number if necessary, properly accumulate hazardous waste, and maintain a record	To be completed by USBP during design and operation
Coastal Zone Management Act of 1972 16 USC § 1451 et seq.	National Oceanic and Atmospheric Administration	Development and other actions occurring within designated coastal zones 15 CFR 923	Submittal of Coastal Consistency Determination and concurrence from the affected state's coastal commission	Consistency Determination has been submitted to Texas Coastal Commission
Executive Order (EO) 11988: Floodplain Management 42 Federal Register (FR) 26,951 (May 24, 1997)	Water Resources Council, Federal Emergency Management Agency, Council on Environmental Quality	Acquisition and management of Federal lands; federally undertaken, financed, or assisted construction; conducting Federal activities affecting land use	Determine whether the proposed action will occur in a floodplain, then evaluate potential effects of any action in a floodplain	Site is in the floodplain and impacts are being evaluated

Table 1-1, continued

Policy Document	Administrative Authority	Invoking Action	Requirements for Compliance	Status of Compliance
EO 11990: Protection of Wetlands 42 FR 26,691 (May 24, 1977)	U.S. Army Corps of Engineers, USEPA	Acquisition and management of Federal lands; federally undertaken, financed, or assisted construction; conducting Federal activities affecting land use	Take action to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands	No wetlands would be affected
EO 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations 59 FR 7629 (February 11, 1994)	USEPA	All programs or activities receiving Federal financial assistance that affect human health or the environment	Analyze the environmental effects, including human health, economic, and social effects of CBP actions, including effects on minority communities and low-income communities	No disproportional adverse effects to minority or low income families
EO 13045: Protection of Children from Environmental Health Risks and Safety Risks 62 FR 19883 (April 23, 1997)	USEPA	Any CPB action	Identify and assess environmental health risks and safety risks that may disproportionately affect children	No adverse effects to children anticipated. Construction zones will be clearly demarcated and controlled
EO 13101: Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition 63 FR 49648	USEPA, Department of Energy (DOE)	Acquisition planning, development of procurement programs, operation of a Federal facility	Incorporate waste prevention and recycling in the agency's daily operations and work to increase and expand markets for recovered materials through greater Federal Government preference and demand for such products	To be completed by USBP during design and operation
EO 13123: Greening the Government Through Efficient Energy Management 64 FR 30851	USEPA, DOE	Operation and maintenance of a Federal facility	Reduce emissions of greenhouse gases, reduce energy consumption, strive to expand use of renewable energy, reduce use of petroleum, and reduce water consumption	To be completed by USBP during design and operation

Table 1-1, continued

Policy Document	Administrative Authority	Invoking Action	Requirements for Compliance	Status of Compliance
EO 13148: Greening the Government Through Leadership in Environmental Management 65 FR 24593	USEPA, DOE	Operation and maintenance of a Federal facility	Integrate environmental accountability into agency day-to-day decision making and long-term planning processes, across all agency missions, activities, and functions	To be completed by USBP during design and operation
EO 13514: Federal Leadership in Environmental, Energy, and Economic Performance 74 FR 52117 (October 8, 2009)	USEPA, DOE	Construction, operation, and maintenance of a Federal facility; aircraft operations and worker commutes	Increase energy efficiency; measure, report, and reduce greenhouse gas emissions from direct and indirect activities; conserve and protect water resources through efficiency, reuse, and stormwater management; eliminate waste, recycle, and prevent pollution; design, construct, maintain, and operate high performance sustainable buildings in sustainable locations	To be completed by USBP during design and operation
EO 13175 (<i>Consultation and Coordination with Indian Tribal Governments</i>)	Bureau of Indian Affairs (BIA)	Federal actions that affect current or historically used cultural properties	Coordinate directly with Tribes claiming cultural affinity to project areas	Full compliance.

*Not All Inclusive

SECTION 2.0
PROPOSED ACTION AND ALTERNATIVES



2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED STATION COMPONENTS

Based upon initial site designs, it has been determined that a 20 to 40-acre project site is sufficient in size to accommodate facilities supporting approximately 130 personnel, including 100 USBP agents, 10 USBP support staff and 19 OFO agents and support staff. The new station and ancillary facilities, including parking lots, would encompass approximately 16 acres. A stormwater detention basin (approximately 5 acres) would also be required. The new station and collocated OFO facility would be designed to qualify for Leadership in Energy and Environmental Design (LEED) Silver certification by the U.S. Green Building Council. The proposed new station and collocated OFO facility would include some or all of the following components:

- Administration building
- Support building area
- Patrol command
- Squad room
- Field support and communications
- Water storage tank
- Alien processing and detention space
- Parking, including a sally port and limited covered parking
- Physical plant support
- Fitness and locker room
- Vehicle washing stations
- Security lighting
- Chain-link security fencing
- Storm water retention system
- Warehouse storage facility
- Communications tower
- Short-term stay canine facility
- Fuel island
- Impounded vehicle area
- Vehicle service and maintenance shop

The vehicle service and maintenance facility would have space for parts storage, vehicle lifts, a grease and oil station, and a tire changing station, including wheel balance and alignment. A fuel bay island with one 4,000-gallon diesel and two 12,000-gallon above ground storage tanks (ASTs) for unleaded gasoline and E85 (ethanol) fuel would be included. A car wash with an oil water separator component, sensor shop, vehicle impound lot, and a stormwater detention basin would be incorporated into the station design.

Other site elements include a self supporting radio tower with communications building or space in the main building, and standby/backup power generator(s) as required. The tower height is currently unknown and would be dependent on communication needs; however, it is expected to be less than 200 feet tall. The proposed new station would also include short-stay canine kennels for up to eight dogs. Utilities (electricity, gas, water, sewer service, and telephone) for the new station would be installed. Additionally, a water storage tank may be necessary to provide additional supply and pressure for fire suppression.

The facilities would be able to support a 3-shift operating schedule, training, and public information officer functions, as well as parking spaces for POVs and GOVs. Covered parking for the GOVs and specialized vehicles will meet the CBP design guide if budget permits.

1 Parking spaces for the public would be required since OFO activities require public visitation on
2 a daily basis.

3
4 A sallyport would be located at the station to provide safe and effective transfer of detainees
5 from USBP vehicles or from the station to deportation buses. A security fence would be
6 installed 10 feet from the property boundary; parking areas would be setback 20 feet from the
7 security fence and all other structures would be constructed no closer than 90 feet from the
8 security fence.

9
10 Additionally, the continued maintenance as well as potential renovations of or minor additions to
11 the new station would be expected. Such activities could include, but are not limited, to minor
12 renovations and additions to buildings such as realigning interior spaces of an existing building,
13 adding a small storage shed to an existing building, installing a small antenna on an already
14 existing antenna tower that does not cause the total height to exceed 200 feet, kennels, security
15 systems, lighting, parking areas, and stormwater detention basins. Other maintenance activities
16 could include routine upgrade, repair, and maintenance of the new station buildings, roofs,
17 parking area, grounds, or other facilities which would not result in a change its functional use
18 (e.g., replacing door locks or windows, painting interior or exterior walls, resurfacing a road or
19 parking lot, culvert maintenance, grounds maintenance, or replacing essential station components
20 such as an air condition unit).

21
22 Two alternative sites for the new Corpus Christi Station have been identified as viable sites
23 based on a site selection survey prepared by the U.S. Army Corps of Engineers (USACE)
24 Galveston District (Figure 2-1). One site (the Clarkwood Site) has two different layout designs
25 that could be used; thus, effectively creating three action alternatives that will be carried forward
26 for analysis: Alternative 1—Clarkwood Site A; Alternative 2—Clarkwood Site B; Alternative
27 3—Twin River Site. The location of the Clarkwood Site is depicted in Figure 2-2; however, it
28 should be noted that only a portion of this site would be used under either of the two alternate
29 design configurations. Alternative 2 is the preferred location and layout and will be referred to
30 as the Preferred Alternative from this point forward. Selection of these sites, and the Preferred
31 Alternative was based on the following criteria:

- 32
33 (1) site should be at a safe distance from neighborhoods;
34 (2) site must be a minimum 20 acres;
35 (3) site must have public access;
36 (4) site should have some or all public utilities at the site or in proximity;
37 (5) site must be owned by a willing seller; and
38 (6) site must not have any significant environmental liabilities.

39
40 Each of these alternative sites satisfies these criteria and construction of the proposed station at
41 any of the sites would satisfy the purpose and need described above.

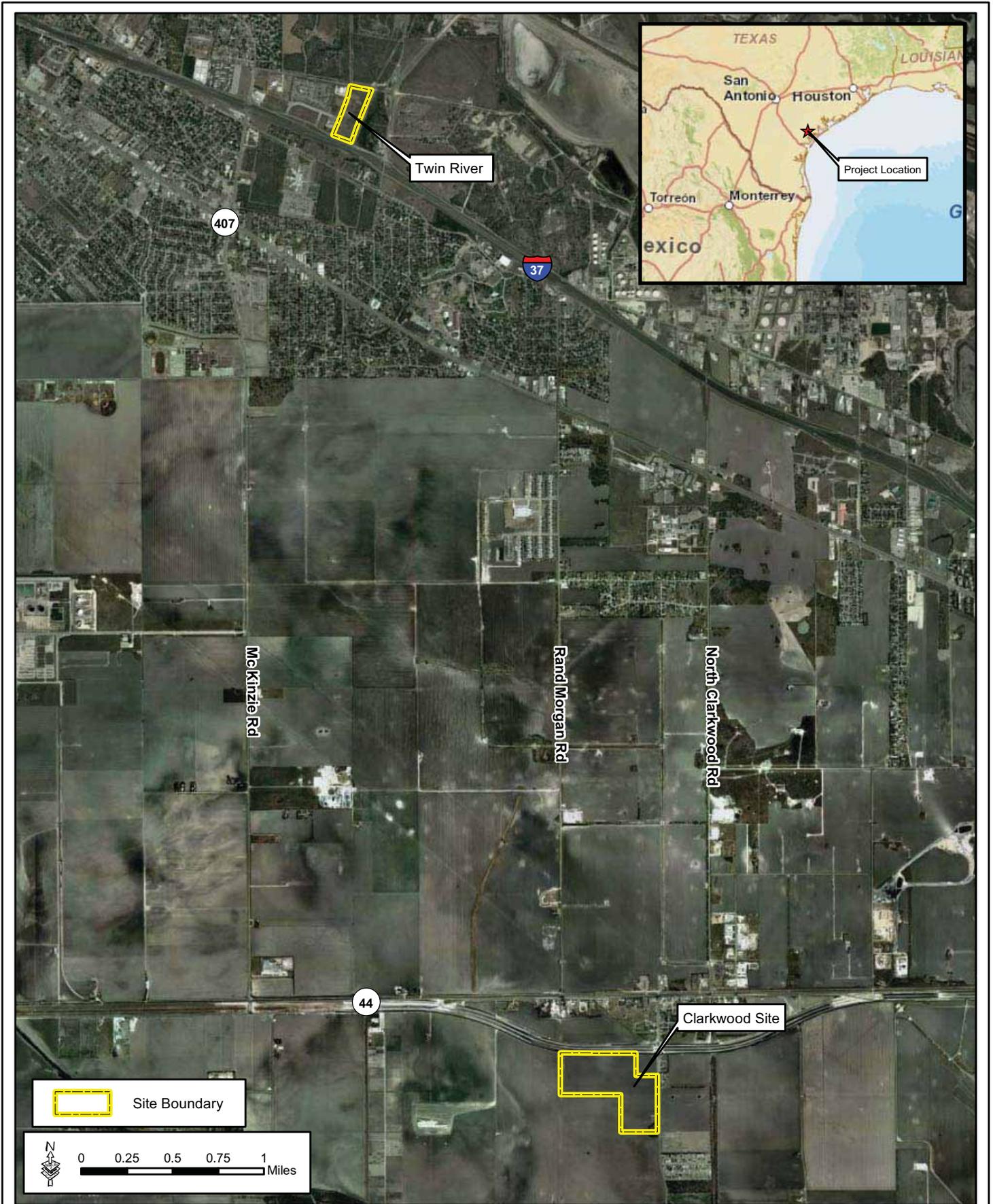


Figure 2-1: Project Location Map

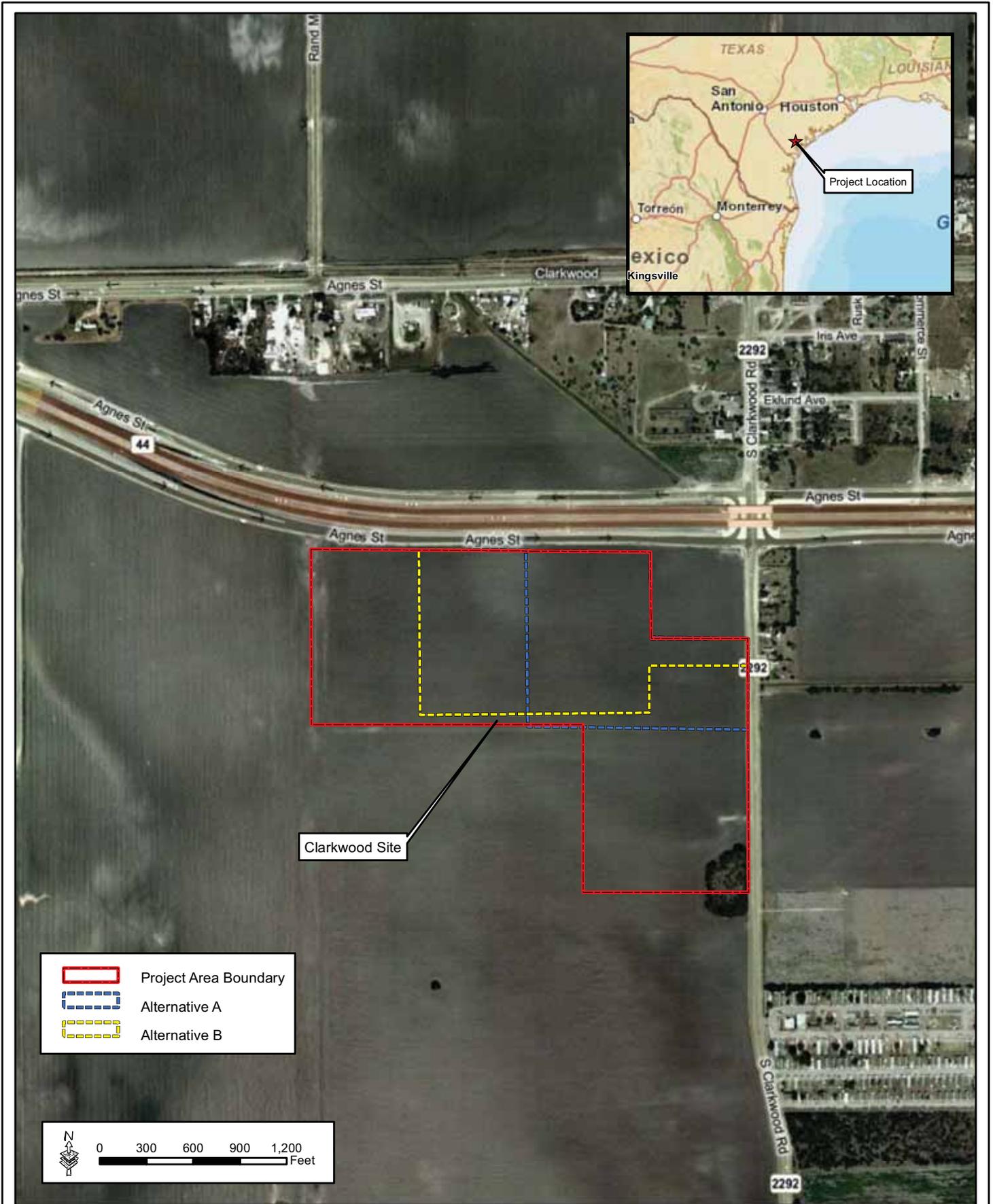


Figure 2-2: Clarkwood Site Conceptual Layouts

1 In addition to these alternatives, a No Action Alternative has been included in the evaluation as
 2 required by NEPA regulations. The No Action Alternative and the other three action alternatives
 3 are described in the following paragraphs. Also, two additional layout designs at the Clarkwood
 4 Site were considered but eliminated from further consideration, as will be discussed later.

6 **2.2 NO ACTION ALTERNATIVE**

7
 8 The No Action Alternative would preclude the construction, operation, and maintenance of a
 9 new station. The existing USBP station and OFO Seaport Office would continue to be
 10 inadequate for the support of USBP and OFO enforcement operations within the Corpus Christi
 11 AOR, and would not accommodate the projected increase in USBP and OFO agents necessary to
 12 operate effectively. Consequently, this alternative would hinder USBP's ability to respond to
 13 high levels of illegal cross border activity and OFO's ability to control activities coming into the
 14 Corpus Christi port. The No Action Alternative does not meet the purpose and need for the
 15 proposed project, but will be carried forward for analysis, as required by the CEQ regulations.
 16 The No Action Alternative describes the existing conditions in the absence of any other
 17 alternative.

19 **2.3 ALTERNATIVE 1: CLARKWOOD SITE A**

20
 21 The Clarkwood Site A is located along
 22 Agnes Street, which is a frontage road of
 23 State Route 44 (SR 44). The site is
 24 currently in agricultural production (cotton),
 25 as depicted in Photograph 2-1. A Shell
 26 gasoline station is located at the corner of
 27 the Agnes Street and Clarkwood Road. The
 28 design layout for this alternative is "L"
 29 shaped, and borders the Shell gasoline
 30 station on portions of the northern and
 31 western boundaries (Figure 2-3). An
 32 abandoned oil and gas well is located on a
 33 portion of this site. Design and
 34 construction of the detention basin would
 35 need to take this well into consideration.
 36 All utilities are located at or adjacent to the
 37 site. Access to the site, using this layout design would be provided on both Agnes Street and
 38 Clarkwood Road. This design would require approximately 24 acres.



39
 40
 41
 42
Photograph 2-1. Clarkwood Site looking South

40 Upon completion of the USBP station, the current lease of the existing station would be
 41 terminated and the building returned to the current owner. Any repairs or maintenance required
 42 by the lease would be completed prior to termination of the lease.



- Abandoned Oil and Gas Well
- ① BPS Main Building
- ② Fuel Building
- ③ Wash Building
- ④ Maintenance/Warehouse Building
- ⑤ Impound Lot
- ⑥ Dog Kennel

Figure 2-3: Alternative 1 Clarkwood Site A

2.4 ALTERNATIVE 2: CLARKWOOD SITE B (PREFERRED ALTERNATIVE)

Alternative 2 would consist of the same construction, operation, and maintenance of a new station as Alternative 1 and on the same site. However, the station layout under this alternative would be along Agnes Street, east of the Shell gasoline station. Access to the station would be from Agnes Street and Clarkwood Road (Figure 2-4). This design would require approximately 37 acres of land.

2.5 ALTERNATIVE 3: TWIN RIVER SITE

Alternative 3 would consist of the same construction, operation, and maintenance of a new station as Alternative 1; however, the station would be constructed at the Twin River Site (Figure 2-5). This site is located north of I-37 at the staging area at the northern end of the site. Most of the area, except the staging area, had become revegetated with native and non-native grassland species (Photograph 2-2). The site slopes to the west toward a large and wide natural drainage. This alternative would require 16 acres for construction (Figure 2-6).



Photograph 2-2. Twin River Site looking South

2.6 OTHER ACTION ALTERNATIVE CONSIDERED BUT ELIMINATED

2.6.1 Expansion of Existing Station

The expansion of the existing station to accommodate additional agents was considered as an action alternative. The existing station currently houses 52 agents and support staff. The existing station does not provide facilities needed to improve agent efficiency and effectiveness. Expansion of the existing USBP station at the current site is prohibited by conditions of the current lease and surrounding development. This action alternative was excluded from further consideration because it does not meet the purpose and need.

2.6.2 Clarkwood Site C

This alternative would consist of the same construction, operation, and maintenance of a new station as Alternative 1 and on the same site. However, the station layout under this alternative would be along Clarkwood Road, south of the Alternative 1 site layout and south of a water line easement that transects Clarkwood Road (Figure 2-7). Access to the station would be from Clarkwood Road only. This design would require approximately 16 acres of land and was considered the preferred alternative in the early planning stages. However, this design would also require clearing a portion of a small patch (less than 2 acres) of woodlands near the southern portion of the site, and be located entirely within the 100-year floodplain. Consequently, this alternative was eliminated from further consideration.



- Abandoned Oil and Gas Well
- ① BPS Main Building
- ② Fuel Building
- ③ Wash Building
- ④ Maintenance/Warehouse Building
- ⑤ Impound Lot
- ⑥ Dog Kennel

Figure 2-4: Alternative 2 Clarkwood Site B (Preferred Alternative)





Figure 2-5: Alternative 3 Twin River Site



Figure 2-6: Alternative Site Building Plan

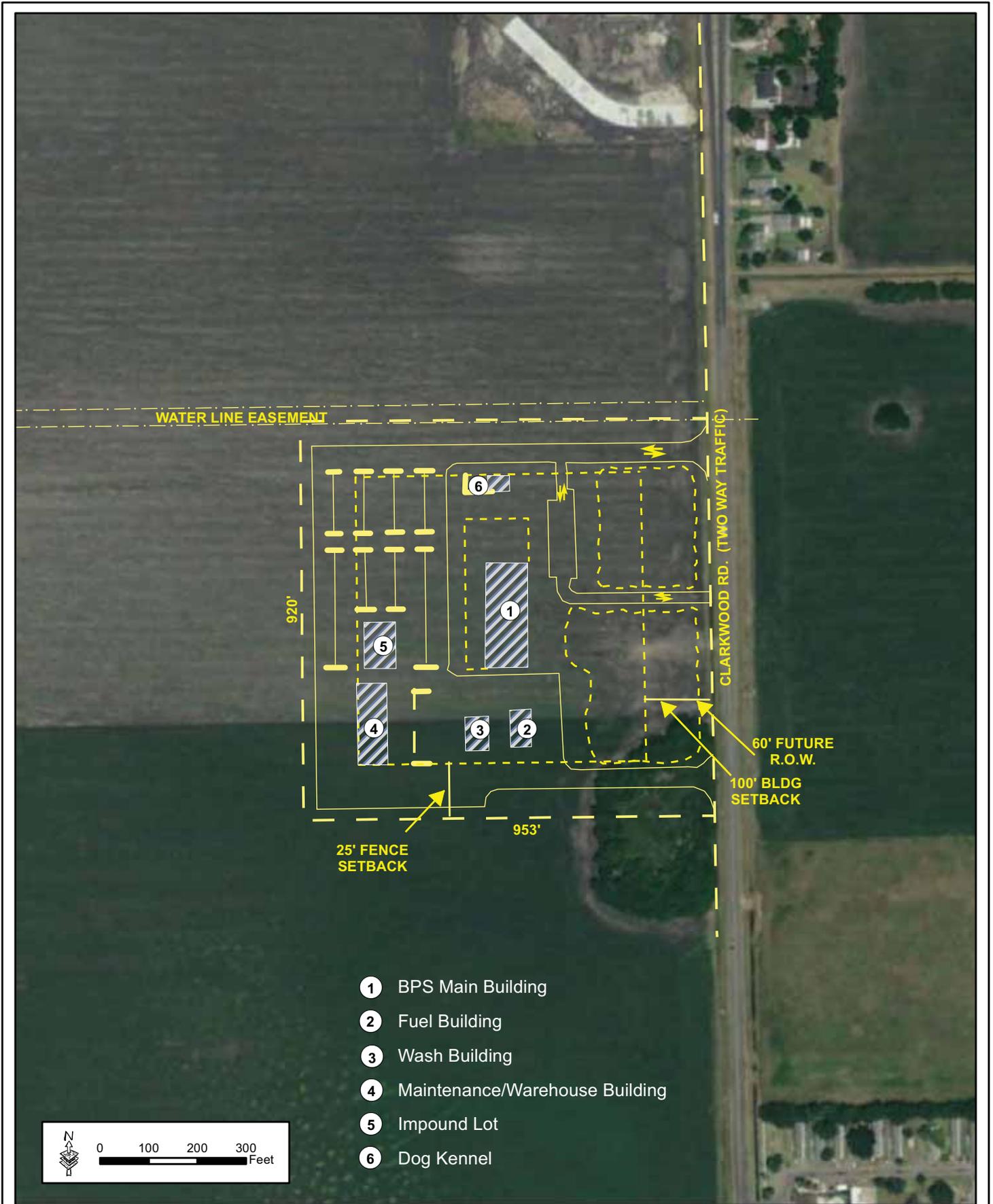


Figure 2-7: Alternative C (Eliminated)

1 **2.6.3 Clarkwood Site D**

2 This alternative would consist of the same activities as Alternative 1 and be located north of
3 Clarkwood Site C. The layout for the station under this alternative would be south of the Shell
4 gasoline station and access would be from Clarkwood Road (Figure 2-8). This design would
5 require approximately 22 acres. However, as depicted in Figure 2-8, a water line easement
6 would transect the site layout, which would require relocation of the water line or substantial
7 design changes. In addition, the entire site would fall within the 100-year floodplain and the
8 abandoned oil/gas well would interfere with the main building and parking lot design.
9 Consequently, this alternative was eliminated from further consideration.

10

11 **2.7 SUMMARY**

12

13 The No Action Alternative and Alternatives 1 through 3 have been carried forward for analysis.
14 As shown in Table 2-1, each of the action alternatives fully support the purpose and need as
15 described in Section 1.5. A summary of the impacts anticipated under each of the alternatives is
16 presented in Table 2-2.

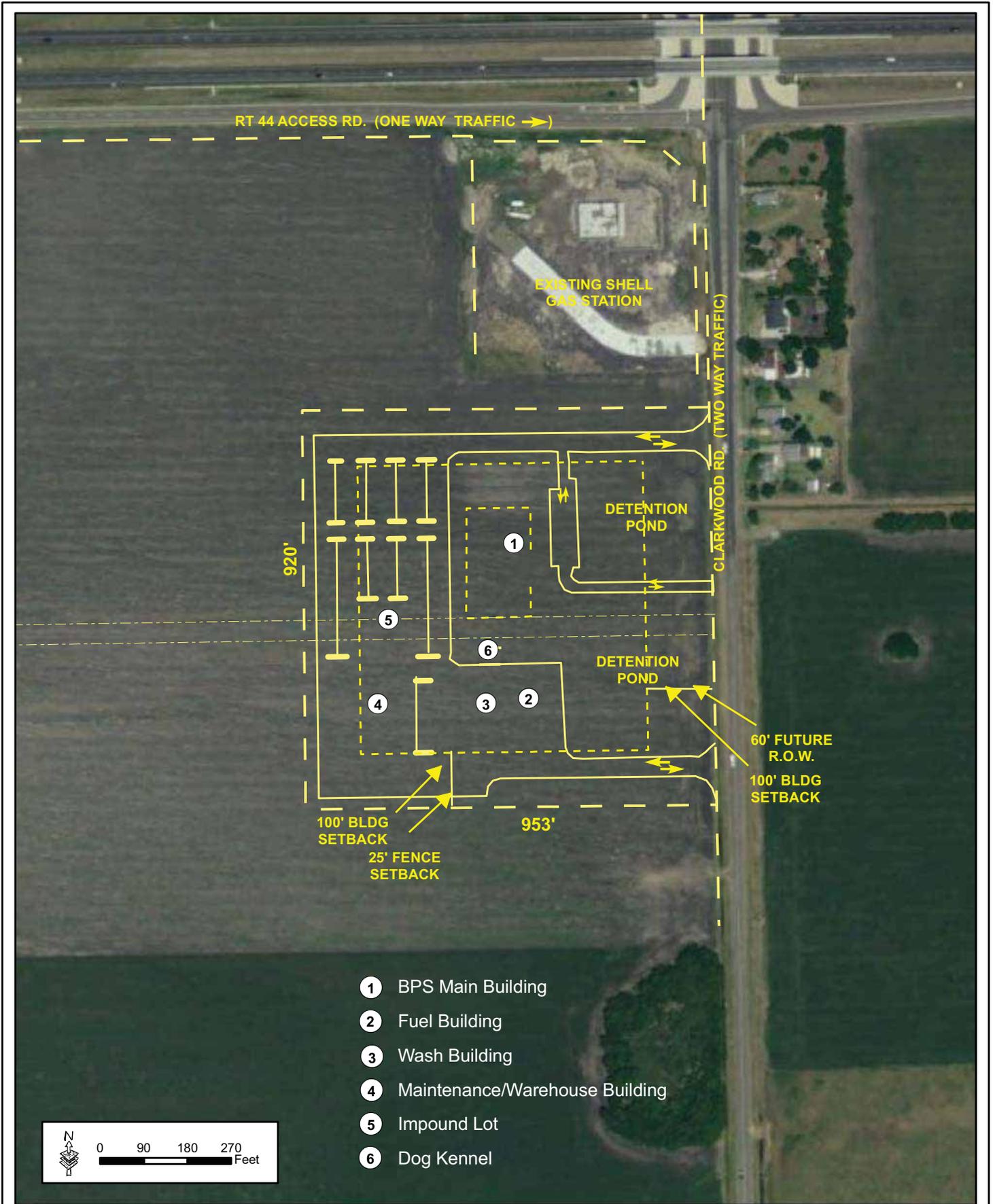


Figure 2-8: Alternative D (Eliminated)

Table 2-1. Alternative Matrix

Purpose and Need	No Action Alternative	Alternative 1: Clarkwood Site A	Alternative 2: Clarkwood Site B (Preferred Alternative)	Alternative 3: Twin River Site
Will the alternative provide adequate facilities for existing agents operating within the Corpus Christi Station AO?	Partially	Yes	Yes	Yes
Will the alternative provide additional facilities for expansion of the Corpus Christi agent force up to 130 staff?	No	Yes	Yes	Yes
Will the alternative provide facilities necessary to enhance USBP/OFO operations in the Corpus Christi Station AO?	No	Yes	Yes	Yes
Will the alternative provide the opportunity for future expansion of facilities?	No	Yes	Yes	Yes
Will the alternative provide increased effectiveness for USBP/OFO agents in the performance of their duties?	No	Yes	Yes	Yes
Will the alternative provide a safe working environment for USBP/OFO agents?	No	Yes	Yes	Yes

Table 2-2. Summary Matrix of Potential Impacts

Affected Environment	No Action Alternative	Alternative 1 – Clarkwood Site A	Alternative 2 – Clarkwood Site B (Preferred Alternative)	Alternative 3 – Twin River Site
Land Use	No direct impacts would occur.	Approximately 24 acres would be permanently converted from agricultural land to CBP station facilities.	Approximately 23 acres would be permanently converted from agricultural land to CBP station facilities.	Approximately 16 acres would be permanently converted from disturbed grassland to CBP station facilities.
Soils	No direct impacts would occur.	Direct impacts on 24 acres of soil removed from biological production. All 24 acres are considered prime farmland soils.	Direct impacts on 23 acres of soil removed from biological production. All 23 acres are considered prime farmland soils.	Direct impacts on 16 acres of soil removed from biological production. Of the 16 acres, less than 2 acres are considered prime farmland soils.
Water Resources	No direct impacts would occur.	No surface waters would be affected since none occur on the site. Approximately 10 acres of the 100-year floodplain would be affected.	No surface waters would be affected since none occur on the site. Approximately 5 acres of the 100-year floodplain would be affected.	No surface waters would be affected since none occur on the site. The 100-year floodplain would not be affected since this site is entirely outside of the floodplain.
Vegetative Habitat	No direct impacts would occur.	No impacts would occur as the site is in agricultural production. Narrow bands of ruderal communities are located on the edge of the agricultural lands.	Impacts would be the same as Alternative 1.	Approximately 16 acres of native and non-native disturbed grasslands would be removed from biological production.
Fish and Wildlife Resources	No direct impacts would occur.	No or negligible effects, would occur since the site is under agricultural production.	Impacts would be the same as Alternative 1.	Minor impacts on common wildlife species that are adapted to urban environments would occur, since 16 acres of disturbed habitat would be removed.
Protected Species and Critical Habitat	No direct impacts would occur.	No impacts would occur. No critical habitat in project area.	Impacts would be the same as Alternative 1.	No impacts would be expected to occur. No critical habitat in project area. It is possible, but highly unlikely, that the endangered Gulf coast spotted skunk would use this site.

Table 2-2, continued

Affected Environment	No Action Alternative	Alternative 1 – Clarkwood Site A	Alternative 2 – Clarkwood Site B (Preferred Alternative)	Alternative 3 – Twin River Site
Cultural Resources	No direct impacts would occur.	No impacts would occur. No significant cultural resources found on the alternative site.	Impacts would be the same as Alternative 1.	Impacts would be similar as Alternative 1. However, there is a potential for buried sites and, therefore, archaeological monitoring is recommended.
Air Quality	Indirect impacts from anticipated increase of POV and GOV in the Corpus Christi airshed and additional fueling.	Short-term minor impacts on air quality would occur during construction. Indirect impacts from vehicle emissions due to anticipated increase in GOV and POV usage and fueling.	Impacts would be the same as Alternative 1.	Impacts would be the same as Alternative 1.
Noise	Permanent indirect impacts on ambient noise levels due to additional vehicles for the increase in agent force.	Minor temporary increases in noise would occur during construction. Minor increases in ambient noise levels due to the increased agent force and enforcement vehicles.	Impacts would be the same as Alternative 1.	Impacts would be the same as Alternative 1.
Utilities and Infrastructure	Minor increase in demand for utilities from the increase in agent force and families.	Minor increase in demand for utilities from the increase in agent force and families.	Impacts would be the same as Alternative 1.	Impacts would be the same as Alternative 1.
Transportation	No direct impact would occur.	Temporary increases would occur during construction and create some minor congestion. Permanent minor increases in average daily traffic volumes would occur on State Route 44 (0.2 percent) and Clarkwood Road (3.9 percent) from the additional GOVs and POVs.	Impacts would be the same as Alternative 1.	Temporary increases would occur during construction and create some minor congestion. Permanent minor increases in average daily traffic volumes would occur on Interstate 37 (0.0009 percent) and McKinzie Lane (0.5 percent) from the additional GOVs and POVs.

Table 2-2, continued

Affected Environment	No Action Alternative	Alternative 1 – Clarkwood Site A	Alternative 2 – Clarkwood Site B (Preferred Alternative)	Alternative 3 – Twin River Site
Aesthetics and Visual Resources	No direct impacts on aesthetic and visual resources in the vicinity of the alternative sites because no construction would be expected to occur.	No adverse impacts on aesthetics and visual resources would be expected. Local area already has experienced aesthetic impacts from agricultural production, highway construction and commercial and residential developments.	Impacts would be the same as Alternative 1.	Impacts would be the same as Alternative 1.
Hazardous Material	No hazardous materials impacts would occur.	Potential for minor adverse impacts during construction would be minimized with BMPs. Above ground storage tanks and maintenance facility have the potential for hazardous materials impacts. An abandoned oil/gas well is located on the site and would need to be considered in the final design and construction of the new station.	Impacts would be the same as Alternative 1.	No known hazardous materials are located on the site. Potential for minor adverse impacts during construction would be minimized with BMPs. Above ground storage tanks and maintenance facility have the potential for hazardous materials impacts.
Socioeconomics	Minor direct impacts on socioeconomic status is expected. Indirect beneficial impacts on socioeconomics of the area from the anticipated increase in agents would occur.	Minor changes to local employment rates, poverty levels, or local incomes would occur as a result of this program. Indirect impacts on socioeconomics of the area from the anticipated increase in agents would be the same as the No Action Alternative.	Impacts would be the same as Alternative 1.	Impacts would be the same as Alternative 1.
Environmental Justice and Protection of Children	No direct impacts would occur.	No direct impacts would occur.	Impacts would be the same as Alternative 1.	Impacts would be the same as Alternative 1.

Table 2-2, continued

Affected Environment	No Action Alternative	Alternative 1 – Clarkwood Site A	Alternative 2 – Clarkwood Site B (Preferred Alternative)	Alternative 3 – Twin River Site
Sustainability and Greening	No direct impacts would occur.	Beneficial effects on the environment from the implementation of LEED Silver certification would be anticipated.	Impacts would be the same as Alternative 1.	Impacts would be the same as Alternative 1.
Human Health and Safety	No direct impacts would occur.	With the implementation of BMPs and safety procedures, no significant impacts would be expected.	Impacts would be the same as Alternative 1.	Impacts would be the same as Alternative 1.

SECTION 3.0
AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES



3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 PRELIMINARY IMPACT SCOPING

This section of the EA describes the natural and human environment that exists within the alternative sites and region of influence (ROI), and the potential impacts of the No Action and the four alternatives outlined in Section 2.0 of this document. The ROI for this project is Nueces County. Only those parameters that have the potential to be affected by any of the alternatives are described, as per CEQ guidance (40 CFR 1501.7 [3]). Some topics are limited in scope due to the lack of direct effect from the proposed project on the resource, or because that particular resource is not located within the project area. Resources dismissed from further discussion are:

Geologic Resources

Geological resources include physical surface and subsurface features of the earth such as geological formations and the seismic activity of the area. The proposed construction of the new station would not disturb the underlying geologic resources of the area, since only surface modifications would be implemented. None of the affected sites are located in an area subject to seismic activity, landslides or flooding, so there would be no impacts on geological resources.

Climate

The proposed construction of the new station would neither affect nor be affected by the climate.

Wild and Scenic Rivers

The proposed construction of the new station would not affect any stretch of river designated as Wild and Scenic.

Unique and Sensitive Areas

The proposed construction of the new station would not affect any unique and sensitive areas, because no areas designated as such are located within or near the project area.

Hydrology and Hydraulics

The proposed construction of the new station would not affect the hydrology or hydraulics of any surface water body, since none are located at either of the alternative site locations.

Groundwater hydrology would not be affected since CBP would acquire its water supply from the City of Corpus Christi, as it does now.

Impacts (consequence or effect) can be either beneficial or adverse, and can be either directly related to the action or indirectly caused by the action. Direct impacts are those effects that are caused by the action and occur at the same time and place (40 CFR 1508.8[a]). Indirect impacts are those effects that are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable (40 CFR 1508.8[b]). As discussed in this section, the No Action, Preferred Alternative, Alternative 2 – Lot 22 and Alternative 3 – Lot 23 may create temporary (lasting the duration of the project), short term (up to 3 years), long term (3 to 10 years following construction), or permanent impacts or effects. Whether an impact is significant depends on the context in which the impact occurs and the intensity of the impact.

1 Impacts can vary in degree or magnitude from a slightly noticeable change to a total change in
 2 the environment. Significant impacts are those effects that would result in substantial changes to
 3 the environment (40 CFR 1508.27) and should receive the greatest attention in the decision-
 4 making process. Insignificant impacts are those that would result in minimal changes to the
 5 environment. The following discussions describe and, where possible, quantify the potential
 6 effects of each alternative on the resources within or near the project corridor. All impacts
 7 described below are considered to be adverse unless stated otherwise.

9 3.2 LAND USE

11 3.2.1 Affected Environment

12 In general, land use near the two project sites
 13 is categorized as developed or agricultural.

14 The Clarkwood Road site is an agricultural
 15 field that is currently in corn and cotton
 16 production (Photograph 3-1). The property is
 17 located south east of the intersection of Farm
 18 to Market (FM) 2292 (Clarkwood Road) and
 19 SR 44. There is a Shell gas station on the
 20 north east corner of the property which is the
 21 southwest intersection of SR 44 and
 22 Clarkwood Road. There are about 10 single
 23 family homes on the east side of Clarkwood
 24 Road. The area surrounding the Clarkwood
 25 Road site consists of agricultural fields and
 26 some residential areas. A plugged and abandoned oil and gas well is located near the northeast
 27 corner of the property. The well was part of the Saxet Oil Field and was plugged in the 1950s or
 28 1960s. Other active and inactive oil wells are present in the region.



Photograph 3-1. Clarkwood Site Looking North

29
 30 The Twin River Site is located north of I-37 and east of Twin River Boulevard. This tract is
 31 located on previous disturbed land in a business park (Photograph 3-2). It is located 0.25 mile
 32 northwest of the I-37 access road and Carbon Plant Road intersection. The site fronts I-37
 33 Access Road, Twin River Boulevard, and McKinzie Lane. A new off ramp from the southbound



Photograph 3-2. Twin River Site Looking Southwest



Photograph 3-3. TXDOT Staging Area Looking North

lanes of I-37 is under construction south and east of the site. There is a sewer easement along the eastern border of the site and other utilities are available at the site. The northern portion of this site is currently being used by TXDOT as a staging area for construction of the roadway improvements for the new off-ramp (Photograph 3-3).

Other uses near the site include multifamily housing, commercial, and Federal government offices (i.e., U.S. Department of Agriculture [USDA]). All of these developments are located on the west side of Twin River Boulevard (Photograph 3-4).



Photograph 3-4. USDA Facility Looking Northeast

3.2.2 Environmental Consequences

3.2.2.1 No Action Alternative

The No Action Alternative would preclude the construction, operation, and maintenance of a new station, and land use would remain unchanged.

3.2.2.2 Alternative 1: Clarkwood Site A

Construction of the new station at the Alternative 1 site would convert approximately 24 acres of agricultural land to a developed CBP land use. Currently, land use in the vicinity of this site includes agricultural and residential uses, and the conversion of 24 acres of previously disturbed agricultural land to a developed use would have an insignificant effect on the overall land use in the region.

3.2.2.3 Alternative 2: Clarkwood Site B (Preferred Alternative)

The land use impacts for Alternative 2 would be similar to those listed in Alternative 1, but would impact approximately 37 acres.

3.2.2.4 Alternative 3: Twin River Site

Construction of a new station at the Twin River Site would convert approximately 16 acres of previously disturbed land to a developed CBP land use. There are presently several commercial businesses within the immediate vicinity of the site. Thus, the conversion of the previously disturbed land to a developed land use is consistent with current uses in the region and would not significantly impact regional or local land use.

3.3 SOILS

3.3.1 Affected Environment

Surface soils in the Corpus Christi area are generally in the Beaumont Series, consisting of clays and slightly sandy clays and loams. Near the Clarkwood Site area, the Victoria clay is the predominant soil, consisting of silt-clay with a high water table, a poorly drained and relatively impermeable soil. These soils are considered prime farmland soil, according to the USDA Natural Resources Conservation Service (NRCS 2010) and have been used for current and past production of crops.

1 Soils at the Twin River Site consist of four different types, with Miguel fine sandy loams
2 comprising the majority (63 percent) of the site. Orelia fine sandy loams comprise
3 approximately 23 percent of the site. Both of these soils have characteristically better drainage
4 and permeability due to the proximity of the Nueces River. The remainder of the soils are
5 comprised of Raymondville complex (10 percent) and Comitas fine sands (4 percent). The
6 Miguel fine sandy loam is considered a prime farmland soil, if it is irrigated. The site is
7 currently not in crop production and is not irrigated; thus, these soils would not be considered
8 prime farmlands. However, the Raymondville soils are considered prime farmland soils.

9 10 **3.3.2 Environmental Consequences**

11 **3.3.2.1 No Action Alternative**

12 Under the No Action Alternative, there would be no disturbance of soils in the area, and,
13 therefore no impacts on soil resources.

14 15 **3.3.2.2 Alternative 1: Clarkwood Site A**

16 For Alternative 1, construction of the new station would involve excavation and disturbance of
17 soils currently used for the production of row crops. The soil is classified as a prime farmland
18 soil, and would be taken out of crop production. Consultation with the NRCS district office
19 would be completed in order to comply with the Farmland Protection Policy Act. A Farmland
20 Conversion Impact Rating (AD Form 1006) would be obtained from NRCS for the removal of
21 approximately 24 acres of prime farmland from production. It is expected that the rating would
22 indicate that the impact on prime farmland from construction of Alternative 1 would be less than
23 significant, due to the large amount of similar farmland soils in the immediate area and in the
24 vicinity.

25
26 Implementation of BMPs for erosion and dust control would minimize transport of soil offsite,
27 and impacts from soil erosion would be insignificant.

28 29 **3.3.2.3 Alternative 2: Clarkwood Site B (Preferred Alternative)**

30 Impacts for Alternative 2 would be similar as for Alternative 1; however, 37 acres of prime
31 farmland, as compared to 24 acres under Alternative 1 would be impacted.

32 33 **3.3.2.4 Alternative 3: Twin River Site**

34 Alternative 3 would construct a station on sandy, relatively well drained soils. Consultation with
35 NRCS would be required, since the Raymondville soils are classified as prime farmland soils.
36 However, less than 2 acres of this soil type would be removed from future agricultural
37 production. With the implementation of BMPS for soil erosion and dust, as indicated for
38 Alternative 1, soil impacts would be insignificant.

39 40 **3.4 VEGETATION COMMUNITIES**

41 42 **3.4.1 Affected Environment**

43 The proposed site for a new station is located within the Central Texas Coast Region. The
44 Central Texas Coast Region starts near Matagorda Bay, and traverses the Victoria and Corpus
45 Christi areas and ends south of Kingsville, Texas. The state is also divided into natural
46 ecoregions, of which the project area is located within the Gulf Coast Prairies and Marshes

1 Ecoregion of Texas (TPWD 2006a). There are no natural vegetation communities on within the
 2 footprint of the proposed station at either the Clarkwood or Twin River sites, with the exception
 3 of a small patch of forest in the southeast corner of the Clarkwood Site. The construction
 4 footprint and surrounding areas consist of agricultural fields, residential and urbanized areas,
 5 major roadways, or highly disturbed shrublands. Agricultural lands, especially agricultural
 6 margins, generally support non-native and invasive species adapted to frequent disturbance.

7
 8 The Clarkwood Site is currently under
 9 agricultural production (cotton and corn), with
 10 the exception of the small wooded patch
 11 mentioned above (Photograph 3-5). This small
 12 patch is an old ranch site and contains large
 13 mesquite (*Prosopis glandulosa*) and sugarberry
 14 (*Celtis laevigata*) trees. The understory is dense
 15 and consists of various native and non-native
 16 shrubs and forbs including granenjo (*Celtis*
 17 *ehrenbergiana*), retama (*Parkinsonia aculeate*),
 18 chile piquin (*Capsicum annuum*), greenbrier
 19 (*Smilax* spp.), Johnsongrass (*Sorghum*
 20 *halpense*), tree tobacco (*Nicotiana glauca*),
 21 tickseed (*Coreopsis* spp.), windmill grass
 22 (*Chloris verticillata*) and blackberry (*Rubus*
 23 spp.).



Photograph 3-5. Small Forested Patch at South End of Clarkwood Site, Looking South

24
 25 The Twin River Site contains native and non-native herbaceous species including Bermuda grass
 26 (*Cynodon dactylon*), beebalm (*Monarda* sp.), mustard (*Brassica* sp.), and Mexican hat (*Ratibida*
 27 *columnaris*). A few scattered retama shrubs were also present on the site, indicating that the
 28 field had been in a fallow state for a few years. A small riparian corridor occurs near the eastern
 29 boundary of the site.

31 **3.4.2 Environmental Consequences**

32 **3.4.2.1 No Action Alternative**

33 The No Action Alternative would preclude the construction, operation, and maintenance of a
 34 new station, and no natural vegetation communities would be affected.

36 **3.4.2.2 Alternative 1: Clarkwood Site A**

37 Under the Preferred Action Alternative, construction and operation of the USBP/OFO station
 38 would convert approximately 24 acres of agricultural fields to developed land. No natural
 39 vegetation communities would be adversely affected. Narrow bands of ruderal communities
 40 would be removed along Agnes Street and Clarkwood Road.

42 **3.4.2.3 Alternative 2: Clarkwood Site B (Preferred Alternative)**

43 Impacts to vegetation communities under this alternative would be similar as Alternative 1.

1 **3.4.2.4 Alternative 3: Twin River Site**

2 Under the Twin River Alternative, approximately 16 acres of disturbed grasslands would be
3 converted to developed land; no natural vegetation communities would be adversely affected.
4 Construction and operation of the station would not affect the riparian corridor to the east of the
5 site.

6 **3.5 WILDLIFE**

7 **3.5.1 Affected Environment**

8
9 As mentioned previously, the proposed sites are located within the Gulf Coast Prairies and
10 Marshes Ecoregion of Texas (TPWD 2006a). This region typically supports an abundant and
11 diverse wildlife population. However, the Clarkwood Site contains non-native vegetation and
12 thus, is not expected to support any permanent wildlife populations. Birds, small mammals and
13 some herpetiles would be expected to use the site for foraging, however. Common birds and
14 mammals expected to occasionally occur at this site include mourning and white-winged dove
15 (*Zenaida asiatica*), bobwhite quail (*Colinus virginianus*), red-tailed hawk (*Buteo jamacaiensis*),
16 American crow (*Corvus corax*), common grackle (*Quiscalus quiscula*), coyotes (*Canis latrans*)
17 raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), rats (Genera *Rattus*, *Sigmodon*,
18 *Orozomys*) and mice (Genera *Mus* and *Peromyscus*).
19
20

21 Reptiles and amphibians expected to occur at or near the site would include Texas rat snake
22 (*Elaphe obsoleta lindheimeri*), western diamondback rattlesnake (*Crotalus atrox*), green anole
23 (*Anolis carolinensis*), Texas horned lizard (*Phrynosoma cornutum*), Woodhouse's toad (*Bufo*
24 *woodhousii*), and Gulf Coast toad (*Rana valliceps*).
25

26 The Twin River Site contains more suitable habitat to support populations of birds, small
27 mammals, reptiles and amphibians. However, since the site has been previously disturbed and
28 contains a mixture of non-native and native plant species, the diversity of wildlife populations
29 would be expected to be less than other native habitat communities that occur in the region.
30 Wildlife species such as mice (*Mus musculus*), rats (*Rattus rattus* and *Rattus norvegicus*),
31 mockingbird (*Mimus poliglottos*), rock dove (*Columba livia*), green anole, and Mediterranean
32 geckos (*Hemidactylus turcicus*) would be typical inhabitants found near urban/developed areas.
33

34 **3.5.2 Environmental Consequences**

35 **3.5.2.1 No Action Alternative**

36 The No Action Alternative would preclude the construction, operation, and maintenance of a
37 new station, and wildlife habitat on the alternative sites would not be altered.
38

39 **3.5.2.2 Alternative 1: Clarkwood Site A**

40 No adverse effects to wildlife populations would occur as a result of the construction, operation
41 and maintenance of the USBP/OFO station at the Clarkwood Site A, since there are no native
42 habitats present at the site. Some individual specimens could be disturbed, injured or killed
43 during the construction; this is particularly true of burrowing mammals, reptiles and amphibians.
44 However, any such individual would likely be of a common species and thus, the loss of a few
45 individuals would not adversely affect the population viability or fecundity of any wildlife
46 species in the region.

1 The proposed action would require artificial lighting around the perimeter of the new station.
 2 Lighting would attract or repel various wildlife species within the project area. The number of
 3 lights along the boundary of the proposed station is not presently known. However, the proposed
 4 lighting is expected to be less than 5-foot candles, back shielded and directed towards the station
 5 and away from adjacent properties. Therefore, the artificial lighting around the station would not
 6 disrupt wildlife activities.

7
 8 The highest period of movement for most wildlife species occurs during night time or low
 9 daylight hours. Construction activities would be limited primarily to daylight hours whenever
 10 possible. The implementation of the environmental design measures outlined in Section 5.0
 11 would assure that these impacts would be minimal.

12
 13 Construction and operation of the stormwater detention basin at the station could benefit some
 14 wildlife species, in particular amphibians and reptiles. Wading birds would likely use the
 15 detention basin for foraging once amphibian, reptilian, fish or crustacean populations become
 16 established. Passerine birds would also use the detention basin if vegetation communities are
 17 allowed to grow around the basin's edge.

18
 19 **3.5.2.3 *Alternative 2: Clarkwood Site B (Preferred Alternative)***

20 The impacts to wildlife species under this alternative would be similar as Alternative 1.

21
 22 **3.5.2.4 *Alternative 3: Twin River Site***

23 Construction of the new station at the Twin River Site would the convert approximately 16 acres
 24 of disturbed grassland in an industrial area to a developed CBP station. This loss would have an
 25 insignificant effect on the more urban species found in this area. While more individual
 26 specimens and possibly different species of wildlife would be damaged, injured or killed,
 27 compared to Alternative 1, these losses would not adversely affect the population viability or
 28 fecundity of any wildlife species in the region.

29
 30 Since the perimeter lighting would be equipped with backshields and directed downward or
 31 toward the station, light trespass would not be expected to occur within the riparian corridor.
 32 The beneficial effects of the detention basin would be the same as that described for
 33 Alternative 1.

34
 35 **3.6 SPECIAL STATUS SPECIES**

36
 37 **3.6.1 Affected Environment**

38 Special status species refers to federally or state-listed endangered, threatened, or candidate
 39 species. A list of special status species potentially occurring in Nueces County was compiled
 40 from the USFWS Southwestern Ecological Services Office (2010) and the TPWD (2010) online
 41 databases. Coordination letters have been sent to both agencies (see Appendix A). The USFWS
 42 and TPWD responses are included in Appendix A and the listing status of each listed species
 43 potentially occurring in Nueces County are provided in Appendix B. Neither of the proposed
 44 project sites occurs within an area of designated Critical Habitat. The USFWS reported that
 45 south Texas ambrosia (*Ambroaia cheiranthifolia*) and slender rush pea (*Hoffmannsegglia tenella*)
 46 have been reported from Nueces County and could occur at or near the proposed sites. South

1 Texas ambrosia grows at low elevations of 26 to 66 feet mean sea level, in open prairies and
2 savannas. The soils present at the known locations consist of clay-loams to sandy-loams, derived
3 primarily from the Beaumont clay series. The slender rush pea occurs in the Gulf Coast prairies
4 and is specifically found in barren openings or where low native grasses persist in clayey soil
5

6 TPWD reported that one state-listed species has been recorded within 1.5 miles of the project
7 sites: Texas windmill grass (*Chloris texensis*). The Texas windmill grass is found mostly in
8 sandy to sandy loam soils of barren ground areas with little or no competition from other plants.
9 This species typically occurs on low mounds, called pimple or mima mounds, within native
10 coastal native prairies.

11
12 Additionally, the mountain plover (*Charadrius montanus*) is a migrant through the area, and
13 non-breeding habitat includes shortgrass plains and bare (i.e., plowed), dirt fields. The western
14 burrowing owl is a resident species in the area and occupies open grasslands and sometimes open
15 areas such as vacant lots near urban areas and nests and roosts in abandoned burrows. Western
16 burrowing owl burrows can be found along agricultural margins excavated into irrigation or
17 drainage canals and berms.

18
19 The plains spotted skunk (*Spilogale putorius interrupta*) is another state-listed species that could
20 occur within Nueces County. It occupies a wide variety of habitats including open fields,
21 croplands, fence rows, and woodlands, but prefers wooded, brushy areas and tallgrass prairies
22 (TPWD 2010). There are no preferred habitats for this species near the Clarkwood Site, but the
23 areas at and around the Twin River Site do provide preferred habitat and the plains spotted skunk
24 could migrate through or forage on the Twin River Site.

25 26 **3.6.2 Environmental Consequences**

27 **3.6.2.1 No Action Alternative**

28 The No Action Alternative would preclude the construction, operation, and maintenance of a
29 new station, and no special status species or their potential habitats would be affected.
30

31 **3.6.2.2 Alternative 1: Clarkwood Site A**

32 The potential for special status species to occur on the Clarkwood Site is negligible due to the
33 lack of habitat on and surrounding the site. As can be seen in Figure 2-2, the entire site has been
34 plowed and, therefore, provides no suitable habitat for south Texas ambrosia or slender rush pea.
35 The mountain plover could use the site as a stopover during migration, these birds would likely
36 avoid any construction related activity. These species are not susceptible to harm related to
37 disturbance, regularly encounter human activity during migration, and would likely relocate to
38 nearby area of similar suitability. Western burrowing owls could nest and forage in or near the
39 Clarkwood Site. Although this species was not observed at the site during recent surveys, a pre-
40 construction survey would be required to avoid impacts on this species if construction occurs
41 during the breeding season (see Section 5). No mima mounds or native coastal prairie are
42 located at this site, which could support populations of Texas windmill grass. Similarly, suitable
43 habitat for the plains spotted skunk does not occur at the Clarkwood Site.

3.6.2.3 *Alternative 2: Clarkwood Site B (Preferred Alternative)*

The impacts to special status species under this alternative would be the same as Alternative 1.

3.6.2.4 *Alternative 3: Twin River Site*

The potential for special status species to occur on the Twin River Site is limited by the low quality of wildlife habitats on and surrounding the site. No south Texas ambrosia or slender rush pea were observed at this site. Texas windmill grass was not observed; likewise, mimas mounds, which would typically support this species, were not observed either. Potential impacts on birds would be the same as those described under Alternative 1. There is a higher potential for the plains spotted skunk to occur at the Twin River Site relative to the Clarkwood Site. This species could migrate through or forage in the Twin River Site, but is not likely to be a resident.

3.7 SURFACE WATER

3.7.1 Affected Environment

Major water bodies near the study area consist of the Corpus Christi Bay, Upper Laguna Madre, Nueces Bay, Oso Bay, Nueces River, and Oso Creek. In general, the open waters of the Corpus Christi Bay, Upper Laguna Madre, Oso Bay, and Nueces Bay have good to excellent water quality. The project area is located in TCEQ Service Region 14 (Corpus Christi).

Sections 305(b) and 303(d) of the federal Clean Water Act (CWA) require states to list the status of surface waters, including concerns for public health, fitness for use by aquatic species and other wildlife, and specific pollutants and their possible sources (TCEQ 2010). Designated Uses of state waters are defined in three categories: (1) Total Body Contact Recreation, which includes swimming and water skiing; (2) Partial Body Contact Recreation, which includes boating and sailing; and (3) Fish Consumption which include bio-accumulative chemicals of concern and fish tissue mercury concentrations.

The Clarkwood Site is located within the TCEQ sub-watershed designated as Oso Creek SEGID 2485A and the Twin River Site is located in the Nueces River (Tidal) SEGID 2101 (Figure 3-1). The Oso Creek stream segment is an unclassified water body that stretches from Oso Bay confluence in southern Corpus Christi to a point 3 miles upstream of SH 44, west of Corpus Christi in Nueces County. The Nueces River stream segment begins at the confluence with Nueces County to Calallen Dam 1.7 (1.1 miles) upstream of U.S.77/I-37 in Nueces/San Patricio County. Both segments are listed on the 2010 Texas Water Quality Inventory (TWQI) Integrated Report (Section 305(b) and 303(d)). These watersheds have been reported for violating criteria such as total phosphorus, orthophosphorus, depressed dissolved oxygen, nitrate, chlorophyll-a, and bacteria (*Enterococcus*). No surface water bodies are located on either site. An unnamed drainage is located to the east of the Twin River Site, however, and drains into the Nueces River.

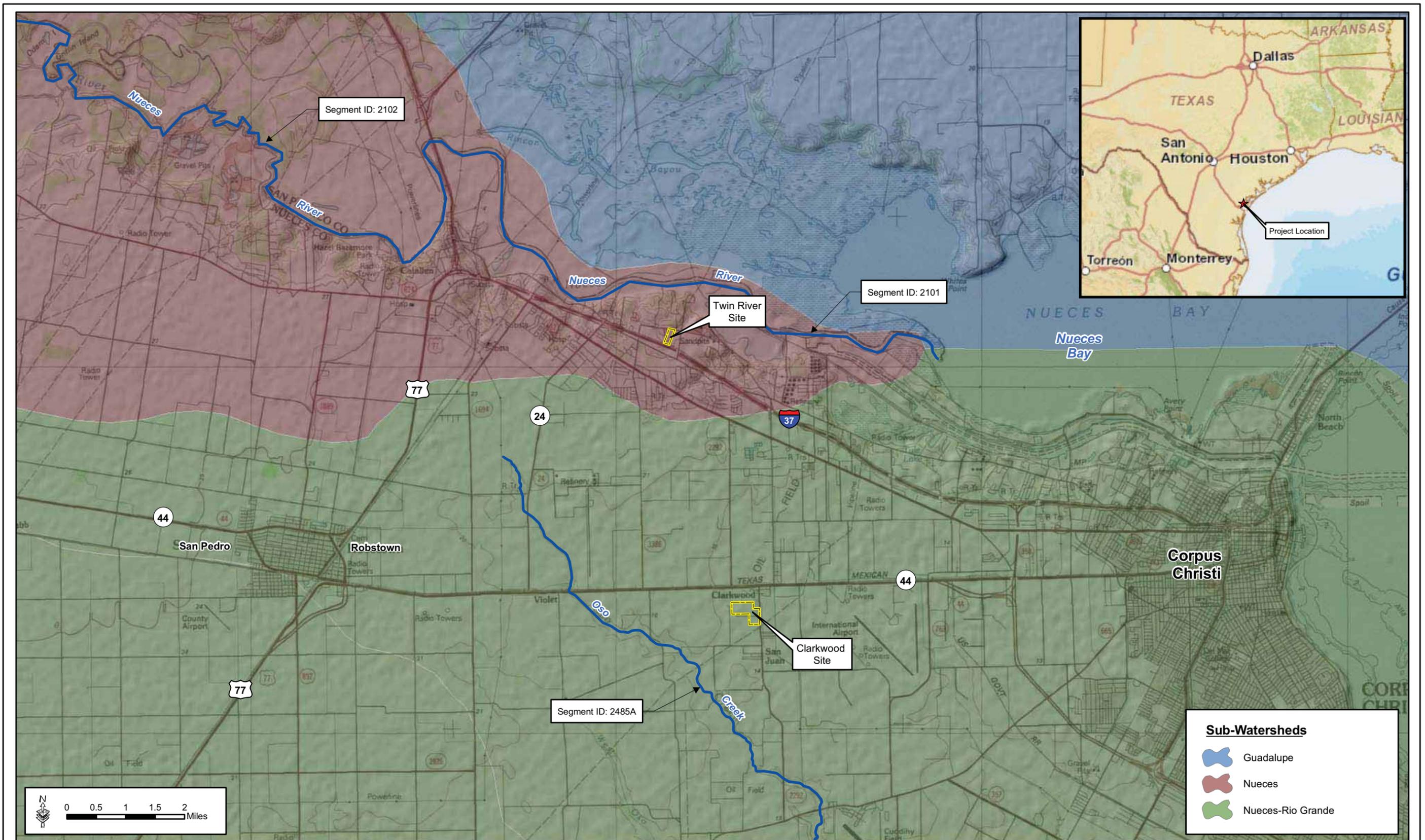


Figure 3-1: Sub-Watersheds in Proximity of Project Locations

The existing water quality conditions for each of the sub-watersheds in the project area are summarized in Table 3-1.

Table 3-1. List of Texas Water Quality Inventory Sub-Watersheds Found in the Project Study Area and Water Quality Attainment Status

Name, Stream Segment Id and TCEQ Region	Texas Integrated Report Water Quality 305 (b) and 303(d) Levels of Concern	Suspected Causes of Impairment	Suspected Sources of Impairment
Nueces River (Tidal) SEGID 2101 Region 14	CS	Chlorophyll <u>a</u>	Unknown
Oco Bay SEGID 2485A Region 14	NS (Cat 5A) CS CS CS	Bacteria (Enterococcus) Nitrate Total Phosphorus Chlorophyll <u>a</u>	MPSD, NPS, UR/SS MPSD, NPS, UR/SS NPS, UR/SS MPSD, NPS, UR/SS

Source: TCEQ Draft Report 2010 Texas Water Quality Inventory (TWQI) Integrated Report for Clean Water Act Sections 305(b) and 303 (d).

MPSD = Municipal Point Source Discharge, NPS = Non-Point Source, UR/SS = Urban Runoff/Storm Sewers, CS = Concern based on screening level, NS = Non-supported report, and Cat 5A = TMDL is underway, scheduled, or will be scheduled.

3.7.2 Environmental Consequences

3.7.2.1 No Action Alternative

Under the No Action Alternative, no adverse impacts on surface water would occur, since no construction would occur.

3.7.2.2 Alternative 1: Clarkwood Site A

Under Alternative 1, temporary short-term impacts on downstream surface waters may occur during the construction period due to soil erosion. The construction site is approximately 24 acres and would require a Storm Water Pollution Prevention Plan (SWPPP) as part of the National Pollution Discharge Elimination System (NPDES) permit process. The station site would include a 5-acre retention pond to capture storm water runoff. During construction activities, water quality within ephemeral and perennial streams would be protected through the implementation of best management practices (BMP), such as silt fences and minimal alteration to vegetative buffers, as specified in the SWPPP. A site-specific Spill Prevention, Control and Countermeasure Plan (SPCCP) would also be in place prior to the start of construction. BMPs outlined in this plan would reduce potential migration of soils, oil and grease, and construction debris into local watersheds. Under the Preferred Alternative, impacts on water resources would be less than significant.

3.7.2.3 Alternative 2: Clarkwood Site B (Preferred Alternative)

Impacts on water resources under Alternative 2 would be the same as that described for Alternative 1.

3.7.2.4 Alternative 3: Twin River Site

Under this alternative, impacts would be similar as those described for Alternative 1. However, since the Twin River Site is slightly less than any of the Clarkwood Sites, the potential for short-

1 term impacts would be slightly less as well. BMPs would be installed so that there would be no
 2 or negligible impacts on the unnamed drainage to the east of the site.

3.8 FLOODPLAINS

3.8.1 Affected Environment

7 A floodplain is the area adjacent to a river, creek, lake, stream, or other open waterway that is
 8 subject to flooding when there is a significant rain. If an area is in the 100-year floodplain, there
 9 is a 1-in-100 chance in any given year that the area will flood. EO 11988 (Floodplain
 10 Management) (43 FR 6030) was enacted on May 24, 1977 to “avoid to the extent possible the
 11 long and short-term adverse impacts associated with the occupancy and modification of
 12 floodplains and to avoid direct or indirect support of floodplain development wherever there is a
 13 practicable alternative. EO 11988 directs all Federal agencies to reduce the risk of flood loss;
 14 minimize the impact of floods on human safety, health, and welfare; and restore and preserve the
 15 natural and beneficial values served by floodplains...”. Additionally, where the only practicable
 16 alternative is to site in a floodplain, a specific step-by-step process must be followed to comply
 17 with EO 11988 as outlined in the Federal Emergency Management Agency (FEMA) document
 18 *Further Advice on EO 11988 Floodplain Management*. This eight-step process is detailed in the
 19 FEMA document “Further Advice on EO 11988 Floodplain Management” and includes the
 20 following steps:

- 21
- 22 1. Determine whether the action would occur in, or stimulate development in, a floodplain.
- 23 2. Receive public review/input of the Proposed Action.
- 24 3. Identify and evaluate practicable alternatives to locating in the floodplain.
- 25 4. Identify the impacts of the Proposed Action (when it occurs in a floodplain).
- 26 5. Minimize threats to life, property, and natural and beneficial floodplain values, and
- 27 restore and preserve natural and beneficial floodplain values.
- 28 6. Reevaluate alternatives in light of any new information that might have become
- 29 available.
- 30 7. Issue findings and a public explanation.
- 31 8. Implement the action.
- 32

33 FEMA floodplain maps were reviewed to identify project locations that would occur within
 34 mapped floodplains (FEMA 1985). As depicted on Figure 3-2, a 34 acre portion of the
 35 Clarkwood Site is in the 100-year floodplain. However, the Twin River Site is not in the 100
 36 year floodplain (see Figure 3-2). Consequently, this Draft EA also serves as a public notice
 37 regarding impacts on floodplains. Steps 1, 3, and 4 have been undertaken as part of this Draft
 38 EA. Steps 2 and 6 through 8 are being conducted simultaneously with the EA development
 39 process, including public review of the Draft EA. Step 5 relates to mitigation and is currently
 40 undergoing development.

3.8.2 Environmental Consequences

3.8.2.1 No Action Alternative

44 Under the No Action Alternative, no impacts on floodplains would occur since no construction
 45 would take place within the 100-year floodplain.

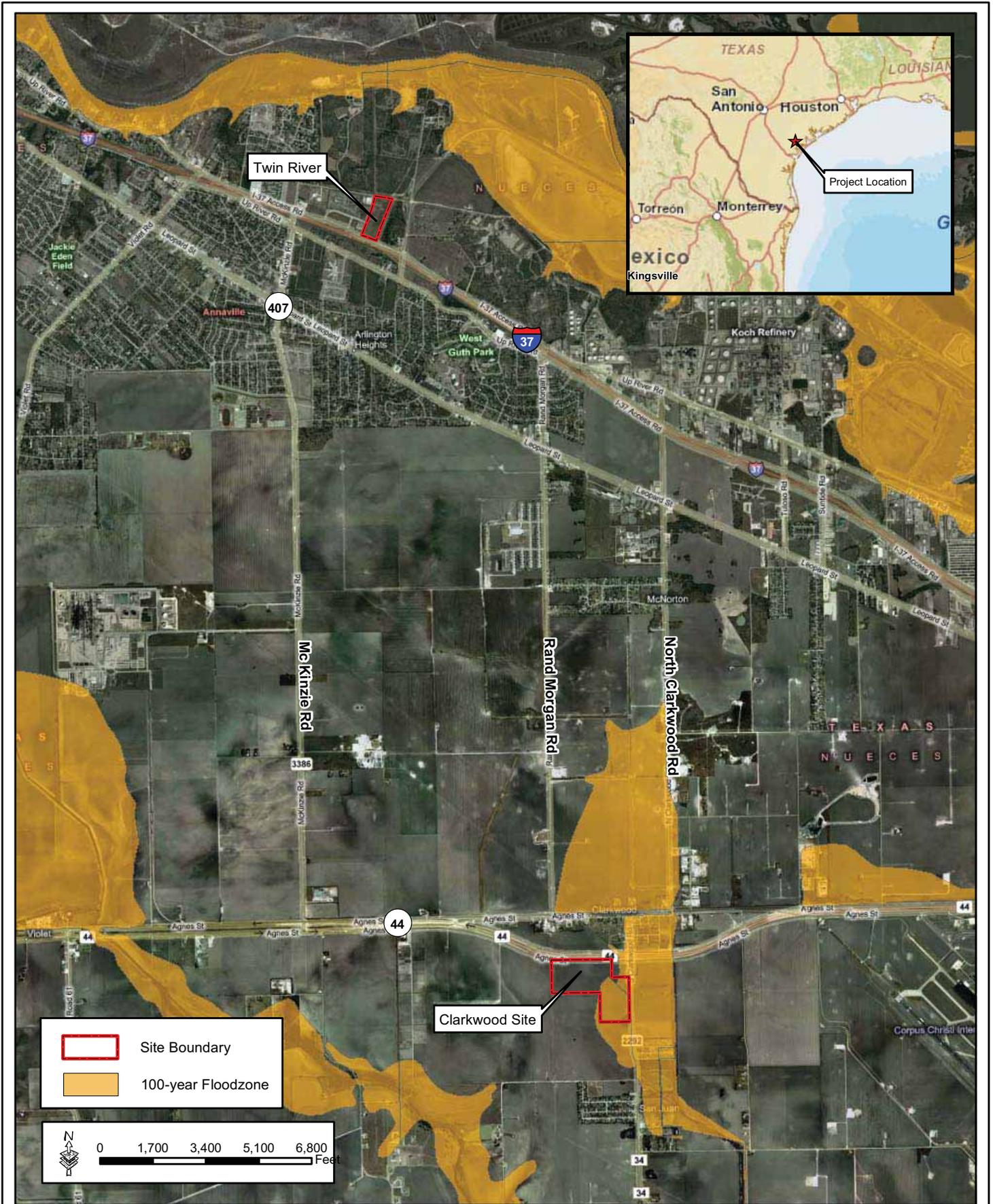


Figure 3-2: 100 Year Floodplain

3.8.2.2 *Alternative 1: Clarkwood Site A*

The Preferred Alternative would affect approximately 10 acres within the 100-year floodplain. The proposed development would not be expected to elevate, impede, or redirect flood flow or significantly increase flood velocity due to the small size and designs (permeable surface drain) that would be incorporated and the location of the facility within the extreme upper limits of the floodplain.

3.8.2.3 *Alternative 2: Clarkwood Site B (Preferred Alternative)*

Construction of the new station under this alternative would impact approximately 5 acres within the 100-year floodplain. Impacts would be similar to, but of less magnitude, than Alternative 1.

3.8.2.4 *Alternative 3: Twin River Alternative*

The Twin River proposed site is not within the 100-year floodplain; therefore, Alternative 3 does not have the potential to affect floodplains.

3.9 AIR QUALITY

3.9.1 Affected Environment

The USEPA established National Ambient Air Quality Standards (NAAQS) for specific pollutants determined to be of concern with respect to the health and welfare of the general public. Ambient air quality standards are classified as either "primary" or "secondary." The major pollutants of concern, or criteria pollutants, are carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), ozone (O₃), particulate matter less than 10 microns (PM-10), particulate matter less than 2.5 microns (PM-2.5) and lead. NAAQS represent the maximum levels of background pollution that are considered safe, with an adequate margin of safety, to protect the public health and welfare. The NAAQS are included in Table 3-2.

Areas that do not meet these NAAQS standards are called non-attainment areas; areas that meet both primary and secondary standards are known as attainment areas. The federal Conformity Final Rule (40 CFR Parts 51 and 93) specifies criteria or requirements for conformity determinations for Federal projects. The federal Conformity Rule was first promulgated in 1993 by the USEPA, following the passage of Amendments to the Clean Air Act in 1990. The rule mandates that a conformity analysis must be performed when a federal action generates air pollutants in a region that has been designated a non-attainment or maintenance area for one or more NAAQS.

A conformity analysis is the process used to determine whether a federal action meets the requirements of the General Conformity Rule. It requires the responsible Federal agency to evaluate the nature of a proposed action and associated air pollutant emissions, calculate emissions as a result of the proposed action. If the emissions exceed established limits, known as *de minimis* thresholds, the proponent is required to implement appropriate mitigation measures.

The TCEQ has adopted USEPA's NAAQS as Texas' criteria pollutants. Areas that fail to meet federal standards for ambient air quality are considered non-attainment. TCEQ has classified Nueces County as in attainment for all NAAQS. The USEPA also considers Nueces County as in attainment for all NAAQS (USEPA 2010b).

1

Table 3-2. National Ambient Air Quality Standards

POLLUTANT	STANDARD VALUE	STANDARD TYPE
Carbon Monoxide (CO)		
8-hour average	9ppm (10mg/m ³)*	P
1-hour average	35ppm (40mg/m ³)*	P
Nitrogen Dioxide (NO₂)		
Annual arithmetic mean	0.053ppm (100µg/m ³)*	P and S
Ozone (O₃)		
8-hour average	0.08ppm (157µg/m ³)*	P and S
1-hour average	0.12ppm (235µg/m ³)*	P and S
Lead (Pb)		
Quarterly average	1.5µg/m ³	P and S
Particulate<10 micrometers (PM-10)		
Annual arithmetic mean	50µg/m ³	P and S
24-hour average	150µg/m ³	P and S
Particulate<2.5 micrometers (PM-2.5)		
Annual arithmetic mean	15µg/m ³	P and S
24-hour average	65µg/m ³	P and S
Sulfur Dioxide (SO₂)		
Annual average mean	0.03ppm (80µg/m ³)	P
24-hour average	0.14ppm (365µg/m ³)	P
3-hour average	0.50ppm (1300µg/m ³)	S

2 Legend: P= Primary S= Secondary

Source: USEPA 2010a.

3 ppm = parts per million mg/m³ = milligrams per cubic meter of air µg/m³ = micrograms per cubic meter of air *

4 Parenthetical value is an approximate equivalent concentration

5

6 **3.9.2 Environmental Consequences**7 **3.9.2.1 No Action Alternative**8 Implementation of the No Action Alternative would not create additional air emissions in the
9 Nueces County airshed.

10

11 **3.9.2.2 Alternative 1: Clarkwood Site A**12 Temporary and minor increases in air pollution would occur from the use of construction
13 equipment (combustible emissions) and the disturbance of soils (fugitive dust) during
14 construction of the station. The following paragraphs describe the air calculation methodologies
15 utilized to estimate air emissions produced by the installation of one housing unit.

16

17 Fugitive dust emissions were calculated using the emission factor of 0.19 ton per acre per month
18 (Midwest Research Institute 1996), which is a more current standard than the 1985 PM-10
19 emission factor of 1.2 tons per acre-month presented in AP-42 Section 13 Miscellaneous Sources
20 13.2.3.3 (USEPA 2001).

21

22 USEPA's NONROAD Model (USEPA 2005) was used, as recommended by USEPA's
23 *Procedures Document for National Emission Inventory, Criteria Air Pollutants, 1985-1999*
24 (USEPA 2001), to calculate emissions from construction equipment. Combustible emission
25 calculations were made for standard construction equipment, such as front-end loaders,
26 backhoes, bulldozers, and cement trucks. Assumptions were made regarding the total number of
27 days each piece of equipment will be used, and the number of hours per day each type of
28 equipment will be used.

1 Construction workers would temporarily increase the combustible emissions in the airshed
 2 during their commute to and from the project area. Emissions from delivery trucks would also
 3 contribute to the overall air emission budget. Emissions from delivery trucks, construction
 4 worker commuters traveling to the job site were calculated using the USEPA MOBILE6.2 Model
 5 (USEPA 2005a, 2005b and 2005c).
 6

7 The total air quality emissions were calculated for the construction activities to compare to the
 8 General Conformity Rule. Summaries of the total emissions for the Preferred Alternative are
 9 presented in Table 3-3. Details of the analyses are presented in Appendix C.
 10

11 **Table 3-3. Total Air Emissions (tons/year) from the Proposed Action Construction verses**
 12 **the *de minimus* Threshold Levels**

Pollutant	Total (tons/year)	<i>de minimus</i> Thresholds (tons/year) ⁽¹⁾
CO	15.74	100
Volatile Organic Compounds (VOC)	2.58	100
Nitrous Oxides (NOx)	14.68	100
PM-10	26.68	100
PM-2.5	3.77	100
SO ₂	1.74	100

13 Source: 40 CFR 51.853 and Gulf South Research Corporation (GSRC) model projections.

14 ⁽¹⁾ Note that Nueces County is in attainment for all NAAQS (USEPA 2010b).
 15

16 Several sources of air pollutants would contribute to the overall air impacts of the construction
 17 project. The air results in Table 3-2 included emissions from:
 18

- 19 1. Combustible engines of construction equipment
- 20 2. Construction workers commute to and from work
- 21 3. Supply trucks delivering materials to construction site
- 22 4. Fugitive dust from job site ground disturbances
 23

24 As can be seen from the tables above, the proposed construction activities do not exceed Federal
 25 *de minimis* thresholds and thus, would not require a Conformity Determination, even if Nueces
 26 County were in a non-attainment area. As there are no violations of air quality standards and no
 27 conflicts with the state implementation plans (SIPs), the impacts on air quality from the
 28 implementation of the Preferred Alternative would be less than significant. During the
 29 construction of the proposed station, proper and routine maintenance of all vehicles and other
 30 construction equipment would be implemented to ensure that emissions are within the design
 31 standards of all construction equipment. Dust suppression methods should be implemented to
 32 minimize fugitive dust. In particular, wetting solutions would be applied to construction area to
 33 minimize the emissions of fugitive dust.
 34

35 ***Ongoing Air Emissions***

36 The proposed action would increase the number of USBP/OFO agents commuting to work in
 37 Nueces County. The new commuters would most likely be from areas outside of Nueces County
 38 and, therefore, the commuter air emissions generated by additional staff's automobiles and

1 lightweight trucks were calculated in this analysis. Table 3-4 presents estimated air emissions
 2 from automobiles of new agents and maintenance staff.

3
 4 **Table 3-4. Total Air Emissions (tons/year) from Daily Auto Activities**
 5 **vs. the *de minimis* Levels**

Pollutant	Total (tons/year)	<i>de minimis</i> Thresholds (tons/year) ⁽¹⁾
CO	4.31	100
Volatile Organic Compounds (VOC)	0.46	100
Nitrous Oxides (NOx)	0.33	100
PM-10	0.00	100
PM-2.5	0.00	100
SO ₂	NA	100

6 NA = non-applicable

7 Source: 40 CFR 51.853 and GSRC model projections.

8 (1) Note that Nueces County is in attainment for all NAAQS (USEPA 2010b).

9
 10 As there are no violations of air quality standards and no conflicts with the SIPs, the impacts on
 11 air quality resulting from the implementation of the Preferred Alternative would be less than
 12 significant.

13 3.9.2.3 *Alternative 2: Clarkwood Site B (Preferred Alternative)*

14 Under Alternative 2, the impacts on air quality in the region would be similar to those described
 15 in Alternative 1 and would be less than significant.

16 3.9.2.4 *Alternative 3: Twin River Site*

17 Under Alternative 3, the impacts on air quality in the region would be similar to those described
 18 in Alternative 1 and would be less than significant.

19 3.10 NOISE

20 3.10.1 Affected Environment

21 Noise is generally described as unwanted sound, which can be based either on objective effects
 22 (i.e., hearing loss, damage to structures, etc.) or subjective judgments (e.g., community
 23 annoyance). Sound is usually represented on a logarithmic scale with a unit called the decibel
 24 (dB). Sound on the decibel scale is referred to as sound level. The threshold of human hearing
 25 is approximately 0 dB and the threshold of discomfort or pain is around 120 dB.

26
 27 Noise levels occurring at night generally produce a greater annoyance than do the same levels
 28 occurring during the day. A-weighted decibel (dBA) is a measure of noise at a given, maximum
 29 level or constant state level louder than the same level of intrusive noise during the day, at least
 30 in terms of its potential for causing community annoyance. It is generally agreed that people
 31 perceive intrusive noise at night as being 10.0 dBA above ambient nighttime levels. This
 32 perception is largely because background environmental sound levels at night in most areas are
 33 also approximately 10.0 dBA lower than those during the day. Acceptable noise levels have
 34 been established by Housing and Urban Development (HUD) for construction activities in
 35 residential areas (HUD 1984):

1 **Acceptable** (not exceeding 65 dBA) – The noise exposure may be of some concern but
 2 common building construction will make the indoor environment acceptable and the
 3 outdoor environment will be reasonably pleasant for recreation and play.
 4

5 **Normally Unacceptable** (above 65 but not greater than 75 dBA) – The noise exposure is
 6 significantly more severe. Barriers may be necessary between the site and prominent
 7 noise sources to make the outdoor environment acceptable. Special building
 8 constructions may be necessary to ensure that people indoors are sufficiently protected
 9 from outdoor noise.
 10

11 **Unacceptable** (greater than 75 dBA) – The noise exposure at the site is so severe that the
 12 construction costs to make the indoor noise environment acceptable may be prohibitive
 13 and the outdoor environment would still be unacceptable.
 14

15 As a general rule of thumb, noise generated by a stationary noise source, or “point source,” will
 16 decrease by approximately 6.0 dBA over hard surfaces and 9.0 dBA over soft surfaces for each
 17 doubling of the distance. For example, if a noise source produces a noise level of 85 dBA at a
 18 reference distance of 50 feet over a hard surface, then the noise level would be 79 dBA at a
 19 distance of 100 feet from the noise source, 73 dBA at a distance of 200 feet, and so on. To
 20 estimate the attenuation of the noise over a given distance the following relationship is utilized:
 21

22 Equation 1: $dBA_2 = dBA_1 - 20 \log (d_2/d_1)$
 23

24 Where:

25 dBA_2 = dBA at distance 2 from source (predicted)
 26 dBA_1 = dBA at distance 1 from source (measured)
 27 d_2 = Distance to location 2 from the source
 28 d_1 = Distance to location 1 from the source
 29

30 Source: California Department of Transportation 1998
 31

32 The Clarkwood Site is located in a semi-rural agricultural area with six residential homes across
 33 Clarkwood Road on the eastern border of the project corridor. Farm fields are located on the
 34 west and south side of project corridor. SR 44 is located immediately north, and the vehicle
 35 traffic on this highway creates the dominant noise signature in the area. The Corpus Christi
 36 International Airport is located approximately 1.5 miles to the east of the Clarkwood Site. Air
 37 traffic around the airport is expected to contribute to the noise environment near the Clarkwood
 38 Site as well.
 39

40 The Twin River Site is located adjacent to I-37 in a semi-rural area with a commercial property
 41 southwest of the project site. The closest residential noise receptor to the Twin River Site is
 42 approximately 350 feet to the west of Twin River Boulevard. Construction of the off-ramp at I-
 43 37 and Carbon Plant Road currently contributes to the noise environment at this site.

1 3.10.2 Environmental Consequences

2 3.10.2.1 No Action Alternative

3 Implementation of the No Action Alternative would not impact ambient noise quality in the
4 region; however, the neighborhoods adjacent to the proposed project sites would continue to
5 experience traffic noise emission produced by cars and trucks traveling on SR 44 and I-37.
6

7 3.10.2.2 Alternative 1: Clarkwood Site A

8 The construction of the new station would require the use of common construction equipment.
9 Table 3-5 describes noise emission levels for construction equipment which range from 76 dBA
10 to 82 dBA at a distance of 50 feet (Federal Highway Administration 2007 [FHWA] 2007).
11

12 **Table 3-5. A-Weighted (dBA) Sound Levels of Construction Equipment and Modeled**
13 **Attenuation at Various Distances¹**

Noise Source	50 feet	100 feet	200 feet	500 feet	1000 feet
Backhoe	78	72	66	58	52
Crane	81	75	69	61	55
Dump truck	76	70	64	56	50
Excavator	81	75	69	61	55
Front end loader	79	73	67	59	53
Concrete mixer truck	79	73	67	59	53
Pneumatic tools	81	75	69	61	55
Bull dozer	82	76	70	62	56
Generator	81	75	69	61	55

14 Source: FHWA 2007 and GSRC 1 The dBA at 50 feet is a measured noise emission (FHWA 2007). The 100 to 1,000 foot
15 results are GSRC modeled estimates.
16

17 Assuming the worst case scenario of 82 dBA, the dBA from a point the noise model projected
18 that noise levels of 82 source (i.e., bull dozer) would have to travel 370 feet before the noise
19 would be attenuated to an acceptable level of 65 dBA. To achieve an attenuation of 82 dBA to a
20 normally unacceptable level of 75 dBA, the distance from the noise source to the receptor is 110
21 feet.
22

23 Assuming the construction activities are contained within the delineated construction area, six
24 residences on Clarkwood Road were located within 370 feet of the edge of the project site
25 boundary. These sensitive noise receptors may be exposed to unacceptable (75 dBA) and to
26 normally unacceptable (65 dBA) noise emissions. To minimize these impacts, construction
27 activities should be limited to daylight hours during the work week, between 8:00 am to 5:00 pm
28 on Monday through Friday. Noise impacts should be less than significant if these timing
29 restrictions are implemented near the residential neighborhoods. Noise generated by the
30 construction activities would be intermittent and last for approximately 2 years, after which,
31 noise levels would return to ambient levels. Therefore, the noise impacts from construction
32 activities would be considered less than significant.

1 Operation of the new station would result in an increase in ambient noise levels due to GOV and
 2 POV traffic. However, these noises would be similar to that generated along SR 44 and, thus,
 3 would not be expected to be significant.

4 5 **3.10.2.3 Alternative 2: Clarkwood Site B (Preferred Alternative)**

6 Construction of the station using this layout would result in similar noise emissions as that
 7 described under Alternative 1. However, the impacts would be expected to be less since the
 8 majority of the construction would be approximately 1,100 feet from the six residences. The
 9 new access road to Clarkwood Road would be the only construction that would occur near these
 10 homes. Operational impacts would be the same under this alternative as that described for
 11 Alternative 1.

12 13 **3.10.2.4 Alternative 3: Twin River Site**

14 The Twin River Site is located in a semi-rural area with multi-family residential homes
 15 approximately 350 feet west of the project corridor. Assuming the construction activities are
 16 contained within the delineated construction area, approximately five residential homes would
 17 likely be exposed to normally unacceptable (65 dBA) noise emissions. To minimize these
 18 potential impacts, construction activities should be limited to daylight hours during the work
 19 week, between 8:00 am to 5:00 pm on Monday through Friday. Noise generated by the
 20 construction activities would be intermittent and last for 2 years, after which, noise levels would
 21 return to ambient levels. Therefore, the noise impacts from construction activities would be
 22 considered less than significant. Operational impacts would be the same under this alternative as
 23 that described for Alternative 1.

24 25 **3.11 CULTURAL RESOURCES**

26
27 The National Historic Preservation Act (NHPA) establishes the Federal government's policy to
 28 provide leadership in the preservation of historic properties and to administer Federally owned or
 29 controlled historic properties in a spirit of stewardship. NHPA established the Advisory Council
 30 on Historic Preservation (ACHP) to advocate full consideration of historic values in Federal
 31 decision-making; review Federal programs and policies to promote effectiveness, coordination,
 32 and consistency with National preservation policies; and recommend administrative and
 33 legislative improvements for protecting our Nation's heritage with due recognition of other
 34 National needs and priorities. In addition, the NHPA also established the State Historic
 35 Preservation Officers (SHPO) to administer National historic preservation programs on the state
 36 level and Tribal Historic Preservation Officers on tribal lands, where appropriate. The NHPA
 37 also establishes the National Register of Historic Places (NRHP). The NRHP is the Nation's
 38 official list of cultural resources worthy of preservation and protection. Properties listed in the
 39 Register include districts, sites, buildings, structures, and objects that are significant in American
 40 history, architecture, archaeology, engineering, and culture. The National Park Service
 41 administers the NRHP.

42 43 **3.11.1 Affected Environment**

44 **3.11.1.1 Cultural History**

45 The current project area lies within the South Texas Plains, which includes the area from the Rio
 46 Grande in the west to the south Texas coast on the Gulf of Mexico (Black 1989a). Within the

1 south Texas Plains the project area lies within the Coastal Bend biogeographical subarea. The
2 Coastal Bend subarea covers the coastal area between the Colorado River and Baffin Bay. The
3 Coastal Bend subarea is biologically diverse having beach and river resources as well as
4 extensive coastal grasslands. The following summary of the prehistory of the Coastal Bend
5 subarea is adapted primarily from Black (1998b).
6

7 The paleoenvironment of the area during the Wisconsin glacial period (22,500 to 14,000 years
8 Before Present [B.P.]) was considerably cooler and more humid than today. A change to the
9 current Holocene environmental conditions began around 10,000 B.P., though there is some
10 debate over timing and nature of the change with some suggesting a gradual trend toward
11 warmer and drier conditions over time and other suggesting that the climate fluctuated
12 throughout the Holocene between drier and wetter conditions (Black 1989a).
13

14 Initial human occupation of the South Texas Plains is thought to have occurred during the Paleo-
15 Indian period dating from 9200 B.C. to 6000 B.C. It is generally thought that the Paleo-Indian
16 were big game hunters with large herbivores, including extinct Pleistocene species such as the
17 mammoth and bison, were the preferred prey. Paleo-Indian subsistence and settlement patterns
18 suggest a very low population density in the area, with small highly mobile bands operating in
19 larger territorial ranges (Black 1989b).
20

21 The subsequent Archaic Period (ca. 6000 B.C. to A.D. 800) is divided into the Early Archaic (ca.
22 6000 B.C. to 2500 B.C.), the Middle Archaic (ca. 2500 B.C. to 400 B.C.) and the Late Archaic
23 (ca. 400 B.C. to A.D. 800) based on artifact types, particularly projectile points, as well as other
24 cultural traits (Black 1989b). In terms of lifestyle, the transition to Archaic periods encompassed
25 a shift from a focus on big game hunting to a more generalized hunting and gathering adaptation
26 beginning during the later part of the Paleo-Indian period.
27

28 Subsistence data from the Early Archaic Period (ca. 6000 B.C. to 2500 B.C.) indicated a shift to
29 the use of littoral resources such as freshwater mussels, land snails, turtle bones, and freshwater
30 drum. Middle Archaic (ca. 2500 B.C. to 400 B.C.) sites are more common in South Texas as
31 compared to site from previous periods and, within the Coastal Bend area, there is a continued
32 adaptation to the littoral resources, particularly those of the estuary bays. Evidence of increased
33 plant utilization for subsistence is also seen during the Middle Archaic including the increase in
34 the use of groundstones as well as an increase in roasting/baking hearths. Subsistence patterns in
35 the Coastal Bend subarea during the Late Archaic Period (ca. 400 B.C. to A.D. 800/1200) show
36 an exploitation of a wide range of shellfish, fish, and small mammals with a focus on marine
37 resources, particularly those of estuary bays.
38

39 Evidence from the Late Prehistoric Period (ca. A.D. 800/1200 to A.D. 1600) indicated an
40 emphasis on faunal exploitation, including a diverse range of species such as bison, deer, and
41 pronghorn.
42

43 By the early nineteenth century the native peoples of the area were either culturally or
44 biologically extinct or displaced. As a result, the information on the historic Native American
45 populations of the area are derived predominantly from historic documents from Spanish
46 expeditions, missionaries, and the earliest Anglo-European explorers and settlers. The Coastal

1 Bend subarea was inhabited by several different groups of Native Americans during the Historic
2 Period including the Coahuilteicans, Karankawas, Lipan Apaches, and Tonkawas. These groups
3 were subdivided into numerous smaller bands including the Atakapa, Borado, Cavas, Capoque,
4 Emet, Kohani, Kopani, Malaquite, Payata, Sana Tamique, and well as others (Long 2010; Hester
5 1989).

6
7 Initial exploration of the area was conducted by Alvarez de Piñeda along the Texas coast in
8 1519. No real attempts to settle the area were made until the late seventeenth century in response
9 to a French settlement established by René Robert Cavelier, Sieur de La Salle on the Texas Coast
10 in 1568. The Corpus Christi Bay remained largely unexplored until 1747, when Joaquín
11 Prudencio de Orobio y Basterra led an expedition down the Nueces River to its mouth. After
12 several failed attempts the first settlement in the area was founded by Blas María de la Garza
13 Falcón in 1766 (Long 2010; Fox 1989).

14
15 With Mexican independence in 1821 the region became part of Tamaulipas. Remaining land in
16 the area was deeded to individuals by the Tamaulipan government. Though there were several
17 unsuccessful attempts to establishment settlements in the area Fort Lipantitlán was established in
18 1831 where the road from Matamoros to Goliad crossed the river. Both Irish and German
19 settlers also moved into the area during the 1820s and 1830s (Long 2010; Fox 1989).

20
21 The Texas Republic period began in 1836 after the Texas Revolution. Henry Lawrence Kinney
22 established a Trading Post and fort on Corpus Christi Bay in 1839 in what would become
23 Corpus Christi. Nueces County was formed from San Patricio County in 1846 and organized
24 that same year. Corpus Christi, which was incorporated in 1846, became the county seat.
25 Population in the county continued to remain relatively low. During the early years of the Civil
26 War Corpus Christi was an important center for Confederate commerce. Despite efforts of
27 Union forces overland trade in the area continued without interruption until the end of the war.
28 A boom in the cattle industry in the early 1870s helped Nueces County overcome the postwar
29 economic depression (Long 2010; Fox 1989).

30
31 During the latter half of the nineteenth and the early twentieth centuries the population of Nueces
32 County grew markedly, particularly in the decade after the turn of the century. Corpus Christi
33 gradually emerged as the commercial hub of the region. Despite several economic downturns
34 during the early to middle twentieth century the economic base of the region outside the Corpus
35 Christi area was still overwhelmingly agricultural by the 1980s and continues to be an important
36 industry today (Long 2010).

37 38 ***3.11.1.2 Previous Investigations***

39 Archival research by personnel at the Texas Archaeological Research Laboratory (TARL) was
40 conducted on June 15, 2010 for a 1-mile area around both the Clarkwood and Twin River sites
41 for all previously recorded archaeological sites, previously conducted archaeological surveys and
42 excavations, and historic structures and districts on record. A total of 15 previously recorded
43 sites are located within 1-mile of the two project areas. A summary of previously recorded sites
44 within the 1-mile radius is presented in Table 3-6. Only one of the previously recorded
45 archaeological site (41NU231) is located adjacent to the one of the project areas. A total of 20

1 previously conducted archaeological surveys and excavations are recorded within 1-mile of the
 2 project area. None of the surveys crossed the footprint of the current project areas.
 3

4 **Table 3-6. Previously Recorded Archaeological Sites within 1-mile of project areas**

Site Name	Site Type	Age	NRHP Eligibility
41NU61	Open campsite\Lithic workshop	Unknown Prehistoric	Unknown
41NU185	Midden	Unknown Prehistoric	Eligible
41NU186	Open Prehistoric Occupation	Unknown Prehistoric	Unknown
41NU211	Open Campsite	Unknown Prehistoric	Unknown
41NU221	Historic Homestead; Prehistoric Campsite	Archaic; Late Prehistoric; Historic (19 th + Century)	Unknown
41NU231	Shell Midden	Archaic	Unknown
41NU240	Open Campsite	Archaic; Late Prehistoric	Unknown
41NU255	Open Campsite	Archaic; Late Prehistoric	Not Eligible
41NU256	Open Campsite	Unknown Prehistoric	Unknown
41NU257	Open Campsite	Unknown Prehistoric	Unknown
41NU269	Open campsite; Shell Midden	Unknown Prehistoric	Unknown
41NU281	Shell Midden	Early Archaic; Late Archaic	Unknown
41NU283	Open campsite	Unknown Prehistoric	Not Eligible
41NU293	Prehistoric Midden	Unknown Prehistoric	Not Eligible
41NU306	Shell Midden	Unknown Prehistoric	Unknown

5
 6 **41NU231**

7 Site 41NU231 is located adjacent to the Twin River site, according to maps provided by TARL.
 8 Little information is available from the site form on file with TARL. The site is described as a
 9 shell midden with flint flakes and projectile points. According to TARL, the site dates to the
 10 Archaic Period. The site form states that the site was currently under development in 1985. No
 11 remains of the site could be located during the pedestrian survey or shovel testing of the area.
 12 The site location on the edge of the project area and adjacent to Twin River Road suggests that
 13 the site may have been destroyed with the construction of the road along with the utilities in the
 14 area.
 15

16 **3.11.1.3 Current Investigations**

17 Archaeological surveys were conducted at both the Clarkwood Site and the Twin River Site from
 18 June 14, 2010 through June 23, 2010. The archaeological surveys consisted of pedestrian survey
 19 supplemented by shovel testing at both sites. The cultural resources management report
 20 outlining the results of the survey is currently being prepared. Preliminary results of the surveys
 21 are presented below. Coordination letters have been sent to the THC and potentially affected
 22 Native American Tribes (see Appendix A); as of the publication of this EA, no responses have
 23 been received.
 24

25 **Clarkwood**

26 One archaeological site was recorded with the Clarkwood survey area. The site consists of a
 27 small historic scatter dating to the middle to late twentieth century. Artifacts recorded at the site
 28 included glass, metal, ceramics, and construction materials such a brick and mortar. The site
 29 probably represents a mid to late twentieth century farmstead. The site has been heavily
 30 impacted by agricultural activities in the past and has little integrity. As a result, the site is not

1 recommended eligible for listing on the NRHP and is not considered an historic property. As a
2 result the site is not considered a significant cultural resource.

4 **Twin River**

5 No cultural material was recorded during the pedestrian survey or the shovel testing of the Twin
6 River survey area. Site 41NU231 was not relocated during the survey of the Twin River project
7 area. Though the site is located adjacent to the current project area, the area has undergone
8 development since the recording of the site. As a result, it is possible that development in the
9 area, particularly the construction of the Twin River Boulevard and its associated infrastructure,
10 may have destroyed the site.

12 **3.11.2 Environmental Consequences**

13 **3.11.2.1 No Action Alternative**

14 No impacts to cultural resources are anticipated under the No Action alternative since no
15 construction or ground disturbance would take place.

17 **3.11.2.2 Alternative 1: Clarkwood Site A**

18 No impacts to cultural resources are anticipated with the implementation of Alternative 1. No
19 cultural resources were identified within the construction footprint during the archaeological
20 surveys. As a result, no impacts to cultural resources are anticipated.

22 **3.11.2.3 Alternative 2: Clarkwood Site B (Preferred Alternative)**

23 No cultural resources were identified during the surveys conducted within the construction
24 footprint of Alternative 2. As a result, no impacts to cultural resources are anticipated from the
25 implementation of Alternative 2.

27 **3.11.2.4 Alternative 3: Twin River Site**

28 No cultural resources were identified during the survey of the Twin River Site. Though
29 previously recorded site 41NU231 is located adjacent to the western edge of the project area the
30 site could not be relocated during the current surveys. Given the development in the area since
31 the recording of the site, particularly the construction of Twin River Boulevard along with its
32 associated infrastructure it is probable that the site has been destroyed. As a result, no impacts to
33 cultural resources are anticipated from the implementation of Alternative 3.

35 **3.12 UTILITIES AND INFRASTRUCTURE**

37 **3.12.1 Affected Environment**

38 The City of Corpus Christi provides gas, sewer and potable water services for businesses at the
39 Clarkwood Road and Twin River Boulevard project site and electricity can be purchased at either
40 site from one of several providers including: TXU Energy, Green Mountain Electric Supply, and
41 Reliant Energy. Infrastructure for these utilities services are available immediately adjacent to
42 both of the project sites.

44 The City of Corpus Christi's potable water is withdrawn from the Nueces River and Lake
45 Texana and treated at the O.N. Stevens Water Treatment Plant. The water is then distributed
46 throughout the Corpus Christi metropolitan area via over 1,600 miles of pipeline. The water

1 treatment plant rated capacity is 174 million gallons per day (MGD), which is well above the 110
2 MGD that is considered peak summer demand (Corpus Christi 2010c).

3
4 Wastewater in this portion of Nueces County is treated at the Allison Plant, which has a design
5 capacity of 5.4 MGD. Presently it treats about 3.0 MGD, and the effluent discharged
6 consistently complies with the permitted discharge limits (Lerme 2010).

8 **3.12.2 Environmental Consequences**

9 ***3.12.2.1 No Action Alternative***

10 Presently, the City of Corpus Christi provides gas, sewer and potable water to the existing USBP
11 Station and OFO Seaport office. The No Action Alternative would not increase the use of
12 potable water, electricity or gas nor would it increase the use of the City of Corpus Christi sewer
13 system. Under the No Action Alternative, impacts to utilities and infrastructure in the region
14 would be less than significant.

16 ***3.12.2.2 Alternative 1: Clarkwood Site A***

17 Assuming that the sewer use and average daily consumptive use of potable water per person is
18 50 gallons per day while at work, the addition of 60 to 70 new agents and support staff would
19 increase daily demand of potable water and sewerage in the Corpus Christi area by 3,500 gallons
20 per day and 1.3 million gallons per year. This amount represents a small increase of water
21 (0.003 percent) and sewer (0.07 percent) usage in the area and would not significantly impact the
22 sewer systems and availability of potable water. Construction crews would bring water to the
23 site for personal use and fugitive dust control; portable latrines would collect sanitary waste.
24 Under Alternative 1, the impacts on the local sewer system and supply of potable water would be
25 less than significant.

26
27 The City of Corpus Christi provides natural gas to businesses in the Corpus Christi area. There
28 are a number of oil and gas refineries in the region. Corpus Christi is an energy hub for offshore
29 natural gas supplies which supply fuels to the city and the other parts of the nation. The natural
30 gas use resulting from the implementation of the Proposed Action would represent a small
31 increase in the region and impacts on the availability of natural gas would be less than
32 significant.

33
34 There are eight providers of electrical power in the Corpus Christi area. Green Mountain Energy
35 provides electricity from sources that are renewable and pollution free at competitive rates. Any
36 of the eight companies have enough capacity to service the needs of the new CBP station. Under
37 Alternative 1, impacts on the electrical services in the region should be less than significant.

39 ***3.12.2.3 Alternative 2: Clarkwood Site B (Preferred Alternative)***

40 Under Alternative 2, impacts on utilities and infrastructure would be similar to those described in
41 Alternative 1 and would be less than significant.

43 ***3.12.2.4 Alternative 3: Twin River Site***

44 Under Alternative 3, impacts on utilities and infrastructure would be similar to those described in
45 Alternative 1 and would be less than significant.

1 **3.13 ROADWAYS AND TRAFFIC**

2 3 **3.13.1 Affected Environment**

4 Numerous modes of transportation are available to serve the proposed station including air, rail
5 and highway access. Corpus Christi is a city located about 150 miles south of San Antonio,
6 Texas. The Corpus Christi International Airport is a public-use general aviation airport
7 providing scheduled airline service to Houston and Dallas (Corpus Christi 2010a). The
8 Burlington Northern Santa Fe Railroad, Corpus Christi Terminal Railroad, Kansas City Southern
9 Railway and Union Pacific Railroad all operate freight rail lines in Corpus Christi. Amtrak
10 provides passenger rail service at the San Antonio station on the *Sunset Limited* which travels
11 eastbound to San Antonio and continues to New Orleans, and westbound to El Paso, continuing
12 to Los Angeles. Public transit is available within Corpus Christi and is provided by the Corpus
13 Christi Regional Transit Authority (RTA). The RTA provides public transportation services to
14 the cities of Agua Dulce, Banquete, Bishop, Corpus Christi, Driscoll, Gregory, Port Aransas,
15 Robstown and San Patricio City. In addition to fixed route bus services, RTA provides
16 transportation services to rural communities and operates the Corpus Christi Harbor Ferry
17 (Corpus Christi 2010b).

18
19 Port Corpus Christi is located on the western Gulf of Mexico and is the sixth largest port in the U.S.
20 in total tonnage. The Port provides quick access to the Gulf and the U.S. inland waterway system.
21 The Port delivers access to overland transportation with on-site and direct connections to three Class
22 I railroads and interstate and state highways (Port of Corpus Christi 2010). The primary
23 transportation routes associated with the proposed new station are I-37, SR 44 and FM 2992
24 (Clarkwood Road).

25
26 The Clarkwood Site is located along Agnes Street (one-way street), which is a frontage road of
27 SR 44, and Clarkwood Road (FM 2292). Access to the new station for the Preferred Alternative
28 site would be provided by both Agnes Street and Clarkwood Road under Alternatives 1 and 2
29 and by Clarkwood Road only under Alternative 3. According to TxDOT, 2008 annual average
30 daily traffic (AADT) volume on SR 44 near the proposed Clarkwood Site is approximately
31 26,000 vehicles per day (vpd). The current AADT for Clarkwood Road near the project site is
32 1,500 vpd (TxDOT 2008).

33
34 The Twin River Site is located north of I-37 at the junction of Twin River Boulevard and
35 McKinzie Lane. Access to the new station for the Alternative 4 site would be provided by Twin
36 River Boulevard only. According to TxDOT, 2008 average traffic volume on I-37 near the
37 proposed border station site is approximately 63,000 vpd. The current AADT at the intersection
38 of McKinzie Lane and I-37 access road is 11,800 vpd (TxDOT 2008).

39 40 **3.13.2 Environmental Consequences**

41 **3.13.2.1 No Action Alternative**

42 Under the No Action Alternative, there would be no effect on vehicle traffic at or around the
43 Clarkwood or Twin River Sites. Regional, air and rail service would also be maintained at status
44 quo. Traffic near the existing USBP station on Leopard Drive between the Corpus Christi
45 Airport and I-37 is already affected by the personnel that currently operate out of the facility and
46 no additional agents and staff would be accommodated at the station under the No Action

1 Alternative. Therefore, the No Action Alternative would not significantly affect transportation
2 near the existing USBP station or any of the alternative sites.

3 4 **3.13.2.2 Alternative 1: Clarkwood Site A**

5 Vehicle traffic at the preferred site would be increased by approximately 44 vpd during the
6 construction period, primarily along SR 44 and Clarkwood Road. This increase in daily traffic
7 volume would consist of four heavy-duty delivery trucks and approximately 40 construction
8 personnel passenger vehicles. During project construction, the delivery of materials and
9 equipment could cause additional delays along the affected segment of SR 44 and Clarkwood
10 Road. Construction activities could cause a minimal increase in traffic along the existing SR 44
11 and Clarkwood Road as a result of ingress and egress by equipment and the delivery of
12 construction materials. Although additional construction traffic would impair traffic flow on this
13 segment of SR 44 and Clarkwood Road, these impacts would be temporary and, therefore, not
14 significant.

15
16 Operation of the proposed new station and checkpoint would also create occasional moderate
17 increases on those same streets. Up to 130 additional vehicles would be expected as a result of
18 the additional staff and agents commuting to and from the new station. Peak hour volumes
19 would increase by up to 58 vehicles as a result of one muster arriving at the station
20 simultaneously. This relatively low number of vehicles represents a 0.2 percent addition to the
21 traffic volume on SR 44 in this area and possible 3.9 percent increase on Clarkwood Road and/or
22 Agnes Street, depending on which access driveway is used. The proposed station located at
23 Clarkwood Site A would result in less than significant impacts on local traffic. Construction and
24 operation of the proposed station would result in minimal impacts on the traffic around the
25 Clarkwood Site.

26 27 **3.13.2.3 Alternative 2: Clarkwood Site B (Preferred Alternative)**

28 The construction and operation of the proposed new station at Clarkwood Site B would result in
29 similar impacts as described above for the Preferred Alternative since they are located at the
30 same site. Daily full-time employee commute of an additional 58 vehicles represents a 0.2
31 percent increase on SH 44 and possible 3.9 percent increase on Clarkwood Road and/or Agnes
32 Street depending on which access driveway is used. Construction and operation of the proposed
33 station would result in minimal impacts on the traffic around Alternative Site 2.

34 35 **3.13.2.4 Alternative 3: Twin River Site**

36 The construction and operation of the proposed new station at the Twin River Site would result
37 in less than significant impacts. Daily full-time employee commute of an additional 58 vehicles
38 represents a 0.009 percent increase on I-37 and possible 0.5 percent increase on McKinzie Lane
39 near I-37. Impacts to traffic on Twin River Boulevard are expected to be minimal since there
40 will be two entrance points to the new station on Twin River Boulevard. A new off ramp from
41 the southbound lanes of I-37 is under construction near the site and the northern portion of the
42 site is being temporarily used by TxDOT as a construction staging area. There is a possibility
43 that this road construction may have an impact on the traffic around the Twin River Site;
44 however, it would be temporary until the road construction is complete. Construction and
45 operation of the proposed station would result in minimal impacts on the traffic under
46 Alternative 3.

1 **3.14 AESTHETICS**

2 3 **3.14.1 Affected Environment**

4 The Clarkwood Site is bordered to the north by SR 44 and to the east by Clarkwood Road. The
5 site is currently being farmed and agricultural fields line the site on the western and southern
6 sides. Because of past and present agricultural practices, few aesthetic or visual qualities
7 currently exist on-site. In addition, there are residences and a Shell gas station located adjacent
8 to the site that further degrades the aesthetic qualities of the site.

9
10 The Twin River Site is located bordered by I-37 access road to the south, Twin River Boulevard
11 to the west, and McKinzie Lane to the north. A narrow band of trees lines the eastern edge of the
12 site. Because the site is located on previously disturbed land in a business park, the aesthetic and
13 visual qualities has already been degraded. Commercial businesses and multi-family apartment
14 near the site, as well as I-37, have greatly reduced the natural aesthetics of the site.

15 16 **3.14.2 Environmental Consequences**

17 ***3.14.2.1 No Action Alternative***

18 The No Action Alternative would preclude the construction, operation, and maintenance of a
19 new station, and aesthetic and visual resources would remain unchanged.

20 21 ***3.14.2.2 Alternative 1: Clarkwood Site A***

22 Construction of the site would convert approximately 24 acres of agricultural land to an USBP
23 facility. Currently, in the vicinity of this site, there are few existing aesthetic and visual
24 resources, as there are agricultural fields and residential properties. The conversion of the site
25 from agricultural to CBP use would have a minimal impact on aesthetic resources, but would not
26 substantially degrade the existing visual character of the region; thus the impacts are considered
27 insignificant.

28 29 ***3.14.2.3 Alternative 2: Clarkwood Site B (Preferred Alternative)***

30 The impacts on aesthetics and visual resources to Alternative 2 would be similar to those listed in
31 Alternative 1.

32 33 ***3.14.2.4 Alternative 3: Twin River Site***

34 The development of the Twin River Site would change the local aesthetics from previously
35 disturbed land in a business park into developed buildings and associated facilities. As the
36 immediate area of the site is already developed with commercial businesses and residences, the
37 new structures would not significantly detract from the current aesthetics. Thus, the impacts on
38 visual resources would be insignificant.

39 40 **3.15 HAZARDOUS MATERIALS AND SUBSTANCES**

41 42 **3.15.1 Affected Environment**

43 Hazardous materials and substances are regulated in Texas by a combination of mandated laws
44 promulgated by the USEPA and the TCEQ. A Phase I Environmental Site Assessment was
45 conducted for the alternative project sites in accordance with the American Society for Testing
46 and Materials International standard E1527-05 (CBP 2010). This assessment included a search

1 of federal and state records of known hazardous waste sites, potential hazardous waste sites, and
2 remedial activities, including sites that are on the National Priorities List or being considered for
3 the list. No evidence of hazardous materials or recognized environmental conditions was
4 detected at the project sites (CBP 2010).

5
6 The Clarkwood Site contained a plugged and abandoned oil and gas well on the property that
7 would pose no environmental risk if plugged property according to the Texas Railroad
8 Commission regulations. Scattered non-hazardous trash and debris was also present in the small
9 wooded patch at the south end of the Clarkwood Site. This debris would require proper disposal
10 if that area were used. Due to past and present cultivation of row crops on the Clarkwood Site,
11 there may be soil residues of pesticides and herbicides applied as normal agricultural practices.
12 No residues in excess of standard non-hazardous levels would be expected, since use of
13 herbicides and pesticides on the property was reported to be within normal agricultural practices
14 and no past spills were reported.

15 16 **3.15.2 Environmental Consequences**

17 ***3.15.2.1 No Action Alternative***

18 Under the No Action Alternative, a minimal increase in the potential for impacts regarding
19 hazardous waste could occur as the current station's staffing level increases. However, the same
20 BMPs used presently would continue to be implemented; therefore, no significant impacts would
21 be expected.

22 23 ***3.15.2.2 Alternative 1: Clarkwood Site A***

24 All hazardous and regulated wastes and substances generated by operation of the new CBP
25 station would be collected, characterized, labeled, stored, transported, and disposed of in
26 accordance with all Federal, state, and local regulations, including proper waste manifesting
27 procedures. All other hazardous and regulated materials or substances would be handled
28 according to materials safety data sheet instructions and would not affect water, soils, vegetation,
29 wildlife, or the safety of USBP/OFO agents and staff. The ASTs installed at the new station
30 would be installed within containment berms and double-walled to prevent the release of any
31 tank spills into the environment. The vehicle maintenance facility would be equipped with
32 oil/water separators to collect any petroleum or other automotive fluids spilled, and waste
33 automotive fluids would be collected and disposed of in accordance with state regulations.
34 Therefore, hazardous and regulated materials and substances would not impact the public or the
35 environment. The potential impacts of the handling and disposal of hazardous and regulated
36 materials and substances during construction would be insignificant when BMPs as described in
37 Section 5 are implemented.

38 39 ***3.15.2.3 Alternative 2: Clarkwood Site B (Preferred Alternative)***

40 The impacts relative to hazardous materials and substances under Alternative 2 would be similar
41 to those described for Alternative 1.

42 43 ***3.15.2.4 Alternative 3: Twin River Site***

44 The construction and operational impacts under this alternative would be similar to those
45 discussed for Alternative 1. However, no wells or trash issues would need to be addressed.

1 3.16 SOCIOECONOMICS

2 3.16.1 Affected Environment

3 3.16.1.1 Population and Demographics

4 According to the 2009 U.S. Census Bureau estimates, a total of 323,486 people live in Nueces
 5 County, which represents a 3 percent increase from the 2000 population. The City of Corpus
 6 Christi is the largest city in the county, with a 2006 estimated population of 285,267 (U.S.
 7 Census Bureau 2010). The racial mix of Nueces County consists predominantly of Caucasians
 8 (Table 3-7). The remainder is divided among African Americans, Native Americans, Asians,
 9 and people claiming to be some other race or two or more races (U.S. Census Bureau 2010).
 10 Nueces County has a significant portion of the population (59.5 percent) that claims Hispanic or
 11 Latino origins (U.S. Census Bureau 2010).
 12

13
 14 **Table 3-7. Population and Race***

Geographic Region	Total Population (est. 2009)	Race						
		White (%)	African American (%)	Native American (%)	Asian (%)	Native Hawaiian or other Pacific Islander (%)	Two or more Races (%)	Hispanic or Latino Origin of any Race (%)
Texas	24,782,302	82.4	11.9	0.8	3.5	0.1	1.3	36.5
Nueces County	323,046	83	4.4	0.9	1.4	0.1	1.3	59.5

15 Source: U.S. Census Bureau 2010

16 3.16.1.2 Employment, Income, and Poverty Levels

17 The total number of jobs in Nueces County in 2008 was 247,857, an increase of 16 percent over
 18 the 1998 number of jobs of 213,731 (Bureau of Economic Analysis 2010). The private sector
 19 provided the most jobs (83 percent), followed by government (16 percent) and farms (18
 20 percent). Within the private sector health care and social assistance enterprises were the leading
 21 employee, followed closely by retail sales.
 22

23 In 2007, Nueces County had a per capita personal income (PCPI) of \$36,318 (Bureau of
 24 Economic Analysis 2010). The Nueces County PCPI ranked 58th of 254 counties in the State of
 25 Texas, and was 96 percent of the state average of \$37,809, and 90 percent of the National
 26 average of \$40,166. The average annual growth rate of Nueces County's PCPI from 1998 to
 27 2008 was 5.0 percent. This average annual growth rate was higher than the growth rate for the
 28 state (4.1 percent) and the Nation (4.0 percent). In 2008, Nueces County had a total personal
 29 income (TPI) of \$11.6 billion. The Nueces County TPI ranked 14th in the state and accounted for
 30 1.3 percent of the state total. The 2008 Nueces County TPI reflected an increase of 5.2 percent
 31 from 2007, which was higher than the 2007-2008 State of Texas change of 4.6 percent and
 32 higher than the National change of 2.9 percent.
 33

34 3.16.2 Environmental Consequences

35 3.16.2.1 No Action Alternative

36 Under the No Action Alternative, no construction of the new station would occur; however, the
 37 increase in agents assigned to the Corpus Christi Station and OFO Seaport Office would still
 38

1 occur, which would result in an increase in the local PCPI and TPI in Nueces County. However,
 2 the total goal of 130 agents and support staff might not be achievable since the existing facilities
 3 are not adequate to accommodate these staffing levels. The potential for construction jobs and
 4 income associated with the construction would be lost.

6 **3.16.2.2 Alternative 1: Clarkwood Site A**

7 The station and collocated OFO facility would increase to 130 people, including agents and
 8 support staff. Currently, USBP/OFO agents live in Corpus Christi area. The increase in staff
 9 would only be a minimal effect on the socioeconomic structure of Nueces County, including
 10 PCPI and TPI, and would not be substantially different from the No Action Alternative.

11
 12 When possible, materials and other project expenditures would predominantly be obtained
 13 through merchants in the local community resulting in minor, temporary, direct economic
 14 benefits. No displacement of residential or commercial properties would result from this action
 15 and, therefore, there would be no direct impacts on housing or employment in the area during
 16 construction. Minor changes to local employment rates, poverty levels, or local incomes would
 17 occur as a result of this project, as the agents and family members enter the work force, children
 18 of agents attend local schools and agents and their families spend their income locally.

20 **3.16.2.3 Alternative 2: Clarkwood Site B (Preferred Alternative)**

21 The same impacts as those discussed for Alternative 1 would occur if this alternative were
 22 implemented.

24 **3.16.2.4 Alternative 3: Twin River Site**

25 The same impacts as those discussed for Alternative 1 would occur if this alternative were
 26 implemented.

28 **3.17 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN**

30 **3.17.1 Executive Order 12898, Environmental Justice**

31 The fair treatment of all races has been assuming an increasingly prominent role in
 32 environmental legislation and implementation of environmental statutes. In February 1994,
 33 President Clinton signed EO 12898 titled, *Federal Actions to Address Environmental Justice in*
 34 *Minority Populations and Low-Income Populations*. This action requires all Federal agencies to
 35 identify and address disproportionately high and adverse effect of its programs, policies, and
 36 activities on minority and low-income populations. Nueces County has a large proportion of
 37 their population claiming to be of Hispanic or Latino origin (see Table 3-7). Furthermore,
 38 Nueces County is below both the National and state median household income and has a greater
 39 percentage of their population in poverty relative to the state. As a result, there is a potential for
 40 CBP projects in Nueces County to encounter both minority and low-income populations, and,
 41 thus, a potential for environmental justice issues.

43 **3.17.2 Executive Order 13045, Protection of Children**

44 EO 13045 requires each Federal agency “to identify and assess environmental health risks and
 45 safety risks that may disproportionately affect children”; and “ensure that its policies, programs,
 46 activities, and standards address disproportionate risks to children that result from environmental

1 health risks or safety risks.” This EO was prompted by the recognition that children, still
 2 undergoing physiological growth and development, are more sensitive to adverse environmental
 3 health and safety risks than adults. In Nueces County, 26.9 percent of the population are
 4 children under the age of 18 (U.S. Census Bureau 2010). The percentage of children under 18 in
 5 the State of Texas is 27.6 percent. The potential for impacts on the health and safety of children
 6 is greater where projects are located near residential or recreational areas.

8 **3.17.3 Affected Environment**

9 Both of the alternative sites occur in a rural area. Six single family residences occur near the
 10 northeastern corner of the Clarkwood Site. A multi-family apartment complex is located
 11 approximately 370 feet west of the Twin River Site.

13 **3.17.4 Environmental Consequences**

14 ***3.17.4.1 No Action Alternative***

15 Under the No Action Alternative, the USBP and OFO agents would continue to work out of their
 16 current offices. No adverse effects on low-income or minority population or children would be
 17 expected under this alternative.

19 ***3.17.4.2 Alternative 1: Clarkwood Site***

20 Construction and operation of the proposed station at the Preferred Alternative site would not
 21 affect minority populations or children, as these groups do not generally occur in the vicinity of
 22 the project area. The construction zone would be fenced to ensure that persons residing in the six
 23 residences do not enter the sites. The proposed construction would temporarily disturb the
 24 occupants of the six homes. The operation of the new facility would increase traffic on Agnes
 25 Street and Clarkwood Road and thus increase the potential to affect children who might live in
 26 those homes.

28 ***3.17.4.3 Alternative 2: Clarkwood Site B A (Preferred Alternative)***

29 Construction and operation of the proposed station at the Alternative 2 site would result in the
 30 same effects as described for Alternative 1.

32 ***3.17.4.4 Alternative 3: Twin River***

33 Construction and operation of the proposed station at the Twin River Site would have similar
 34 temporary effects as described for Alternative 1. However, the potential to adversely affect
 35 children is likely to be higher at this site due to the presence of the apartment complex. No
 36 displacements would occur under this alternative.

38 **3.18 HUMAN HEALTH AND SAFETY**

40 **3.18.1 Affected Environment**

41 Human health effects occur in a variety of forms, such as exposure to chemical, extreme
 42 temperatures, weather, and physical security and safety. Generally, human health factors are
 43 driven by factors that differ substantially by geographic area. In the Corpus Christi area, factors
 44 that could impact human health range from automobile accidents, extreme weather such as
 45 thunderstorms with lightning, hurricanes, high temperatures and physical security on the site as

1 well as minimizing the chance that non-site workers could venture on the project site and be
2 harmed.

3
4 There are no permanent improvements or structures at the Clarkwood Site, but there is a new
5 Shell gas station on the corner of SH-44 and South Clarkwood Road, which was built in 2009.
6 The general area surrounding the project corridor consists of mixed commercial, agricultural and
7 residential developed property along SH-44 and Clarkwood Road. There is a wooded area at the
8 south end of the subject property parcel that contains numerous debris piles, old farm equipment
9 and scattered trash. The subject property is undeveloped vacant property used for agriculture.

10
11 The area surrounding the Twin River Site consists of mixed commercial and residential
12 developed property along I-37 and adjacent feeder roads and service roads. The nearest
13 commercial development is located along Twin River Boulevard across from the proposed Twin
14 River Site. The commercial development consists of various office buildings and an apartment
15 complex. There are several former baseball diamonds on the property with chain link backstops.
16 Currently, construction of a new exit ramp on I-37 is underway for Carbon Plant Road. The
17 proposed project site is bounded on the east side by vacant land and a regional drainage creek.
18 McKinzie Lane is paved along the north boundary of the subject property with vacant land to the
19 north, and I-37 and the service road runs along the south boundary.

20 21 **3.18.2 Environmental Consequences**

22 ***3.18.2.1 No Action Alternative***

23 Under the No Action Alternative no construction would occur; therefore, there would be no
24 impacts, either beneficial or adverse, on human health and safety issues.

25 26 ***3.18.2.2 Alternative 1: Clarkwood Site A***

27 The construction of the Preferred Alternative has the potential to create human health hazards.
28 All construction activities, regardless of the area, would be limited to daylight hours only. Safety
29 buffer zones would be designated around all construction sites to ensure public health and safety.
30 Through BMPs developed for general construction practices (see Section 5.1), and because of
31 the rural nature of the project area with no residences located within the project footprint, no
32 significant, long-term, adverse impacts are expected.

33
34 In compliance with Occupational, Safety and Health Administration (OSHA) regulations, there
35 would be a Right-to Know station located in a high-visibility area, where chemical data are
36 accessible by construction and CBP personnel. Material Safety Data Sheets (MSDS)
37 information would be readily accessible at this station. As mentioned previously, a SPPCCP
38 would also be implemented that describes planning, prevention and control measures to
39 minimize impacts resulting from a spill of any hazardous materials or petroleum, oils, and
40 lubricants (POLs). Furthermore, an on-site emergency plan would be prepared to protect the
41 public health, safety and environment on and off the proposed site in the case of a dangerous
42 natural phenomenon or industrial accident relating to or affecting the project.

43
44 CBP would prepare the emergency plan and be responsible for implementing the plan with its
45 operations team in coordination with the local emergency response support functions. The plans
46 would describe the emergency response procedures to be implemented during various situations

1 that might affect the surrounding community or environment. The emergency plan would cover
 2 a number of events that may occur at or near the project site by natural causes, equipment failure
 3 or by human mistake. Events that would be covered by the emergency plans should include:

- 4
- 5 • Personnel injury;
- 6 • Construction emergencies;
- 7 • Project evacuation;
- 8 • Fire or explosion; and
- 9 • Extreme weather.

10
 11 The project contractors and operation personnel would receive regular emergency response and
 12 safety training to assure that effective and safe action would be taken to reduce and limit the
 13 impact of an emergency at the project site. The following actions would be taken for personnel
 14 injuries:

- 15
- 16 • The Site Construction Manager(s), Supervisors, or designee, would be notified of the
- 17 injury(s);
- 18 • A qualified first aid attendant would administer first aid until medical assistance arrives;
- 19 • The Site Construction Manager(s), Supervisors, or designee, would notify CBP and the
- 20 county-wide emergency response (911) system;
- 21 • All key supervisors would be paged or called and advised of the injury;
- 22

23 The increase of automobile traffic associated with the implementation of the Preferred
 24 Alternative has the potential to raise the risks of automobile accidents. According to TxDOT, in
 25 2008 the AADT volume on SR 44 and Clarkwood Road was approximately 26,000 vpd and
 26 1,500 vpd, respectively (TxDOT 2008). The increase of traffic associated with the Preferred
 27 Alternative is well below the capacity of local roads. Therefore, the impacts on human health
 28 and safety relative to transportation would be less than significant.

30 **3.18.2.3 Alternative 2: Clarkwood Site B (Preferred Alternative)**

31 The impacts relative to human health and safety under Alternative 2 would be similar to those
 32 described for Alternative 1.

34 **3.18.2.4 Alternative 3: Twin River Site**

35 Under Alternative 3, impacts on human health and safety would be similar to those described
 36 under Alternative 1. All OSHA standards and safety plans would be adhered to; therefore, no
 37 significant or long-term impacts would be expected. Impacts on traffic on Twin River Boulevard
 38 are expected to be minimal since there would be two entrance points to the new station on Twin
 39 River Boulevard. A new off ramp from the southbound lanes of I-37 is under construction near
 40 the site and the northern portion of the site is being temporarily used by TxDOT as a temporary
 41 construction staging area. There is a possibility that this road construction may have an impact
 42 on the traffic around the Twin River Site; however, it would be temporary until the road
 43 construction is complete. Construction and operation of the Twin River station would result in
 44 minimal impacts on the traffic under Alternative 3 and impacts on human health and safety
 45 would be less than significant.

1 **3.19 SUSTAINABILITY AND GREENING**

2 3 **3.19.1 Affected Environment**

4 In accordance with EO 13423, Strengthening Federal Environmental, Energy, and Transportation
5 Management (72 FR 3919), CBP would incorporate practices in an environmentally,
6 economically, and fiscally sound, integrated, continuously improving, efficient and sustainable
7 manner in support of their mission. CBP implements practices throughout the agency to: 1)
8 improve energy efficiency and reduce greenhouse emissions, 2) implement renewable energy
9 projects, 3) reduce water consumption, 4) incorporate sustainable environmental practices such
10 as recycling and the purchase of recycled-content products, and 5) reduce the quantity of toxic
11 and hazardous materials used and disposed of by the agency. DHS would also reduce total
12 consumption of petroleum products as set forth in the EO and use environmentally sound
13 practices with respect to the purchase and disposition of electronic equipment.
14

15 **3.19.2 Environmental Consequences**

16 ***3.19.2.1 No Action Alternative***

17 Under the No Action Alternative, the new station would not be built and the BP agents would
18 continue to use the existing building to run operations. The current building is over 30 years old
19 without many of the modern energy saving technologies developed of the last three decades.
20 The effects on sustainability and greening would not improve and would be less than significant.
21

22 ***3.19.2.2 Alternative 1: Clarkwood Site A***

23 The new station would be designed to qualify for LEED Silver certification by the U.S. Green
24 Building Council. These design criteria require pollution prevention of construction activities,
25 use of low emission and fuel-efficient vehicles or use of alternative fuels, reduction of light
26 pollution and the heat island effect (thermal gradient differences between developed and
27 undeveloped areas), use of water efficient landscaping, reduced generation of waste water and
28 reduction of demand on drinking water, optimization of energy use, management of refrigerants,
29 storage and collection of recyclables, construction waste management, and other measures to
30 ensure sustainable growth.
31

32 CBP would incorporate sustainability and greening practices in daily operations through cost-
33 effective waste reduction, recycling of reusable materials, and purchase of items produced using
34 recovered materials. CBP intends to obtain the goal of reducing petroleum-based product use
35 with a Fleet Management Plan facilitated through CBP's Asset Management Division. The
36 operation of the Corpus Christi Station would adhere to this management plan. Under
37 Alternative 1, CBP would improve sustainability and greening and impacts on these resources
38 would be less than significant.
39

40 ***3.19.2.3 Alternative 2: Clarkwood Site B (Preferred Alternative)***

41 Under Alternative 2, the impacts on sustainability and greening would be similar to those
42 described in Alternative 1 and would be less than significant.
43

44 ***3.19.2.4 Alternative 3: Twin River Site***

45 Under Alternative 3, the impacts on sustainability and greening would be similar to those
46 described in Alternative 1 and would be less than significant.

SECTION 4.0
CUMULATIVE IMPACTS



4.0 CUMULATIVE IMPACTS

This section of the EA addresses the potential cumulative impacts associated with the implementation of the alternatives and other projects/programs that are planned for the region. The CEQ defines cumulative impacts as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7). This section continues, “Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”

USBP has been conducting law enforcement actions along the border since its inception in 1924, and has continuously transformed its methods as new missions; illegal alien (IA) modes of operations, agent needs and national enforcement strategies have evolved. Development and maintenance of training ranges, station and sector facilities, detention facilities, and roads and fences have impacted thousands of acres with synergistic and cumulative impacts on soil, wildlife habitats, water quality, and noise. Beneficial effects, too, have resulted from the construction and use of these facilities including, but not limited to, increased employment and income for border regions and its surrounding communities; protection and enhancement of sensitive resources north of the border; reduction in crime within urban areas in the border region; increased land value in areas where border security has increased; and increased knowledge of the biological communities and pre-history of the region through numerous biological and cultural resources surveys and studies.

With continued funding and implementation of CBP’s environmental conservation measures, including use of biological and archaeological monitors, wildlife water systems, and restoration activities, adverse impacts due to future and on-going projects would be avoided or minimized. However, recent, on-going and reasonably foreseeable proposed projects would result in cumulative impacts. CBP is currently planning to construct another new USBP station in the Kingsville, Texas area. That station would be designed to accommodate up to 350 agents and staff and provide a regional vehicle maintenance facility. Construction of this station would require approximately 50 acres; however, the sites that are being considered are all disturbed (agricultural) sites.

Nueces County does not have any current projects near the Twin River or Clarkwood Road sites. The City of Corpus Christi has a 10-year plan which includes Capital Improvement Program (CIP) projects valued at over \$200 million for fiscal year 2010. Subsequent years are planned at similar funding levels. The CIP projects include improvements to the Corpus Christi International Airport, streets, water and wastewater treatment plants and distribution lines, and parks and recreation. Some of the latter projects included acquisition of additional land for the preservation and enhancement of green space.

TxDOT has several projects occurring in Nueces County; however, only a few may potentially impact the project area. These include:

- Installing and upgrading safety barriers on SR 44 from International Boulevard to 0.076 mile west of SR 358.

- 1 • Installing and upgrading roadway lighting on SR 44 at intersection of SR 44 and FM 24.
- 2 • Constructing frontage roads on I-37 from 0.25 mile east of Carbon Plant Road to
- 3 McKinzie Lane.
- 4 • Replacing bridge on County Road from SR 1 Kingsbury Drive to 0.3 mile east of
- 5 McKinzie Lane.
- 6 • Resurfacing roadway on FM 24 from I-37 to South of Starlight Lane.
- 7 • Resurfacing roadway on FM 386 from I-37 to end of 5 lane section.
- 8

9 All of the above TxDOT projects will have short-term impacts during construction.

10
11 A summary of the anticipated cumulative impacts relative to the Proposed Action Alternative is
12 presented below. These discussions are presented for each of the resources described previously.

13 14 **4.1 LAND USE**

15
16 A significant impact would occur if any action is inconsistent with adopted land use plans or an
17 action would substantially alter those resources required for, supporting, or benefiting the current
18 use. All four alternative sites are currently undeveloped sites located on agricultural or fallow
19 land. Corpus Christi is experiencing population and metropolitan growth. However, most of this
20 growth is occurring near the downtown area and not in the vicinity of the alternative sites. Other
21 parcels in the vicinity of the alternative sites have the potential for future public or private
22 development. The construction and operation of a new station would not initiate an increase of
23 development in the immediate vicinity, but would be part of the growth in the Corpus Christi
24 area. Therefore, the construction of the new station would not be expected to result in a
25 significant cumulative adverse effect.

26 27 **4.2 SOILS**

28
29 A significant impact would occur if the action exacerbates or promotes long-term erosion, if the
30 soils are inappropriate for the proposed construction and would create a risk to life or property,
31 or if there would be a substantial reduction in agricultural production or loss of Prime Farmland
32 soils. The proposed action and other CBP actions have not substantially reduced agricultural
33 production regionally. The projects under consideration for the Corpus Christi and Kingsville
34 area are planned for agricultural areas or areas where soils have already been disturbed.
35 Construction plans would include SWPPP which implement soil erosion measures. The impact
36 from the construction of the new station, when combined with past and proposed projects in the
37 region, would not be considered a significant cumulative adverse effect.

38 39 **4.3 VEGETATION**

40
41 The significance threshold for vegetation would include a substantial reduction in ecological
42 process, communities, or populations that would threaten the long-term viability of a species or
43 result in the substantial loss of a sensitive community that could not be off-set or otherwise
44 compensated. Much of the land use in the region of proposed action is composed of agriculture
45 where natural vegetation has already been removed or disturbed. Most of the land use in the
46 region would continue to be used to grow row crops, even with the new USBP/OFO station and

1 other development projects. Therefore, this proposed action in conjunction with other regionally
2 proposed projects, does not create a substantial cumulative effect on vegetative habitat in the
3 region.

4 **4.4 WILDLIFE RESOURCES**

6
7 The significance threshold for wildlife and aquatic resources would include a substantial
8 reduction in ecological process, communities, or populations that would threaten the long-term
9 viability of a species or result in the substantial loss of a sensitive community that could not be
10 off-set or otherwise compensated. As discussed for vegetative habitat, many of the projects
11 under consideration in the Corpus Christi area are planned in developed urban areas or
12 agricultural areas where wildlife habitat has already been removed or disturbed. Most of the land
13 use in the region is agriculture and would continue that way, even with the new USBP station
14 and other development projects. Therefore, this proposed project in conjunction with other
15 regionally proposed projects does not create a substantial cumulative effect on wildlife habitat in
16 the region.

17 **4.5 THREATENED AND ENDANGERED SPECIES**

18
19
20 A significant impact on threatened and endangered species would occur if any action resulted in
21 a jeopardy opinion for any endangered, threatened, or rare species. The Proposed Action would
22 not have an effect on protected species, nor would any of the other planned projects in the
23 region; therefore, no cumulative impacts would occur.

24 **4.6 SURFACE WATERS AND WATERS OF THE U.S.**

25
26
27 The significance threshold for surface water and Waters of the U.S. (WUS) include any action
28 that substantially depletes surface water supplies, substantially alters drainage patterns, or results
29 in the loss of WUS that cannot be compensated. No impact on surface water resources or WUS
30 would occur as a result of the construction and operation of the proposed station, as none exist
31 within the site boundaries. Further, the required SWPPP and BMPs would reduce erosion and
32 sedimentation during construction to negligible levels and eliminate post-construction erosion
33 and sedimentation from the site. By implementing these measures, no off-site WUS would be
34 adversely impacted. The same measures would be implemented for other federal and non-
35 federal construction projects; therefore, cumulative impacts would not be significant.

36 **4.7 FLOODPLAINS**

37
38
39 Federal and local laws governing floodplains limit development within the 100-year floodplain.
40 The Preferred Alternative would impact approximately 10 acres within the 100-year floodplain.
41 Other developments such as the construction of the Shell gasoline station at the Clarkwood Site
42 have also likely affected the 100-year floodplain. As the City of Corpus Christi continues to
43 grow, other demands on the 100-year floodplain are expected to increase. Measures to reduce
44 these effects, such as the detention basin planned for the station, would be implemented to
45 reduce these adverse cumulative effects.

1 **4.8 AIR QUALITY**

2
3 Impacts on air quality would be considered significant if the action results in a violation of air
4 quality standards, obstructs implementation of an air quality plan, or exposes sensitive receptors
5 to substantial pollutant concentrations. The emissions generated during the construction of the
6 new USBP station would be short-term and minor. An increase in vehicular traffic to the new
7 station locale would result in cumulative impacts on the region's airshed; and these impacts
8 would not be considered significant, even when combined with the other proposed developments
9 in the Corpus Christi area, because the semi-rural location of the new station would allow for
10 vehicle emissions to dissipate.

11 12 **4.9 NOISE**

13
14 Actions would be considered to cause significant impacts if they permanently increase ambient
15 noise levels over 65 dBA. Most of the noise generated by the proposed action would occur
16 during construction and, thus, would not contribute to cumulative impacts on ambient noise
17 levels. Operation activities at the new station would create a minor increase in ambient noise
18 levels; however, potential sources of noise from daily operations are not enough (temporal or
19 spatial) to increase ambient noise levels above the 65 dBA range at the proposed sites. Thus, the
20 noise generated by the construction and operation of the new station, when considered with the
21 other existing and proposed projects in the region, would not be considered a significant
22 cumulative adverse effect.

23 24 **4.10 CULTURAL RESOURCES**

25
26 The proposed action at the Preferred Alternative site would have no effect on cultural resources.
27 As discussed above, many of the projects under consideration in the Corpus Christi area are
28 planned in developed and agricultural areas or areas where cultural resource have already been
29 avoided, or disturbed and mitigated. Therefore, this action, when combined with other existing
30 and proposed projects in the region, would not result in significant cumulative impacts on
31 historical properties.

32 33 **4.11 UTILITIES AND INFRASTRUCTURE**

34
35 Actions would be considered to cause significant impacts if they require greater utilities or
36 infrastructure use than can be provided. The parcels in the vicinity of the alternative sites have
37 the potential for future public or private development, but have been zoned for this development
38 and are within the service area of the public utilities. The Corpus Christi area is prepared for an
39 increased demand in utilities anticipated with urban growth. Operation of the new station, in
40 conjunction with current public use and proposed urban growth, would require utilities and
41 infrastructure anticipated for the City of Corpus Christi; and therefore, would not be considered a
42 significant cumulative adverse effect.

1 **4.12 ROADWAYS AND TRAFFIC**

2
3 Impacts on traffic or roadways would be considered to cause significant impacts if the increase
4 of traffic exceeded the ability for the surface streets to offer a suitable level of service for the
5 area. The construction of the new station, and other construction projects proposed for the
6 Corpus Christi area, would require a temporary increase of large construction equipment
7 transportation in the vicinity of alternative sites. An increase of vehicles from the daily
8 operations of the new station would occur; however, the new station would have the USBP
9 agents on a 3-shift rotation. Additional vehicular use by USBP agents and any additional
10 commercial use that may occur in the future would not greatly increase the traffic for this area.
11 The overall number of vehicles on the roadway at or near the new station would be modified by
12 this, and only at shift changes would vehicle use be at its highest.

13 14 **4.13 AESTHETICS AND VISUAL RESOURCES**

15
16 Actions that cause the permanent loss of the characteristics that make an area visually unique or
17 sensitive would be considered to cause a significant impact. No major impacts on visual
18 resources would occur from constructing a new station, due in part to the existing commercial
19 buildings in the vicinity of the proposed action and alternate sites. Other TXDOT construction
20 activities in the vicinity would contribute to temporary adverse effects on the region's aesthetics
21 and visual resources, provided the construction of the proposed station would coincide with
22 TXDOT's construction schedule. However, the proposed action, in combination with these and
23 other projects proposed in the region, would not have a significant cumulative impact on visual
24 resources.

25 26 **4.14 HAZARDOUS MATERIALS**

27
28 Significant impacts would occur if an action creates a public hazard, the site is considered a
29 hazardous waste site that poses health risks, or if the action would impair the implementation of
30 an adopted emergency response or evacuation plan. Only minor increases in the use of
31 hazardous substances (e.g., POL) would occur as a result of the construction and maintenance of
32 the USBP station. BMPs would be implemented to minimize the risk from hazardous materials
33 during construction and daily operations at the new station. No health or safety risks would be
34 created by the Proposed Action. The effects of this Proposed Action, when combined with other
35 on-going and proposed projects in the region, would not be considered a significant cumulative
36 effect.

37 38 **4.15 SOCIOECONOMICS**

39
40 Significance threshold for socioeconomic conditions includes displacement or relocation of
41 residences or commercial buildings and increases in long-term demands for public services in
42 excess of existing and projected capacities. Construction of the new station would result in
43 temporary cumulative beneficial impacts on the region's economy from an increase in the hiring
44 of local workers for construction projects and other related activities. The addition of
45 USBP/OFO agents would also be a cumulative beneficial effect on the overall economic stability
46 of the Corpus Christi area, as agents and their families would purchase houses and other goods

1 and services locally. The anticipated urban growth of the City of Corpus Christi would also be a
2 beneficial effect for the community with an increase in jobs and services to the area. No adverse
3 impacts on the socioeconomics of the region would occur. These effects, when combined with
4 the other currently proposed or on-going projects within the region, would not be considered as
5 significant cumulative impacts.

6 7 **4.16 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN**

8
9 Most of the CBP's proposed projects occur in areas that are not residential. The cumulative
10 effect on minority populations and children from USBP activities would be beneficial to
11 minority populations and children. The increasing agent force in the Laredo Sector would
12 reduce illegal activities, such as smuggling of drugs and contraband, and increase the security of
13 the local communities. These effects, when combined with the other currently proposed or on-
14 going projects within the region, would not be considered as significant cumulative impacts.

15 16 **4.17 SUSTAINABILITY AND GREENING**

17
18 CBP would implement the Federal sustainability and greening practices to the greatest extent
19 practicable as part of the Proposed Action. Cost-effective waste reduction and recycling of
20 reusable materials would be implemented as part of the project. Implementation of the Federal
21 sustainability and greening practices would have a cumulative beneficial impact on the
22 environment.

23 24 **4.18 HUMAN HEALTH AND SAFETY**

25
26 Most of the CBP's proposed projects occur in areas that are not residential, often in rugged and
27 rough terrain. Typically, CBP construction activities are completed by National Guard Units,
28 USBP agents, or private contractors, who are all well trained and cognizant of all required safety
29 measures. The proposed construction of the new station would be provided by private
30 contractors, who would be required to comply with all appropriate OSHA and other safety laws
31 and regulations. The land at either site is generally flat and no physical features are present that
32 would make the sites more prone to health and safety issues. The overall increase in vehicular
33 traffic to the area from the operation of the new USBP station, in conjunction with normal traffic,
34 would not create a significant cumulative effect on health and human safety due to the remote
35 locations.

SECTION 5.0
MITIGATION MEASURES



5.0 MITIGATION MEASURES

This chapter describes those measures that would be implemented to reduce or eliminate potential adverse impacts on the human and natural environment. Many of these measures have been incorporated as standard operating procedures by CBP on past projects. Environmental design measures will be presented for each resource category that would be potentially affected. It should be emphasized that these are general mitigation measures; development of specific mitigation measures might be required for certain activities implemented under the action alternatives. The proposed mitigation measures would be coordinated through the appropriate agencies and land managers/administrators, as required.

It is Federal policy to mitigate adverse impacts through the sequence of avoidance, minimization, and finally, compensation. Compensation varies and includes activities such as restoration of habitat in other areas, acquisition of lands, etc., and is typically coordinated with the USFWS and other appropriate Federal and state resource agencies.

5.1 GENERAL CONSTRUCTION ACTIVITIES

BMPs would be implemented as standard operating procedures during all construction activities, such as proper handling, storage, and/or disposal of hazardous and/or regulated materials. To minimize potential impacts from hazardous and regulated materials, all fuels, waste oils, and solvents would be collected and stored in tanks or drums within a secondary containment system that consist of an impervious floor and bermed sidewalls capable of containing the volume of the largest container stored therein. The refueling of machinery would be completed following accepted guidelines, and all vehicles would have drip pans during storage to contain minor spills and drips. Although it would be unlikely for a major spill to occur, any spill of a reportable quantity would be contained immediately within an earthen dike, and the application of an absorbent (e.g., granular, pillow, sock.) would be used to absorb and contain the spill. Any major reportable spill of a hazardous or regulated substance would be reported immediately to on-site environmental personnel, who would notify appropriate Federal and state agencies. In addition, a SPCCP would be in place prior to the start of construction, and all personnel would be briefed on the implementation and responsibilities of this plan.

All waste oil and solvents would be recycled. All non-recyclable hazardous and regulated wastes would be collected, characterized, labeled, stored, transported, and disposed of in accordance with all Federal, state, and local regulations, including proper waste manifesting procedures.

Non-hazardous solid waste (trash and waste construction materials) would be collected and deposited in the on-site receptacles. Solid waste receptacles would be maintained and solid waste would be collected and disposed of by a local waste disposal contractor.

5.2 SOILS

Suitable fencing would be installed around the perimeter of the facility to contain vehicles and people and prevent accidental impacts on soils on adjacent properties. Vehicular traffic

1 associated with the construction activities and operational support activities would remain on
2 established access roads. A SWPPP would be prepared prior to construction activities and BMPs
3 described in the SWPPP, such as, straw bales, aggregate materials, and wetting compounds, shall
4 be implemented to reduce erosion. Furthermore, all areas not immediately developed would be
5 landscaped with native plant species, where appropriate, in such a way as to minimize erosion.
6

7 **5.3 BIOLOGICAL RESOURCES**

8

9 The Migratory Bird Treaty Act requires that Federal agencies coordinate with the USFWS if a
10 construction activity would result in the “take” of a migratory bird. If construction or clearing
11 activities were scheduled during the nesting season (typically March 1-September 1)
12 preconstruction surveys for migratory bird species would occur immediately prior to the start of
13 any construction activity to identify active nests. If construction activities would result in the
14 “take” of a migratory bird, then coordination with the USFWS and TPWD would occur, and
15 applicable permits would be obtained prior to construction or clearing activities. Another
16 mitigation measure that would be considered is to schedule clearing and grubbing activities
17 outside the nesting season, negating the requirement for nesting bird surveys.
18

19 Shields would be installed on the lights to prevent background lighting. Lights would also be
20 installed such that the direction of illumination is downward toward the station facilities.
21

22 **5.4 AIR QUALITY**

23

24 Soil watering would be utilized to minimize airborne particulate matter created during
25 construction activities. Bare ground would be covered with hay or straw to lessen wind erosion
26 between facility construction and landscaping. After the construction is completed, landscaping
27 would be designed and implemented to prevent or lessen wind fugitive dust creation.
28 Additionally, all construction equipment and vehicles would be kept in good operating condition
29 to minimize exhaust emissions.
30

31 **5.5 WATER RESOURCES**

32

33 Because the impact area is greater than 1 acre, as part of the NPDES permit process, a SWPPP
34 and Notice of Intent would be submitted to the USEPA/TCEQ prior to the start of construction.
35 Sedimentation and pollution of surface waters by fuels, oils and lubricants would be minimized
36 through the implementation of the SWPPP. The construction of the new station would not alter
37 natural drainage patterns; still, proper storm water retention measures would be incorporated into
38 the station design. All fuel tanks would be double-walled to prevent leaks from entering the soil
39 or groundwater.
40

41 **5.6 NOISE**

42

43 During the construction phase, short-term noise impacts are anticipated. All OSHA requirements
44 would be followed. To lessen noise impacts to the local residents, construction would only occur
45 during daylight hours, whenever possible.

5.7 CULTURAL RESOURCES

Although no cultural resources are known to be present within the project area, unanticipated subsurface deposits are possible at any undertaking that disturbs the ground surface. Evidence of subsurface deposits may be in the form of subsurface artifacts (lithics, ceramics, ground stone, bone, metal, and glass), charcoal, stained soil, or burned rocks. If previously unknown cultural resources are exposed by construction activities associated with the proposed development, work would stop in the immediate vicinity, the resources would be protected, and the SHPO would be notified within 24 hours of discovery. If, in consultation with the SHPO, it is determined that the resource is significant and if a significant resource cannot be avoided by construction, then an archaeological data recovery plan would be prepared in consultation with the SHPO and would be implemented.

If unmarked human burials are discovered during construction, work would stop in the immediate vicinity, the remains would be protected, and the local law enforcement agency and the SHPO would be notified as soon as possible. The location of the unmarked human burial would be documented and the provisions of the Native American Graves Protection and Repatriation Act would be implemented, including consultation with Native American tribes.

5.8 SOLID AND HAZARDOUS WASTES

Care would be taken to avoid impacting the project area with hazardous substances (i.e., anti-freeze, fuels, oils, lubricants) used during construction. Although catch pans would be used when refueling, accidental spills could occur as a result of maintenance procedures to construction equipment. A spill could result in potentially adverse impacts on on-site soils and waters, as well as threaten the health of wildlife and vegetation. However, the amount of fuel, lubricants, and oil is limited, and equipment necessary to quickly contain any spills would be present when refueling.

All waste oil and solvents associated with the vehicle maintenance facility would be recycled. All non-recyclable hazardous and regulated wastes would be collected, characterized, labeled, stored, transported, and disposed of in accordance with all Federal, state, and local regulations, including proper waste manifesting procedures.

5.9 TRANSPORTATION

During the design phase of the new station construction, measures to assure impacts on traffic flow are minimized would be considered. Additional vehicular entrances, speed zones, traffic signals or signs would be reviewed as measures to ease the impacts of traffic. The CBP would coordinate with the City of Corpus Christi Public Safety Department to address any traffic or safety impacts associated with the Proposed Action.

SECTION 6.0
REFERENCES



6.0 REFERENCES

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SECTION 7.0
ACRONYMS/ABBREVIATIONS



7.0 ACRONYMS/ABBREVIATIONS

1		
2		
3	$\mu\text{g}/\text{m}^3$	Micrograms per cubic meter
4	ACHP	Advisory Council on Historic Preservation
5	AADT	Average annual daily traffic
6	AOR	Area of responsibility
7	AST	Above-ground storage tank
8	BEA	Bureau of Economic Analysis
9	BMP	Best management practices
10	Caltrans	California Department of Transportation
11	CBP	U.S. Customs and Border Protection
12	CEQ	Council on Environmental Quality
13	CFR	Code of Federal Regulations
14	CIP	Capital Improvement Program
15	CO	Carbon monoxide
16	CWA	Clean Water Act
17	dB	Decibel
18	dba	A-weighted decibel
19	DOE	Department of Energy
20	DHS	Department of Homeland Security
21	E	Endangered
22	EO	Executive Order
23	EA	Environmental Assessment
24	ESA	Endangered Species Act
25	FEMA	Federal Emergency Management Agency
26	FHWA	Federal Highway Administration
27	FM	Farm-to-Market
28	FONSI	Finding of No Significant Impact
29	FR	Federal Register
30	GOV	Government Owned Vehicles
31	GSRC	Gulf South Research Corporation
32	HUD	U.S. Department of Housing and Urban Development
33	I-37	Interstate 37
34	IA	Illegal alien
35	INA	Immigration and Nationality Act
36	INS	Immigration and Naturalization Service
37	LEED	Leadership in Energy and Environmental Design
38	mg/m^3	Milligrams per cubic meter
39	MGD	Million gallons per day
40	NA	Non-applicable
41	NAAQS	National Ambient Air Quality Standards
42	NEPA	National Environmental Policy Act of 1969
43	NHPA	National Historic Preservation Act
44	NO ₂	Nitrogen dioxide
45	NOA	Notice of Availability
46	NO _x	Nitrogen oxides

47	NPDES	National Pollutant Discharge Elimination System
48	NRCS	Natural Resource Conservation Service
49	NRHP	National Register of Historic Places
50	O ₃	Ozone
51	OFO	Office of Field Operations
52	OSHA	Occupational Safety and Health Administration
53	P	Primary
54	Pb	Lead
55	PCPI	Per Capita Personal Income
56	PL	Public Law
57	PM-10	Particulate Matter <10 micrometers
58	PM-2.5	Particulate Matter < 2.5 micrometers
59	POV	Privately owned vehicles
60	ppm	Parts per million
61	ROI	Region of influence
62	RTA	Regional Transit Authority
63	S	Secondary
64	SHPO	State Historic Preservation Officer
65	SIP	State Implementation Plan
66	SO ₂	Sulfur dioxide
67	SPCCP	Spill Prevention, Control and Countermeasures Plan
68	SR	State Route
69	SWPPP	Stormwater Pollution Prevention Plan
70	TARL	Texas Archaeological Research Laboratory
71	TCEQ	Texas Commission on Environmental Quality
72	TPI	Total Personal Income
73	TPWD	Texas Parks and Wildlife Department
74	TXDOT	Texas Department of Transportation
75	U.S.	United States
76	USACE	U.S. Army Corps of Engineers
77	USBP	U.S. Border Patrol
78	USC	United States Code
79	USDA	U.S. Department of Agriculture
80	USEPA	U.S. Environmental Protection Agency
81	USFWS	U.S. Fish and Wildlife Service
82	VOC	Volatile organic compounds
83	Vpd	Vehicles per day
84	WUS	Waters of the U.S.

SECTION 8.0
LIST OF PREPARERS



8.0 LIST OF PREPARERS

The following people were primarily responsible for preparing this EA.

NAME	AGENCY/ORGANIZATION	DISCIPLINE/EXPERTISE	EXPERIENCE	ROLE IN PREPARING EA
Mark Gable	Customs and Border Protection	NEPA/DHS PM and Regional Environmental Officer	25 years Environmental Management and Review	EA review
Marc Wiese	Customs and Border Protection	PM, Dallas Facility Center		CBP Project Manager
Rhonda Brown	USACE, Galveston District			USACE Project Manager
Terry Roberts, Ph.D.	USACE, Galveston District	Environmental Resources		Environmental Resources Manager and EA review
Mark Garza	USACE, Galveston District	Environmental Resources		EA review
Eric Webb, Ph.D.	GSRC	Ecology/Wetlands	17 years experience in natural resources and NEPA studies	EA technical review
Chris Ingram	GSRC	Biology/Ecology	33 years EA/EIS studies	GSRC Project Manager; DOPAA; technical review
Steve Oivanki	GSRC	Geology	20 years EA and remediation	Phase I ESA; soils; hazardous materials
Steve Kolian	GSRC	Environmental Science	12 years natural resources	Utilities, noise, air quality; human health and safety
Nicole Forsyth	GSRC	Environmental Engineering	6 years environmental and NEPA studies	transportation
Greg Lacy	GSRC	Natural Resources	12 years natural resources and environmental studies	Wildlife and floodplains
Michael Hodson	GSRC	Ecology/Wetlands	5 years natural resources	T&E species, vegetation
John Lindemuth	GSRC	Archaeology	18 years professional archaeologist/cultural resources	Cultural resources and socioeconomics
Sharon Newman	GSRC	GIS/graphics	15 years GIS/graphics experience	GIS/graphics

APPENDIX A
CORRESPONDENCE





**U.S. Customs and
Border Protection**

JUL 09 2010

Mr. F. Lawrence Oaks
State Historic Preservation Officer
ATTN: Ms. Debra Beene
Texas Historical Commission
1511 Colorado Street
Austin, TX 78701

Dear Mr. Oaks:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that addresses the potential effects, beneficial and adverse, resulting from the proposed construction, operation, and maintenance of a new U.S. Border Patrol (USBP) station near Corpus Christi, Nueces County, Texas. The proposed new station would be constructed to accommodate existing staff, as well as an anticipated increase in agent force in support of the National Border Patrol Strategy to gain and maintain effective control of the U.S. borders. The existing station does not provide adequate space for the planned increase in staff. USBP anticipates an increase to approximately 120 personnel, including USBP and Office of Field Operations (OFO) agents and support staff. By providing additional space and facilities, the proposed new station would substantially enhance the overall safety and efficiency of current and future operations within the USBP Corpus Christi's Area of Responsibility. CBP has identified the Area of Potential Effect (APE) as two alternative sites, each approximately 18-22 acres, near the City of Corpus Christi, Texas, as shown on Attachment A.

We are currently in the process of gathering the most current information available, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800. CBP respectfully requests that you provide information on any cultural resources that you believe may be affected by the proposed USBP activities in Nueces County, Texas. A cultural resources survey is being conducted for the proposed project areas, and we will provide you with a copy of the cultural resources report for your comment once it is completed.

We also intend to provide your agency with a copy of the Draft EA once the document is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA. Your prompt attention to this request would be greatly appreciated. For additional information, please contact:

Customs and Border Protection
Mr. Marc Wiese, Dallas Facilities Center
7701 North Stemmons Freeway
Dallas, TX 75247-4232

Mr. F. Lawrence Oaks
Page 2

If you require additional information or have any questions, please contact Mr. Wiese at (214) 905-5363 or by email at marc.wiese@dhs.gov.

Sincerely,


Loren Flossman, Director
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

JUL 09 2010

Mescalero Apache Reservation
Mescalero Apache Tribal Council
Honorable Mark Chino, President
101 Central Avenue
Mescalero, NM 88340

Dear President Chino:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that addresses the potential effects, beneficial and adverse, resulting from the proposed construction, operation, and maintenance of a new U.S. Border Patrol (USBP) station near Corpus Christi, Nueces County, Texas. The proposed new station would be constructed to accommodate existing staff, as well as an anticipated increase in agent force in support of the National Border Patrol Strategy to gain and maintain effective control of the U.S. borders. The existing station does not provide adequate space for the planned increase in staff. USBP anticipates an increase to approximately 120 personnel, including USBP and Office of Field Operations (OFO) agents and support staff. By providing additional space and facilities, the proposed new station would substantially enhance the overall safety and efficiency of current and future operations within the USBP Corpus Christi's Area of Responsibility. CBP has identified the Area of Potential Effect (APE) as two alternative sites, each approximately 18-22 acres, near the City of Corpus Christi, Texas, as shown on Attachment A.

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Customs and Border Protection
Mr. Marc Wiese, Dallas Facilities Center
7701 North Stemmons Freeway
Dallas, TX 75247-4232

President Mark Chino
Page 2

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Sincerely,


Loren Flossman, Director
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

JUL 09 2010

Mr. Bernard F. Barcena Jr., Chairman
Lipan Apache Tribe of Texas
Attn: Tom Castillo
4553 Dandridge
Corpus Christi, TX 78413

Dear Chairman Barcena:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that addresses the potential effects, beneficial and adverse, resulting from the proposed construction, operation, and maintenance of a new U.S. Border Patrol (USBP) station near Corpus Christi, Nueces County, Texas. The proposed new station would be constructed to accommodate existing staff, as well as an anticipated increase in agent force in support of the National Border Patrol Strategy to gain and maintain effective control of the U.S. borders. The existing station does not provide adequate space for the planned increase in staff. USBP anticipates an increase to approximately 120 personnel, including USBP and Office of Field Operations (OFO) agents and support staff. By providing additional space and facilities, the proposed new station would substantially enhance the overall safety and efficiency of current and future operations within the USBP Corpus Christi's Area of Responsibility. CBP has identified the Area of Potential Effect (APE) as two alternative sites, each approximately 18-22 acres, near the City of Corpus Christi, Texas, as shown on Attachment A.

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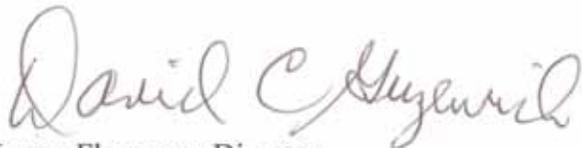
Customs and Border Protection
Mr. Marc Wiese, Dallas Facilities Center
7701 North Stemmons Freeway
Dallas, TX 75247-4232

Chairman Bernard F. Barcena Jr.

Page 2

If you require additional information or have any questions, please contact Mr. Wiese at (214) 905-5363 or by email at marc.wiese@dhs.gov.

Sincerely,



for Loren Flossman, Director
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

JUL 09 2010

Mr. Michael Burgess, Chairman
Comanche Nation
584 NW Bingo Road
PO Box 908
Lawton, OK 73502-0908

Dear Chairman Burgess:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that addresses the potential effects, beneficial and adverse, resulting from the proposed construction, operation, and maintenance of a new U.S. Border Patrol (USBP) station near Corpus Christi, Nueces County, Texas. The proposed new station would be constructed to accommodate existing staff, as well as an anticipated increase in agent force in support of the National Border Patrol Strategy to gain and maintain effective control of the U.S. borders. The existing station does not provide adequate space for the planned increase in staff. USBP anticipates an increase to approximately 120 personnel, including USBP and Office of Field Operations (OFO) agents and support staff. By providing additional space and facilities, the proposed new station would substantially enhance the overall safety and efficiency of current and future operations within the USBP Corpus Christi's Area of Responsibility. CBP has identified the Area of Potential Effect (APE) as two alternative sites, each approximately 18-22 acres, near the City of Corpus Christi, Texas, as shown on Attachment A.

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Customs and Border Protection
Mr. Marc Wiese, Dallas Facilities Center
7701 North Stemmons Freeway
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Chairman Michael Burgess

Page 2

If you require additional information or have any questions, please contact Mr. Wiese at (214) 905-5363 or by email at marc.wiese@dhs.gov.

Sincerely,


for Loren Flossman, Director
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

JUL 09 2010

Ms. Susan Clewis, Regional Director
Texas Commission on Environmental Quality
Region 14
NRC Bldg., Ste. 1200
6300 Ocean Dr., Unit 5839
Corpus Christi, TX 78412-5839

Dear Ms. Clewis:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that addresses the potential effects, beneficial and adverse, resulting from the proposed construction, operation, and maintenance of a new U.S. Border Patrol (USBP) station near Corpus Christi, Nueces County, Texas. The proposed new station would be constructed to accommodate existing staff, as well as an anticipated increase in agent force in support of the National Border Patrol Strategy to gain and maintain effective control of the U.S. borders. The existing station does not provide adequate space for the planned increase in staff. USBP anticipates an increase to approximately 120 personnel, including USBP and Office of Field Operations (OFO) agents and support staff.

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The Clarkwood Site affords several different layout designs, each of which will be considered as alternatives in the EA. Access to the USBP Station would be from Agnes Street or Clarkwood Road, or both, depending on the layout ultimately selected. Access to the Twin River Site would be from Twin River Boulevard or McKinzie Lane, or both. Stormwater detention basins of the appropriate size would be incorporated to the design and construction of the USBP station.

CBP respectfully requests that you provide us with any concerns or issues that you feel should be addressed in this EA. We intend to provide your agency with a copy of the Draft EA once the document is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Ms. Susan Clewis
Page 2

Your prompt attention to this request would be greatly appreciated. For additional information, please contact:

Customs and Border Protection
Mr. Marc Wiese, Dallas Facilities Center
7701 North Stemmons Freeway
Dallas, TX 75247-4232

If you require additional information or have any questions, please contact Mr. Wiese at (214) 905-5363 or by email at marc.wiese@dhs.gov.

Sincerely,



fo Loren Flossman, Director
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

JUL 09 2010

Texas Parks and Wildlife Department
ATTN: Mr. Russell Hooten
NRC Building, Ste 2501
6300 Ocean Dr., Unit 5846
Corpus Christi, TX 78412

Dear Mr. Hooten:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that addresses the potential effects, beneficial and adverse, resulting from the proposed construction, operation, and maintenance of a new U.S. Border Patrol (USBP) station near Corpus Christi, Nueces County, Texas. The proposed new station would be constructed to accommodate existing staff, as well as an anticipated increase in agent force in support of the National Border Patrol Strategy to gain and maintain effective control of the U.S. borders. The existing station does not provide adequate space for the planned increase in staff. USBP anticipates an increase to approximately 120 personnel, including USBP and Office of Field Operations (OFO) agents and support staff.

By providing additional space and facilities, the proposed new station would substantially enhance the overall safety and efficiency of current and future operations within the USBP Corpus Christi's Area of Responsibility. CBP has identified the Area of Potential Effect (APE) as two alternative sites, each approximately 18-22 acres, near the City of Corpus Christi, Texas, as shown on Attachment A.

The Clarkwood Site is currently in agricultural production (i.e., cotton and corn). The Twin River Site is an abandoned recreational area that contains both native and non-native grasses and other herbaceous species.

We are currently in the process of gathering the most current information available regarding Federal and state listed species potentially occurring within the project area. CBP respectfully requests that your agency provide a list of the protected species that occur within this county, along with a description of the sensitive resources (e.g., rare or unique plant communities, threatened, endangered, and candidate species, etc.), and a species location map for those species that you believe may be affected by the proposed CBP activities.

We intend to provide your agency with a copy of the Draft EA once the document is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Mr. Russell Hooten

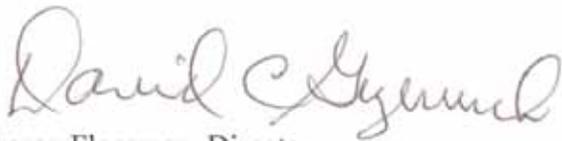
Page 2

Your prompt attention to this request would be greatly appreciated. For additional information, please contact:

Customs and Border Protection
Mr. Marc Wiese, Dallas Facilities Center
7701 North Stemmons Freeway
Dallas, TX 75247-4232

If you require additional information or have any questions, please contact Mr. Wiese at (214) 905-5363 or by email at marc.wiese@dhs.gov.

Sincerely,



 Loren Flossman, Director
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

JUL 09 2010

Texas Department of Transportation
ATTN: Julie Brown, P.E.
1701 S Padre Island Drive
Corpus Christi, Texas 78416

Dear Ms. Brown:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that addresses the potential effects, beneficial and adverse, resulting from the proposed construction, operation, and maintenance of a new U.S. Border Patrol (USBP) station near Corpus Christi, Nueces County, Texas. The proposed new station would be constructed to accommodate existing staff, as well as an anticipated increase in agent force in support of the National Border Patrol Strategy to gain and maintain effective control of the U.S. borders. The existing station does not provide adequate space for the planned increase in staff. USBP anticipates an increase to approximately 120 personnel, including USBP and Office of Field Operations (OFO) agents and support staff.

By providing additional space and facilities, the proposed new station would substantially enhance the overall safety and efficiency of current and future operations within the USBP Corpus Christi's Area of Responsibility. CBP has identified the Area of Potential Effect (APE) as two alternative sites, each approximately 18-22 acres, near the City of Corpus Christi, Texas, as shown on Attachment A.

The Clarkwood Site affords several different layout designs, each of which will be considered as alternatives in the EA. Access to the USBP Station would be from Agnes Street or Clarkwood Road, or both, depending on the layout ultimately selected. Access to the Twin River Site would be from Twin River Boulevard or McKinzie Lane, or both.

CBP respectfully requests that you provide us with any concerns or issues that you feel should be addressed in this EA. We intend to provide your agency with a copy of the Draft EA once the document is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

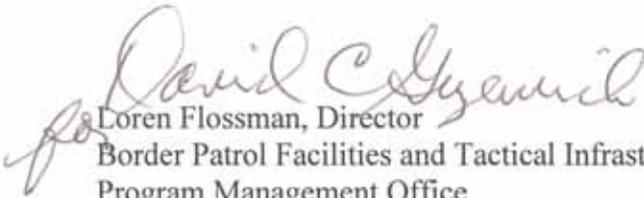
Ms. Julie Brown
Page 2

Your prompt attention to this request would be greatly appreciated. For additional information, please contact:

Customs and Border Protection
Mr. Marc Wiese, Dallas Facilities Center
7701 North Stemmons Freeway
Dallas, TX 75247-4232

If you require additional information or have any questions, please contact Mr. Wiese at (214) 905-5363 or by email at marc.wiese@dhs.gov.

Sincerely,


Loren Flossman, Director
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

JUL 09 2010

U.S. Fish and Wildlife Service
Austin, Texas Ecological Services Field Office
ATTN: Adam Zerrenner, Field Supervisor
Compass Bank Building
10711 Burnet Rd, Ste 200
Austin, TX 78758

Dear Mr. Zerrenner:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that addresses the potential effects, beneficial and adverse, resulting from the proposed construction, operation, and maintenance of a new U.S. Border Patrol (USBP) station near Corpus Christi, Nueces County, Texas. The proposed new station would be constructed to accommodate existing staff, as well as an anticipated increase in agent force in support of the National Border Patrol Strategy to gain and maintain effective control of the U.S. borders.

The existing station does not provide adequate space for the planned increase in staff. USBP anticipates an increase to approximately 120 personnel, including USBP and Office of Field Operations (OFO) agents and support staff. By providing additional space and facilities, the proposed new station would substantially enhance the overall safety and efficiency of current and future operations within the USBP Corpus Christi's Area of Responsibility.

CBP has identified the Area of Potential Effect (APE) as two alternative sites, each approximately 18-22 acres, near the City of Corpus Christi, Texas, as shown on Attachment A. The Clarkwood Site is currently in agricultural production (i.e., cotton and corn). The Twin River Site is an abandoned recreational area that contains both native and non-native grasses and other herbaceous species.

We are currently in the process of gathering the most current information available regarding Federal and State listed species potentially occurring within the project area. CBP respectfully requests that your agency provide a list of the protected species that occur within this county, along with a description of the sensitive resources (e.g., rare or unique plant communities, threatened, endangered, and candidate species, etc.), and a species location map for those species that you believe may be affected by the proposed CBP activities.

We intend to provide your agency with a copy of the Draft EA once the document is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA.

Adam Zerrenner
Page 2

Your prompt attention to this request would be greatly appreciated. For additional information, please contact:

Customs and Border Protection
Mr. Marc Wiese, Dallas Facilities Center
7701 North Stemmons Freeway
Dallas, TX 75247-4232

If you require additional information or have any questions, please contact Mr. Wiese at (214) 905-5363 or by email at marc.wiese@dhs.gov.

Sincerely,


for Loren Flossman, Director
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



**U.S. Customs and
Border Protection**

JUL 09 2010

Donald Tofpi, Chairman
Kiowa Tribe of Oklahoma
Business Committee
West Highway 9
Carnegie, OK 73015

Dear Chairman Tofpi:

U.S. Customs and Border Protection (CBP) is preparing an Environmental Assessment (EA) that addresses the potential effects, beneficial and adverse, resulting from the proposed construction, operation, and maintenance of a new U.S. Border Patrol (USBP) station near Corpus Christi, Nueces County, Texas. The proposed new station would be constructed to accommodate existing staff, as well as an anticipated increase in agent force in support of the National Border Patrol Strategy to gain and maintain effective control of the U.S. borders. The existing station does not provide adequate space for the planned increase in staff. USBP anticipates an increase to approximately 120 personnel, including USBP and Office of Field Operations (OFO) agents and support staff. By providing additional space and facilities, the proposed new station would substantially enhance the overall safety and efficiency of current and future operations within the USBP Corpus Christi's Area of Responsibility. CBP has identified the Area of Potential Effect (APE) as two alternative sites, each approximately 18-22 acres, near the City of Corpus Christi, Texas, as shown on Attachment A.

We are currently in the process of gathering the most current information available, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800. CBP respectfully requests that you provide information on any cultural resources that you believe may be affected by the proposed USBP activities in Nueces County, Texas. A cultural resources survey is being conducted for the proposed project areas, and we will provide you with a copy of the cultural resources report for your comment once it is prepared, if requested.

We intend to provide your agency with a copy of the Draft EA once the document is completed. Please inform us if additional copies are needed and/or if someone else within your agency other than you should receive the Draft EA. Your prompt attention to this request would be greatly appreciated. For additional information, please contact:

Customs and Border Protection
Mr. Marc Wiese, Dallas Facilities Center
7701 North Stemmons Freeway
Dallas, TX 75247-4232

Chairman Tofpi
Page 2

If you require additional information or have any questions, please contact Mr. Wiese at (214) 905-5363 or by email at marc.wiese@dhs.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Loren Flossman', with a long horizontal flourish extending to the right.

 Loren Flossman, Director
Border Patrol Facilities and Tactical Infrastructure
Program Management Office

Enclosure



Figure 1: Corpus Christi Location Map



Life's better outside.®

August 13, 2010

Loren Flossman
U.S. Customs and Border Protection
1300 Pennsylvania Avenue NW
Washington, DC 20229

RE: Proposed construction of U.S. Border Patrol Station near Corpus Christi,
Nueces County, Texas.

Dear Mr. Flossman:

This letter is in response to your request for information to assist U.S. Customs and Border Protection (CBP) prepare an Environmental Assessment for the proposed project referenced above.

Project description

The CBP proposed to construct, operate and maintain a U.S. Border Patrol (USBP) station near Corpus Christi, Nueces County, Texas. CBP has identified two alternative sites: the Twin River site near McKinzie Road and Interstate Highway (IH) 37 and the Clarkwood site, west of the Corpus Christi International Airport at the State Highway (SH) 44 and Clarkwood Road (Farm-to-Market Road 2292) intersection. The Twin River site is bordered by underground natural gas pipelines and consists of native and non-native grasses, forbs, and woody species characteristic of disturbed areas (*i.e.*, retama and mesquite). The Clarkwood site is an agricultural field currently producing cotton.

You have requested information regarding the presence of threatened and endangered species that could potentially occur on the proposed construction sites. Texas Parks and Wildlife Department (TPWD) has reviewed the information provided and offers the following comments.

RARE SPECIES REVIEW

Based on the project as presented, the TPWD annotated county list of rare species for Nueces County, and presently known Texas Natural Diversity Database (TXNDD) records for the general project areas, the following state threatened and species of concern could be impacted by proposed project activities if suitable habitat is present:

State Listed Threatened

- Sheep frog (*Hypopachus variolosus*)
- Texas Botteri's Sparrow (*Aimophila botterii texana*)
- Plains spotted skunk (*Spilogale putorius interrupta*)

Texas horned lizard (*Phrynosoma cornutum*)
Texas indigo snake (*Drymarchon melanurus erebennus*)
Texas tortoise (*Gopherus berlandieri*)

Federal Proposed Threatened

Mountain Plover (*Charadrius montanus*)

Species of Concern

Spot-tailed earless lizard (*Holbrookia lacerata*)
Elmendorf's onion (*Allium elmendorfi*)
* Texas windmill-grass (*Chloris texensis*)
Plains gumweed (*Grindelia oolepis*)
Welder machaeranthera (*Psilactis heterocarpa*)

Occurrences of the species shown above, preceded by an asterisk, have been documented on and/or possibly within 1.5 miles of the project sites. A printout for this occurrence record is included for your planning reference. (Occurrences of the Gulf saltmarsh snake and Snowy Plover have been documented within 1.5 miles of the Twin River site; however, suitable habitat for neither of these species occurs at the Twin Rivers site).

Please be aware that the TXNDD is intended to assist users in avoiding harm to rare species or significant ecological features. Absence of information in an area does not imply that a species is absent from that area. Given the small proportion of public versus private land in Texas, the TXNDD does not include a representative inventory of rare resources in the state. Although it is based on the best data available to TPWD regarding rare species, the data from the TXNDD do not provide a definitive statement as to the presences, absence or condition of special species, natural communities, or other significant features within your project area. These data are not inclusive and **cannot be used as presence/absence data**. They represent species that could potentially be in your project area. This information cannot be substituted for on-the-ground surveys.

Please review the most current TPWD county list for Nueces County, as other rare species could be present depending upon habitat availability. These lists are available online at http://www.tpwd.state.tx.us/landwater/land/maps/gis/ris/endangered_species/index.phtml.

For the USFWS rare species lists please visit: http://eco.fws.gov/tess_public/serviet/gov.doi.tess_public.serviets.EntryPage.

Federal and State Regulations

Endangered Species Act

The Endangered Species Act of 1973, as amended, authorizes the listing of species as endangered and threatened; prohibits unauthorized take, possession, sale, and transport of endangered species; provides authority to acquire land for the conservation of listed species; authorizes the creation of recovery plans for each listed species; and authorizes the assessment of civil and criminal penalties for violating the Act.

Recommendation: Mountain Plovers winter in south Texas and utilize overgrazed pastures and dirt agricultural fields. If the Clarkwood site is selected as the preferred alternative and construction occurs during winter months, contractors should be made aware of the potential to encounter this species and be instructed to avoid negatively impacting it.

Migratory Bird Treaty Act (MBTA)

The Migratory Bird Treaty Act (MBTA) implicitly prohibits intentional *and unintentional* take of migratory birds, including their nests and eggs, except as permitted by the U.S. Fish and Wildlife Service. Although not documented in the TXNDD, many bird species that are protected by the MBTA are known to reside in or migrate through the two potential project areas.

Recommendation: When preparing the site for construction (particularly the Twin River site, if selected), TPWD recommends scheduling any vegetation clearing or trampling outside of the April 1-July 15 migratory bird nesting season in order to fully comply with the MBTA. Please contact the U.S. Fish and Wildlife Service Southwest Regional Office (Region 2) at (505) 248-6879 for further information regarding the MBTA.

State regulations

Parks and Wildlife Code

State law prohibits any take (incidental or otherwise) of state-listed species. Laws and regulations pertaining to state-listed endangered or threatened animals are contained in Chapters 67 and 68 of the Texas Parks and Wildlife (TPW) Code; laws pertaining to endangered or threatened plants are contained in Chapters 88 of the TPW Code.

Habitat that is most suitable for wildlife, including state listed species, is more prevalent at the Twin River site than the Clarkwood site. Due to the low density development in the area, the proximity of the site to freshwater and estuarine habitats and areas vegetated with native grasses, forbs and trees, the Twin River site could support state listed amphibians (*e.g.*, Sheep frog) and reptiles (*e.g.*, Texas indigo snake) as well as prey species (*e.g.*, lizards, mice) for raptors common in the area.

Recommendation: TPWD recommends that if encountered, wildlife including state listed species, should be avoided and permitted to leave the project area on their own.

Because snakes are generally perceived as a threat and killed when encountered during clearing or construction, TPWD recommends that contractors should be informed of the potential for the snakes, including the protected Texas indigo snake, to occur on the project site. Contractors should be advised to avoid impacts to this snake.

Please note that relocating any species of wildlife (including listed species) requires a scientific collection permit, as referenced above. This can be obtained from TPWD Wildlife Permits Program. For more information regarding this permit, please visit TPWD's wildlife permit website at: <http://www.tpwd.state.tx.us/business/permits/land/wildlife/>

If during construction the project area is found to contain rare species, natural plant communities or special features, TPWD recommends that precautions be taken to avoid, minimize, and compensate for impacts to them.

ALTERNATIVES

The CBP is evaluating two sites to construct a new USBP station in Nueces County, Texas. The Clarkwood site is a disturbed agricultural field that periodically provides low to medium quality wildlife habitat. The Twin River provides medium to high quality wildlife habitat and is adjacent to high and very high quality wildlife habitat.

Recommendation: TPWD recommends that the new USBP station be constructed at the Clarkwood site in order to avoid and minimize potential impacts to wildlife, including rare, threatened and endangered species.

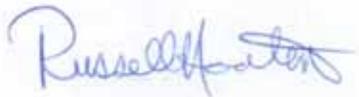
In addition to providing more suitable wildlife habitat, the topography of the undeveloped Twin River site is such that if the area is developed with impervious cover, stormwater runoff may overwhelm the small drainage

Mr. Flossman
August 13, 2010
Page 5 of 5

and bridge below the site. Potential impacts involving runoff and flooding may require additional permitting and increase planning and construction costs.

Please contact me at (361) 825-3240 if you have any questions regarding our comments.

Sincerely,



Russell Hooten
Wildlife Habitat Assessment Program
Wildlife Division

/rh 15289

Attachment

Element Occurrence Record

Specimen:

CORPUS CHRISTI MUSEUM/HERBARIUM. 1959. F.B. JONES #3311, SPECIMEN # 770229 CC. 9 JULY 1959.

Associated Species:

<u>Species Name</u>	<u>Type</u>	<u>Comments</u>
---------------------	-------------	-----------------

**Code Key for Printouts from
Texas Parks and Wildlife Department
Texas Natural Diversity Database (TXNDD)**

This information is for your assistance only; due to continuing data updates, vulnerability of private land to trespass and of species to disturbance or collection, **please refer all requesters to our office to obtain the most current information available.** Also, please note, identification of a species in a given area does not necessarily mean the species currently exists at the point or area indicated.

LEGAL STATUS AND CONSERVATION RANKS

FEDERAL STATUS (as determined by the US Fish and Wildlife Service)

LE	Listed Endangered
LT	Listed Threatened
PE	Proposed to be listed Endangered
PT	Proposed to be listed Threatened
PDL	Proposed to be Delisted (Note: Listing status retained while proposed)
SAE, SAT	Listed Endangered on basis of Similarity of Appearance, Listed Threatened on basis of Similarity of Appearance
DL	Delisted Endangered/Threatened
C	Candidate. USFWS has substantial information on biological vulnerability and threats to support proposing to list as threatened or endangered. Data are being gathered on habitat needs and/or critical habitat designations.
C*	C, but lacking known occurrences
C**	C, but lacking known occurrences, except in captivity/cultivation
XE	Essential Experimental Population
XN	Non-essential Experimental Population
Blank	Species is not federally listed

TX PROTECTION (as determined by the Texas Parks and Wildlife Department)

E	Listed Endangered
T	Listed Threatened
Blank	Species not state-listed

GLOBAL RANK (as determined by NatureServe)

G1	Critically imperiled globally, extremely rare, typically 5 or fewer viable occurrences
G2	Imperiled globally, very rare, typically 6 to 20 viable occurrences
G3	Very rare and local throughout range or found locally in restricted range, typically 21 to 100 viable occurrences
G4	Apparently secure globally
G5	Demonstrably secure globally
GH	Of historical occurrence through its range
GU	Possibly in peril range-wide, but status uncertain
G#G#	Ranked within a range as status uncertain
GX	Apparently extinct throughout range
Q	Rank qualifier denoting taxonomic assignment is questionable
#?	Rank qualifier denoting uncertain rank
C	In captivity or cultivation only
G#T#	“G” refers to species rank; “T” refers to variety or subspecies rank

STATE (SUBNATIONAL) RANK (as determined by the Texas Parks and Wildlife Department)

S1	Critically imperiled in state, extremely rare, vulnerable to extirpation, typically 5 or fewer viable occurrences
S2	Imperiled in state, very rare, vulnerable to extirpation, typically 6 to 20 viable occurrences
S3	Rare or uncommon in state, typically 21 to 100 viable occurrences
S4	Apparently secure in State
S5	Demonstrably secure in State
S#S#	Ranked within a range as status uncertain
SH	Of historical occurrence in state and may be rediscovered
SU	Unrankable – due to lack of information or substantially conflicting information
SX	Apparently extirpated from State
SNR	Unranked – State status not yet assessed
SNA	Not applicable – species id not a suitable target for conservation activities
?	Rank qualifier denoting uncertain rank in State

ELEMENT OCCURRENCE RECORD

Element Occurrence Record (EOR) Spatial and tabular record of an area of land and/or water in which a species, natural community, or other significant feature of natural diversity is, or was, present and associated information; may be a single contiguous area or may be comprised of discrete patches or subpopulations

Occurrence # Unique number assigned to each occurrence of each element when added to the NDD

LOCATION INFORMATION

Watershed Code Eight digit numerical code determined by US Geological Survey (USGS)

Watershed Name of watershed as determined by USGS

Quadrangle Name of USGS topographical map

Directions Directions to geographic location where occurrence was observed, as described by observer or in source

SURVEY INFORMATION

First/Last Observation Date a particular occurrence was first/last observed; refers only to species occurrence as noted in source and does not imply the first/last date the species was present

Survey Date If conducted, date of survey

EO Type State rank qualifiers:

M Migrant – species occurring regularly on migration at staging areas, or concentration along particular corridors; status refers to the transient population in the State

B Qualifier indicating basic rank refers to the breeding population in State

N Qualifier indicating basic rank refers to the non-breeding population in State

EO Rank

A Excellent

AI Excellent, Introduced

B Good

BI Good, Introduced

C Marginal

CI Marginal, Introduced

D Poor

DI Poor, Introduced

E Extant/Present

EI Extant, Introduced

H Historical/No Field Information

HI Historical, Introduced

X Destroyed/Extirpated

XI Destroyed, Introduced

O Obscure

OI Obscure, Introduced

EO Rank Date Latest date EO rank was determined or revised

Observed Area Acres, unless indicated otherwise

COMMENTS

Description General physical description of area and habitat where occurrence is located, including associated species, soils, geology, and surrounding land use

Comments Comments concerning the quality or condition of the element occurrence at time of survey

Protection Comments Observer comments concerning legal protection of the occurrence

Management Comments Observer comments concerning management recommendations appropriate for occurrence conservation

DATA

EO Data Biological data; may include number of individuals, vigor, flowering/fruitlet data, nest success, behaviors observed, or unusual characteristic, etc.

SITE

Site Name Title given to site by surveyor

MANAGED AREA INFORMATION

Managed Area Name Place name or (on EOR printout) name of area when the EO is located within or partially within an area identified for conservation, such as State or Federal lands, nature preserves, parks, etc.

Alias Additional names the property is known by

Acres Total acreage of property, including non-contiguous tracts

Manager Contact name, address, and telephone number for area or nearest area land steward

Please use one of the following citations to credit the source for the printout information:

Texas Natural Diversity Database. [year of printouts]. Wildlife Diversity Program of Texas Parks & Wildlife Department. [day month year of printouts].

Texas Natural Diversity Database. [year of printouts]. Element occurrence printouts for [scientific name] *records # [occurrence number(s)]. Wildlife Diversity Program of Texas Parks & Wildlife Department. [day month year of printouts]. *Use of record #'s is optional.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
c/o TAMU-CC, Campus Box 338
6300 Ocean Drive
Corpus Christi, Texas 78412

August 4, 2010

Loren Flossman
Director
Border Patrol Facilities and Tactical Infrastructure
Program Management Office
U.S. Customs and Border Protection
1300 Pennsylvania Avenue NW
Washington DC 20229

Consultation Number: 21410-2010-I-0449

Dear Director Flossman:

Thank you for your inquiry received August 2, 2010, with regard to the proposed Border Patrol station construction in Corpus Christi, Nueces County, Texas. The new station would provide space for 120 personnel.

Federally Listed Species

We have enclosed lists of federally listed or proposed threatened and endangered species that have been documented or are known to occur in the Nueces County. Species information may be obtained at <http://ifw2es.fws.gov/endangeredspecies/lists/>. The species information should help you determine if suitable habitat for these listed species exists in any of the proposed project areas or if project activities may affect species on-site, off-site, and/or result in a "take" of a federally listed species.

"Take" is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. In addition to the direct take of an individual animal, habitat destruction or modification can be considered take, regardless of whether it has been formally designated as critical habitat, if it would result in the death or injury of wildlife by removing essential habitat components or impairing essential behavior patterns, including breeding, feeding or sheltering.

We have reviewed the information provided in your letter, and we are aware of several populations of the endangered plant, South Texas Ambrosia (*Ambrosia cheiranthifolia*) in Nueces County. Often, the endangered slender rush pea (*Hoffmannseggia tenella*) is found in association with South Texas Ambrosia. We recommend that any areas that are not in active agricultural production, including potential staging areas or access routes, be surveyed for the presence of South Texas Ambrosia and slender rush pea. It may be beneficial to determine if the appropriate soils are present on your proposed sites, prior to performing a plant survey.

Information concerning South Texas Ambrosia is also enclosed. Please provide us with a copy of any survey results and include this information in your Draft Environmental Assessment (EA).

Section 7

Section 7 of the Endangered Species Act (ESA) requires that all Federal agencies consult with the Service to ensure that actions authorized, funded or carried out by such agencies do not jeopardize the continued existence of any listed threatened or endangered species or adversely modify or destroy critical habitat of such species. *It is the responsibility of the Federal action agency to determine if the proposed project may affect threatened or endangered species.* If a “may affect” determination is made, the Federal agency shall initiate the formal section 7 consultation process by writing to: Field Supervisor; U.S. Fish and Wildlife Service; c/o TAMU-CC, Unit 5837; 6300 Ocean Drive; Corpus Christi, Texas 78412-5837. If no effect is evident, no further consultation is needed; however, we would appreciate the opportunity to review the criteria used to arrive at that determination.

Non-federal representatives (i.e. consultants, state agencies, county or local officials) may request and receive species lists, prepare environmental documents, biological assessments, and provide information for formal consultations. However, the Service requires the action agency to designate the non-federal representative in writing. If not designated, we recommend non-federal representatives provide a complete record of their evaluation to the federal action agency so that they may make a determination of effect and, if necessary, consult with this office on the proposed action.

The Service recommends the action agency and/or non-federal representative maintain a complete record that identifies steps leading to the determination of effect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related articles. The Service’s Consultation Handbook is available at <http://endangered.fws.gov/consultations/s7hndbk/s7hndbk.htm> for further information on definitions and process.

State Listed Species

The State of Texas protects certain species. Please contact the Texas Parks and Wildlife Department (Endangered Resources Branch), 4200 Smith School Road, Austin, Texas 78744 (telephone 512/389-8111) for information concerning fish, wildlife, and plants of State concern or visit their website at <http://www.tpwd.state.tx.us/nature/endang/animals/mammals/>.

Migratory Birds

The Migratory Bird Treaty Act implements various treaties and conventions for the protection of migratory birds. Under the Act, taking, killing or possessing migratory birds is unlawful. Many may nest in trees, brush areas or other suitable habitat. The Service recommends activities

requiring vegetation removal or disturbance avoid the peak nesting period of March through August to avoid destruction of individuals, nests or eggs. If project activities must be conducted during this time, we recommend surveying for nests prior to commencing work. If a nest is found, and if possible, the Service recommends a buffer of vegetation ($\geq 50\text{m}$ for songbirds, $\geq 100\text{m}$ for wading birds, and $\geq 180\text{m}$ for terns, skimmers and birds of prey) remain around the nest until young have fledged or the nest is abandoned. A list of migratory birds may be viewed at <http://migratorybirds.fws.gov/intrnltr/mbta/proposedbirdlist.pdf>.

Wetlands

Wetlands and riparian zones provide valuable fish and wildlife habitat as well as contribute to flood control, water quality enhancement, and groundwater recharge. Wetland and riparian vegetation provide food and cover for wildlife, stabilize banks and decrease soil erosion. These areas are inherently dynamic and very sensitive to changes caused by such activities as overgrazing, logging, major construction, or earth disturbance. Executive Order 11990 asserts that each agency shall provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial value of wetlands in carrying out the agency's responsibilities. Construction activities near riparian zones should be carefully designed to minimize impacts. If vegetation clearing is needed in these riparian areas, they should be re-vegetated with native wetland and riparian vegetation to prevent erosion or loss of habitat. We recommend minimizing the area of soil scarification and initiating incremental re-establishment of herbaceous vegetation at the proposed work sites. Denuded and/or disturbed areas should be re-vegetated with a mixture of native legumes and grasses. Species commonly used for soil stabilization are listed in the Texas Department of Agriculture's (TDA) Native Tree and Plant Directory, available from TDA at P.O. Box 12847, Austin, Texas 78711. The Service also urges taking precautions to ensure sediment loading does not occur to any receiving streams in the proposed project area. To prevent and/or minimize soil erosion and compaction associated with construction activities, avoid any unnecessary clearing of vegetation, and follow established rights-of-way whenever possible. All machinery and petroleum products should be stored outside the floodplain and/or wetland area during construction to prevent possible contamination of water and soils. No permanent structures should be placed in the 100-year floodplain.

If your project will involve filling, dredging, or trenching of a wetland or riparian area it may require a Section 404 permit from the U.S. Army Corps of Engineers (COE). For permitting requirements please contact the U.S. Corps of Engineers, District Engineer, P.O. Box 1229, Galveston, TX 77553-1229, (409) 766-3002.

Beneficial Landscaping

In accordance with Executive Order 13112 on Invasive Species and the Executive Memorandum on Beneficial Landscaping, where possible, any landscaping associated with project plans should be limited to seeding and replanting with native species. A mixture of grasses and forbs appropriate to address potential erosion problems and long-term cover should be planted when seed is reasonably available. Although Bermuda grass is listed in seed mixtures, this species and

other introduced species should be avoided as much as possible. The Service also recommends the use of native trees, shrubs and herbaceous species that are adaptable, drought tolerant and conserve water.

Thank you for your concern for endangered and threatened species and other resources, and we appreciate the opportunity to comment on the proposed project. If we can be of further assistance, or if you have any questions about these comments, please contact Dr. Larisa Ford at 361/994-9005, extension 226. Please refer to the Service Consultation number listed above in any future correspondence regarding this project. We look forward to reviewing your Draft EA when it becomes available.

Sincerely,


for Allan M. Strand
Field Supervisor

enclosures

CC: Marc Wiese, Dallas Facilities Center, Dallas, TX

**Federally Listed as Threatened and Endangered Species of
Corpus Christi Ecological Services Field Office
Area of Responsibility
June 4, 2010**

DISCLAIMER

County-by-County lists containing species information is available at the U.S. Fish and Wildlife Service's (Service), Southwest Region, web site <http://ifw2es.fws.gov/endangeredspecies/lists/>. This list is based on information available to the Service at the time of preparation. This list is subject to change, without notice, as new biological information is gathered and should not be used as the sole source for identifying species that may be impacted by a project.

Candidate Species and Species of Concern currently have no legal protection under the Endangered Species Act. However, they may be protected under other Federal and/or State laws. If you find you have potential project impacts to these species the Service would like to provide technical assistance to help avoid or minimize adverse effects. Addressing these species at this stage could better provide for overall ecosystem health in the local area and may avert potential future listing.

Migratory Species Common to many or all Counties: Statewide or area-wide migrants are not included by county, except where they breed or occur in concentrations. Species listed specifically in a county have confirmed sightings. If a species is not listed they may occur as migrants in those counties.

Least tern	(E ~)	<i>Sterna antillarum</i>
Whooping crane	(E w/CH)	<i>Grus americana</i>
Bald eagle	(T)	<i>Haliaeetus leucocephalus</i>
Piping plover	(T w/CH)	<i>Charadrius melodus</i>
Loggerhead shrike	(SOC)	<i>Lanius ludovicianus</i>
White-faced ibis	(SOC)	<i>Plegadis chihi</i>

Nueces County

Brown pelican	(DM)	<i>Pelecanus occidentalis</i>
Green sea turtle	(T)	<i>Chelonia mydas</i>
Gulf Coast jaguarundi	(E)	<i>Herpailurus yagouaroundi cacomitli</i>
Hawksbill sea turtle	(E w/CHI)	<i>Eretmochelys imbricata</i>
Kemp's Ridley sea turtle	(E)	<i>Lepidochelys kempii</i>
Leatherback sea turtle	(E w/CHI)	<i>Dermochelys coriacea</i>
Loggerhead sea turtle	(T)	<i>Caretta caretta</i>
Ocelot	(E)	<i>Leopardus pardalis</i>
Piping plover	(T w/CH)	<i>Charadrius melodus</i>
Slender rush-pea	(E)	<i>Hoffmannseggia tenella</i>
South Texas ambrosia	(E)	<i>Ambrosia cheiranthifolia</i>
West Indian manatee	(E)	<i>Trichechus manatus</i>
Whooping crane	(E w/CH)	<i>Grus americana</i>

INDEX

E	=	Species in danger of extinction throughout all or a significant portion of its range.
T	=	Species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
C	=	Species for which the Service has on file enough substantial information to warrant listing as threatened or endangered.
CH	=	Critical Habitat (in Texas unless annotated ‡)
P/	=	Proposed ...
P/E	=	Species proposed to be listed as endangered.
P/T	=	Species proposed to be listed as threatened.
TSA	=	Threatened due to similarity of appearance.
SOC	=	Species for which there is some information showing evidence of vulnerability, but not enough data to support listing at this time.
G	=	with special rule
‡	=	CH designated (or proposed) outside Texas
~	=	Protection restricted to populations found in the "interior" of the United States. In Texas, the least tern receives full protection, except within 50 miles (80 km) of the Gulf Coast.

South Texas ambrosia

The proposed rule to list south Texas ambrosia (*Ambrosia cheiranthifolia*) as endangered was published in the Federal Register on August 5, 1993 (58 FR 41696; U.S. Fish and Wildlife Service 1993). Final listing of the south Texas ambrosia as an endangered species under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) occurred on August 24, 1994 (59 FR 43648; U.S. Fish and Wildlife Service 1994). Critical habitat was not designated.

Species Description

The first collection on record of south Texas ambrosia was taken by Luis Berlandier in 1835 in San Fernando, Tamaulipas, Mexico (59 FR 43648). In 1859, Asa Gray named the collection *Ambrosia cheiranthifolia* (Turner 1983). In 1932, the first collection of *Ambrosia cheiranthifolia* in the United States was taken from an area near Barreda (now Russelstown) in Cameron County, Texas, by Robert Runyon (Turner 1983). South Texas ambrosia is an herbaceous ashy blue-gray rhizomatous perennial in the Asteraceae (sunflower) Family. Erect stems are 3.9- 23.8 inches tall. The number of plants present is difficult to count as they usually form closely spaced colonies with rhizomatous growth habits inhibiting number counts. The leaves are usually opposite at the base, and alternate above. The leaves are mostly oblanceolate 0.8 - 2.8 inches long with the blade narrowing gradually at the base. Leaves are mostly unlobed and entire, although the lower and larger leaves of juvenile plants may be undulate or shallowly pinnate. Leaves appear whitened due to a fine and short appressed pubescence, giving the leaf an ashy blue-gray color. The inflorescence is usually unbranched and composed of separate male and female flowers. The male flowers occur in a terminal raceme 2 - 4 inches long composed of 10-12 small, light yellow, saucer-shaped flowers that are about 0.16 inches broad and have 4-6 acute, triangular lobes. The female flowers are in small clusters in the axils of the leaves. The fruit is an achene, somewhat angled and long with a stout beak. The fruit has 4 to 5 blunt spines spread across the surface (Correll and Johnston 1970; Jones 1977). South Texas ambrosia is distinguished from related species within its geographical range by its simple leaves and the ashy blue-gray color; however, this species is easily obscured by taller native and introduced grasses (Turner 1983).

Distribution and Abundance

The species is considered rare or infrequent in the coastal prairies of the Rio Grande Plains (Correll and Johnston 1970). South Texas ambrosia was known from 30 locations in Cameron, Jim Wells, Kleberg and Nueces counties, Texas, and one in Tamaulipas, Mexico. Three of these locations are historical occurrences which have not been relocated: one each in Jim Wells and Cameron counties and the Mexico record. Currently, south Texas ambrosia occurs in 27 sites within Kleberg and Nueces counties. Of these 27 current sites, three (3) are on State land, 13 on Federal land (Kingsville Naval Air Station), and 11 are on private land or on local jurisdictions in and around the communities of Bishop (Nueces County), Kingsville (Kleberg County) and Robstown (Nueces County), Texas. The species currently occurs primarily on private ranch lands that have not been subjected to continuous mowing, plowing and/or herbicide use. Suitable habitat for the south Texas ambrosia probably exists in Kenedy and Willacy Counties, based on the historical and current presence of the plants in Cameron and Nueces Counties

Habitat

South Texas ambrosia grows at low elevations 26 - 66 feet, in open prairies and savannas of south Texas on soils varying from clay-loams to sandy-loams. It inhabits the Gulf Coastal grasslands in clay soils derived primarily from the Beaumont clay series (Turner 1983). This soil is typically clay-loam to sandy-loam, usually deep clay soils and occasionally on wind-blown clay dunes along streams. Two of the Bishop area populations occur on slightly alkaline soils with an average pH of 7.4. Precipitation averages range from up to 15.7 inches per year but is variable. The average frost-free season is 250-310 days annually (Brown *et al.* 1976).

South Texas ambrosia is almost always associated with native grasses such as Texas grama (*Bouteloua rigidiseta*), buffalo grass (*Buchlœe dactyloides*), Texas spear grass (*Stipa leucotricha*) and curley mesquite (*Hilaria mutica*) (59 FR 43648; U.S. Fish and Wildlife Service 1994). Some of the invading non- native grasses include such species as

buffelgrass (*Pennisetum ciliaris*), King Ranch bluestem (*Bothriochloa ischaemum* var. *songarica*), Kleberg bluestem (*Dichanthium annulatum*), bermudagrass (*Cynodon dactylon*) and St. Augustine grass (*Stenotaphrum secundatum*). Native woody species scattered in the grassland include mesquite (*Prosopis glandulosa*), huisache (*Acacia smallii*), huisachillo (*Acacia schaffneri*), brasil (*Condalia hookeri*), granjeno (*Celtis pallida*) and lotebrush (*Ziziphus obtusifolia*) (59 FR 43648; U.S. Fish and Wildlife Service 1994). Associated forb species include Western ragweed (*Ambrosia psilostachya*), plains gumweed (*Grindelia oolepis*), violet ruellia (*Ruellia nudiflora*), scarlet pea (*Indigofera miniata*), small-flowered verbena (*Glandularia bipinnatifida*), *Bouchetia erecta*, *Malvastrum coromandelianum*, false ragweed (*Parthenium hysterophorus*), old man's beard (*Clematis drummondii*) and cowpen daisy (*Verbesina microptera*).

At three locations in Nueces County, the endangered slender rush-pea (*Hoffmannseggia tenella*) occurs in association with the south Texas ambrosia. The endangered black lace cactus (*Echinocereus reichenbachii* var. *albertii*) occurs in close proximity to the ambrosia at a site in Kleberg County.

Life History and Population Biology

The life history of south Texas ambrosia is not well known. For example, it is not known whether the south Texas ambrosia reproduces asexually, sexually, or a combination of both. South Texas ambrosia will bloom from July to November, but it is believed that this species primarily reproduces vegetatively by rhizomatous (underground stems) regrowth in the upper portion of the soil. As a result, a single individual may be represented by several to hundreds of stems, depending on the age of the plant (Turner 1983). In winter, upper portions of the plant, including the inflorescence, become dry and rigid with a very characteristic silver-gray color (Bush 1997). In spring, new foliage appears as a basal rosette with deeply lobed leaf margins.

Reasons for listing/Threats to Survival

The Service (1994; 59 FR 43648) described 3 major threats to the South Texas ambrosia which justified listing the species as endangered: (1) Destruction or modification of range through agricultural practices, highway construction and urbanization; (2) Invasive exotic grasses; and (3) Decreased genetic variability and viability through the loss and/or modification of habitat and fragmentation.

Habitat Loss

Habitat destruction is the primary threat to South Texas ambrosia. Past practices of converting parts of South Texas to agricultural fields, urbanized areas and industrial parks has limited the amount of habitat available for colonization.

Invasive Exotic Grasses

Results from various invasive grass studies indicate that there is shade and root competition between native plants and invasive grasses (Pressly 2002) as well as possible allelopathic effects (suppression of growth of one plant species by another due to release of toxic substances) by invasives on native forbs and grasses (Nuridin and Fulbright 1990 as cited by U.S. Department of Agriculture 1998). When native plants must compete for light, moisture, and/or nutrients, energy is expended to produce vegetative growth for photosynthesis and survival. Seed production then decreases, restricting seedling recruitment and limiting range expansion of the species. Highly invasive species also create monotypic habitats quickly and by-pass the important components of natural ecosystem processes. Other potential prairie habitat may be invaded by thorny shrub and tree species as a result of fire suppression or overgrazing. Along railway and roadway rights-of-way, where several of the South Texas ambrosia populations occur, herbicide application is used to discourage weedy growth that impairs the vision of operators of motor vehicles and/or railway cars, but may also prevent ambrosia populations from expanding.

Reduction of Genetic Variability

Separation of plant populations that rely on pollination for reproduction can lead to the loss of genetic diversity due to lack of gene exchange, consequently resulting in inbreeding of small groups of plants and amplifying the effects of deleterious alleles. With reduced numbers of individuals and populations of South Texas ambrosia, stochastic events can lead to the extinction of isolated local populations. Although the clonal habit of the species may alleviate deleterious allelic problems, it only perpetuates a small amount of isolated genetic material that may or may not be able to survive disease or extreme seasonal climatic changes. Species that evolved with small isolated populations

have already adapted to such factors over geologic time, but widespread species like the South Texas ambrosia should not be expected to change within a few decades to adjust to such conditions (Jackie Poole, personal communication, 1993).

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- U. S. Fish and Wildlife Service. 1994. Endangered and threatened wildlife and plants; determination of endangered status for the plants *Ayenia limitaris* (Texas Ayenia) and *Ambrosia cheiranthifolia* (South Texas Ambrosia). Federal Register 59 (163): 43648-43652.

Slender rush-pea *Hoffmannseggia tenella*

Description/Habitat: this is a low-growing (3-6 inches tall) perennial member of the Family Fabaceae (legume or pea) and has small (0.2 inch) orange-salmon colored flowers. Petals are egg-shaped and flowers contain 10 stamens. The blue-green leaves are double compound, and are arranged alternately along the stem. Each leaf is composed of 5-7 pairs of leaflets. Pinnae are oblong without a stalk, and slightly hairy on the underside. The species flowers primarily from February to June with fruit maturing from March to July. Two to four seeds are produced per fruit. Occurs in the Gulf Coast prairies specifically found in barren openings or where low native grasses persist in clayey soil, and also are found on pipeline and roadway rights-of-way.

Threats: Habitat loss due to conversion of Gulf Coast Prairie to row-crop agriculture and competition from nonnative grasses used for erosion control. Limited distribution and low population numbers make this species vulnerable to further disturbance.

Recommendations: Project sites should be surveyed by a qualified biologist or botanist to determine if the species is present. Please notify the Service with the results of any surveys for review and further determinations of impacts.

APPENDIX B
THREATENED AND ENDANGERED SPECIES



NUECES COUNTY

AMPHIBIANS

		Federal Status	State Status
Black-spotted newt	<i>Notophthalmus meridionalis</i>		T
can be found in wet or sometimes wet areas, such as arroyos, canals, ditches, or even shallow depressions; aestivates in the ground during dry periods; Gulf Coastal Plain south of the San Antonio River			
Sheep frog	<i>Hypopachus variolosus</i>		T
predominantly grassland and savanna; moist sites in arid areas			

BIRDS

		Federal Status	State Status
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	DL	T
year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from more northern breeding areas in US and Canada, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.			
Arctic Peregrine Falcon	<i>Falco peregrinus tundrius</i>	DL	
migrant throughout state from subspecies' far northern breeding range, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.			
Brown Pelican	<i>Pelecanus occidentalis</i>	DL	E
largely coastal and near shore areas, where it roosts and nests on islands and spoil banks			
Eskimo Curlew	<i>Numenius borealis</i>	LE	E
historic; nonbreeding: grasslands, pastures, plowed fields, and less frequently, marshes and mudflats			
Mountain Plover	<i>Charadrius montanus</i>		
breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous			
Northern Aplomado Falcon	<i>Falco femoralis septentrionalis</i>	LE	E
open country, especially savanna and open woodland, and sometimes in very barren areas; grassy plains and valleys with scattered mesquite, yucca, and cactus; nests in old stick nests of other bird species			
Peregrine Falcon	<i>Falco peregrinus</i>	DL	T
both subspecies migrate across the state from more northern breeding areas in US and Canada to winter along coast and farther south; subspecies (F. p. anatum) is also a resident breeder in west Texas; the two subspecies' listing statuses differ, F.p. tundrius is no longer listed in Texas; but because the subspecies are not easily distinguishable at a distance, reference is generally made only to the species level; see subspecies for habitat.			
Piping Plover	<i>Charadrius melodus</i>	LT	T
wintering migrant along the Texas Gulf Coast; beaches and bayside mud or salt flats			

NUECES COUNTY

BIRDS

		Federal Status	State Status
Reddish Egret	<i>Egretta rufescens</i>		T
resident of the Texas Gulf Coast; brackish marshes and shallow salt ponds and tidal flats; nests on ground or in trees or bushes, on dry coastal islands in brushy thickets of yucca and prickly pear			
Sennett's Hooded Oriole	<i>Icterus cucullatus sennetti</i>		
often builds nests in and of Spanish moss (<i>Tillandsia unioides</i>); feeds on invertebrates, fruit, and nectar; breeding March to August			
Snowy Plover	<i>Charadrius alexandrinus</i>		
formerly an uncommon breeder in the Panhandle; potential migrant; winter along coast			
Sooty Tern	<i>Sterna fuscata</i>		T
predominately 'on the wing'; does not dive, but snatches small fish and squid with bill as it flies or hovers over water; breeding April-July			
Southeastern Snowy Plover	<i>Charadrius alexandrinus tenuirostris</i>		
wintering migrant along the Texas Gulf Coast beaches and bayside mud or salt flats			
Texas Botteri's Sparrow	<i>Aimophila botterii texana</i>		T
grassland and short-grass plains with scattered bushes or shrubs, sagebrush, mesquite, or yucca; nests on ground of low clump of grasses			
Western Burrowing Owl	<i>Athene cunicularia hypugaea</i>		
open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows			
Western Snowy Plover	<i>Charadrius alexandrinus nivosus</i>		
uncommon breeder in the Panhandle; potential migrant; winter along coast			
White-faced Ibis	<i>Plegadis chihi</i>		T
prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats			
White-tailed Hawk	<i>Buteo albicaudatus</i>		T
near coast on prairies, cordgrass flats, and scrub-live oak; further inland on prairies, mesquite and oak savannas, and mixed savanna-chaparral; breeding March-May			
Whooping Crane	<i>Grus americana</i>	LE	E
potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties			
Wood Stork	<i>Mycteria americana</i>		T
forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960			

NUECES COUNTY

FISHES

	Federal Status	State Status
American eel <i>Anguilla rostrata</i> coastal waterways below reservoirs to gulf; spawns January to February in ocean, larva move to coastal waters, metamorphose, then females move into freshwater; most aquatic habitats with access to ocean, muddy bottoms, still waters, large streams, lakes; can travel overland in wet areas; males in brackish estuaries; diet varies widely, geographically, and seasonally		
Opossum pipefish <i>Microphis brachyurus</i> brooding adults found in fresh or low salinity waters and young move or are carried into more saline waters after birth; southern coastal areas		T
Smalltooth sawfish <i>Pristis pectinata</i> different life history stages have different patterns of habitat use; young found very close to shore in muddy and sandy bottoms, seldom descending to depths greater than 32 ft (10 m); in sheltered bays, on shallow banks, and in estuaries or river mouths; adult sawfish are encountered in various habitat types (mangrove, reef, seagrass, and coral), in varying salinity regimes and temperatures, and at various water depths, feed on a variety of fish species and crustaceans	LE	E
Texas pipefish <i>Syngnathus affinis</i> Corpus Christi Bay; seagrass beds		

INSECTS

	Federal Status	State Status
Manfreda giant-skipper <i>Stallingsia maculosus</i> most skippers are small and stout-bodied; name derives from fast, erratic flight; at rest most skippers hold front and hind wings at different angles; skipper larvae are smooth, with the head and neck constricted; skipper larvae usually feed inside a leaf shelter and pupate in a cocoon made of leaves fastened together with silk		

MAMMALS

	Federal Status	State Status
Maritime pocket gopher <i>Geomys personatus maritimus</i> fossorial, in deep sandy soils; feeds mostly from within burrow on roots and other plant parts, especially grasses; ecologically important as prey species and in influencing soils, microtopography, habitat heterogeneity, and plant diversity		
Ocelot <i>Leopardus pardalis</i> dense chaparral thickets; mesquite-thorn scrub and live oak mottes; avoids open areas; breeds and raises young June-November	LE	E
Plains spotted skunk <i>Spilogale putorius interrupta</i> catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie		
Red wolf <i>Canis rufus</i>	LE	E

NUECES COUNTY

MAMMALS

	Federal Status	State Status
extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal prairies		
Southern yellow bat <i>Lasiurus ega</i>		T
associated with trees, such as palm trees (<i>Sabal mexicana</i>) in Brownsville, which provide them with daytime roosts; insectivorous; breeding in late winter		
West Indian manatee <i>Trichechus manatus</i>	LE	E
Gulf and bay system; opportunistic, aquatic herbivore		
White-nosed coati <i>Nasua narica</i>		T
woodlands, riparian corridors and canyons; most individuals in Texas probably transients from Mexico; diurnal and crepuscular; very sociable; forages on ground and in trees; omnivorous; may be susceptible to hunting, trapping, and pet trade		

REPTILES

	Federal Status	State Status
Atlantic hawksbill sea turtle <i>Eretmochelys imbricata</i>	LE	E
Gulf and bay system, warm shallow waters especially in rocky marine environments, such as coral reefs and jetties, juveniles found in floating mats of sea plants; feed on sponges, jellyfish, sea urchins, molluscs, and crustaceans, nests April through November		
Green sea turtle <i>Chelonia mydas</i>	LT	T
Gulf and bay system; shallow water seagrass beds, open water between feeding and nesting areas, barrier island beaches; adults are herbivorous feeding on sea grass and seaweed; juveniles are omnivorous feeding initially on marine invertebrates, then increasingly on sea grasses and seaweeds; nesting behavior extends from March to October, with peak activity in May and June		
Gulf Saltmarsh snake <i>Nerodia clarkii</i>		
saline flats, coastal bays, and brackish river mouthss		
Keeled earless lizard <i>Holbrookia propinqua</i>		
coastal dunes, barrier islands, and other sandy areas; eats insects and likely other small invertebrates; eggs laid underground March-September (most May-August)		
Kemp's Ridley sea turtle <i>Lepidochelys kempii</i>	LE	E
Gulf and bay system, adults stay within the shallow waters of the Gulf of Mexico; feed primarily on crabs, but also snails, clams, other crustaceans and plants, juveniles feed on sargassum and its associated fauna; nests April through August		
Leatherback sea turtle <i>Dermochelys coriacea</i>	LE	E
Gulf and bay systems, and widest ranging open water reptile; omnivorous, shows a preference for jellyfish; in the US portion of their western Atlantic nesting territories, nesting season ranges from March to August		
Loggerhead sea turtle <i>Caretta caretta</i>	LT	T
Gulf and bay system primarily for juveniles, adults are most pelagic of the sea turtles; omnivorous, shows a preference for mollusks, crustaceans, and coral; nests from April through November		

NUECES COUNTY

REPTILES

Federal Status

State Status

Spot-tailed earless lizard

Holbrookia lacerata

central and southern Texas and adjacent Mexico; moderately open prairie-brushland; fairly flat areas free of vegetation or other obstructions, including disturbed areas; eats small invertebrates; eggs laid underground

Texas diamondback terrapin *Malaclemys terrapin littoralis*

coastal marshes, tidal flats, coves, estuaries, and lagoons behind barrier beaches; brackish and salt water; burrows into mud when inactive; may venture into lowlands at high tide

Texas horned lizard

Phrynosoma cornutum

T

open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September

Texas indigo snake

Drymarchon melanurus erebennus

T

Texas south of the Guadalupe River and Balcones Escarpment; thornbush-chaparral woodlands of south Texas, in particular dense riparian corridors; can do well in suburban and irrigated croplands if not molested or indirectly poisoned; requires moist microhabitats, such as rodent burrows, for shelter

Texas scarlet snake

Cemophora coccinea lineri

T

mixed hardwood scrub on sandy soils; feeds on reptile eggs; semi-fossorial; active April-September

Texas tortoise

Gopherus berlandieri

T

open brush with a grass understory is preferred; open grass and bare ground are avoided; when inactive occupies shallow depressions at base of bush or cactus, sometimes in underground burrows or under objects; longevity greater than 50 years; active March-November; breeds April-November

PLANTS

Federal Status

State Status

Elmendorf's onion

Allium elmendorfii

Texas endemic; grassland openings in oak woodlands on deep, loose, well-drained sands; in Coastal Bend, on Pleistocene barrier island ridges and Holocene Sand Sheet that support live oak woodlands; to the north it occurs in post oak-black hickory-live oak woodlands over Queen City and similar Eocene formations; one anomalous specimen found on Llano Uplift in wet pockets of granitic loam; flowering March-April, May

Lila de los llanos

Echeandia chandleri

most commonly encountered among shrubs or in grassy openings in subtropical thorn shrublands on somewhat saline clays of lomas along Gulf Coast near mouth of Rio Grande; also observed in a few upland coastal prairie remnants on clay soils over the Beaumont Formation at inland sites well to the north and along railroad right-of-ways and cemeteries; flowering (May-) September-December, fruiting October-December

Mexican mud-plantain

Heteranthera mexicana

wet clayey soils of resacas and ephemeral wetlands in South Texas and along margins of playas in the Panhandle; flowering June-December, only after sufficient rainfall

Plains gumweed

Grindelia oolepis

NUECES COUNTY

PLANTS

Federal Status

State Status

coastal prairies on heavy clay (blackland) soils, often in depressional areas, sometimes persisting in areas where management (mowing) may maintain or mimic natural prairie disturbance regimes; 'crawfish lands'; on nearly level Victoria clay, Edroy clay, claypan, possibly Greta within Orelia fine sandy loam over the Beaumont Formation, and Harlingen clay; roadsides, railroad rights-of-ways, vacant lots in urban areas, cemeteries; flowering April-December

Slender rushpea

Hoffmannseggia tenella

LE

E

Texas endemic; coastal prairie grasslands on level uplands and on gentle slopes along drainages, usually in areas of shorter or sparse vegetation; soils often described as Blackland clay, but at some of these sites soils are coarser textured and lighter in color than the typical heavy clay of the coastal prairies; flowering April-November

South Texas ambrosia

Ambrosia cheiranthifolia

LE

E

grasslands and mesquite-dominated shrublands on various soils ranging from heavy clays to lighter textured sandy loams, mostly over the Beaumont Formation on the Coastal Plain; in modified unplowed sites such as railroad and highway right-of-ways, cemeteries, mowed fields, erosional areas along small creeks; flowering July-November

Texas windmill-grass

Chloris texensis

Texas endemic; sandy to sandy loam soils in relatively bare areas in coastal prairie grassland remnants, often on roadsides where regular mowing may mimic natural prairie fire regimes; flowering in fall

Welder machaeranthera

Psilactis heterocarpa

Texas endemic; grasslands, varying from midgrass coastal prairies, and open mesquite-huisache woodlands on nearly level, gray to dark gray clayey to silty soils; known locations mapped on Victoria clay, Edroy clay, Dacosta sandy clay loam over Beaumont and Lissie formations; flowering September-November



U.S. Fish & Wildlife Service

Endangered Species List

[Back to Start](#)

List of species by county for Texas:

Counties Selected: Nueces

Select one or more counties from the following list to view a county list:

Anderson
 Andrews
 Angelina
 Aransas
 Archer

View County List

Nueces County

<u>Common Name</u>	<u>Scientific Name</u>	<u>Species Group</u>	<u>Listing Status</u>	<u>Species Image</u>	<u>Species Distribution Map</u>	<u>Critical Habitat</u>	<u>More Info</u>
brown pelican	<i>Pelecanus occidentalis</i>	Birds	DM				P
green sea turtle	<i>Chelonia mydas</i>	Reptiles	E, T				P
Gulf Coast jaguarundi	<i>Herpailurus (=Felis) yagouaroundi cacomitli</i>	Mammals	E				P
hawksbill sea turtle	<i>Eretmochelys imbricata</i>	Reptiles	E				P
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	Reptiles	E				P
leatherback sea turtle	<i>Dermochelys coriacea</i>	Reptiles	E				P
loggerhead sea turtle	<i>Caretta caretta</i>	Reptiles	T				P
ocelot	<i>Leopardus (=Felis) pardalis</i>	Mammals	E				P
piping Plover	<i>Charadrius melodus</i>	Birds	E, T			Final	P
slender rush-pea	<i>Hoffmannseggia tenella</i>	Flowering Plants	E				P
south Texas ambrosia	<i>Ambrosia cheiranthifolia</i>	Flowering Plants	E				P
West Indian Manatee	<i>Trichechus manatus</i>	Mammals	E				P
whooping crane	<i>Grus americana</i>	Birds	E, EXPN				P

APPENDIX C
AIR QUALITY CALCULATIONS



CALCULATION SHEET-COMBUSTIBLE EMISSIONS-CONSTRUCTION

Assumptions for Combustible Emissions					
Type of Construction Equipment	Num. of Units	HP Rated	Hrs/day	Days/yr	Total hp-hrs
Water Truck	1	300	8	240	576000
Diesel Road Compactors	1	100	8	60	48000
Diesel Dump Truck	1	300	8	240	576000
Diesel Excavator	1	300	8	10	24000
Diesel Hole Trenchers	1	175	8	10	14000
Diesel Bore/Drill Rigs	1	300	8	10	24000
Diesel Cement & Mortar Mixers	1	300	8	60	144000
Diesel Cranes	1	175	8	60	84000
Diesel Graders	1	300	8	28	67200
Diesel Tractors/Loaders/Backhoes	1	100	8	180	144000
Diesel Bull Dozers	1	300	8	10	24000
Diesel Front End Loaders	1	300	8	10	24000
Diesel Fork Lifts	2	100	8	90	144000
Diesel Generator Set	2	40	8	240	153600

Emission Factors							
Type of Construction Equipment	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	PM-10 g/hp-hr	PM-2.5 g/hp-hr	SO2 g/hp-hr	CO2 g/hp-hr
Water Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Road Compactors	0.370	1.480	4.900	0.340	0.330	0.740	536.200
Diesel Dump Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Excavator	0.340	1.300	4.600	0.320	0.310	0.740	536.300
Diesel Trenchers	0.510	2.440	5.810	0.460	0.440	0.740	535.800
Diesel Bore/Drill Rigs	0.600	2.290	7.150	0.500	0.490	0.730	529.700
Diesel Cement & Mortar Mixers	0.610	2.320	7.280	0.480	0.470	0.730	529.700
Diesel Cranes	0.440	1.300	5.720	0.340	0.330	0.730	530.200
Diesel Graders	0.350	1.360	4.730	0.330	0.320	0.740	536.300
Diesel Tractors/Loaders/Backhoes	1.850	8.210	7.220	1.370	1.330	0.950	691.100
Diesel Bull Dozers	0.360	1.380	4.760	0.330	0.320	0.740	536.300
Diesel Front End Loaders	0.380	1.550	5.000	0.350	0.340	0.740	536.200
Diesel Fork Lifts	1.980	7.760	8.560	1.390	1.350	0.950	690.800
Diesel Generator Set	1.210	3.760	5.970	0.730	0.710	0.810	587.300

CALCULATION SHEET-COMBUSTIBLE EMISSIONS-CONSTRUCTION

Emission factors (EF) were generated from the NONROAD2005 model for the 2006 calendar year. The VOC EFs includes exhaust and evaporative emissions. The VOC evaporative components included in the NONROAD2005 model are diurnal, hotsoak, running loss, tank permeation, hose permeation, displacement, and spillage. The construction equipment age distribution in the NONROAD2005 model is based on the population in U.S. for the 2006 calendar year.

Emission Calculations							
Type of Construction Equipment	VOC tons/yr	CO tons/yr	NOx tons/yr	PM-10 tons/yr	PM-2.5 tons/yr	SO2 tons/yr	CO2 tons/yr
Water Truck	0.279	1.314	3.485	0.260	0.254	0.470	340.227
Diesel Road Paver	0.020	0.078	0.259	0.018	0.017	0.039	28.363
Diesel Dump Truck	0.279	1.314	3.485	0.260	0.254	0.470	340.227
Diesel Excavator	0.009	0.034	0.122	0.008	0.008	0.020	14.184
Diesel Hole Cleaners\Trenchers	0.008	0.038	0.090	0.007	0.007	0.011	8.266
Diesel Bore/Drill Rigs	0.016	0.061	0.189	0.013	0.013	0.019	14.010
Diesel Cement & Mortar Mixers	0.097	0.368	1.155	0.076	0.075	0.116	84.057
Diesel Cranes	0.041	0.120	0.529	0.031	0.031	0.068	49.080
Diesel Graders	0.026	0.101	0.350	0.024	0.024	0.055	39.715
Diesel Tractors/Loaders/Backhoes	0.294	1.303	1.146	0.217	0.211	0.151	109.669
Diesel Bull Dozers	0.010	0.036	0.126	0.009	0.008	0.020	14.184
Diesel Front End Loaders	0.010	0.041	0.132	0.009	0.009	0.020	14.181
Diesel Aerial Lifts	0.314	1.231	1.358	0.221	0.214	0.151	109.622
Diesel Generator Set	0.205	0.636	1.011	0.124	0.120	0.137	99.411
Total Emissions	1.606	6.676	13.437	1.279	1.245	1.745	1265.196

Conversion factors	
Grams to tons	1.102E-06

CALCULATION SHEET-TRANSPORTATION COMBUSTIBLE EMISSIONS-CONSTRUCTION

Construction Worker Personal Vehicle Commuting to Construction Site-Passenger and Light Duty Trucks									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of cars	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	1.36	1.61	60	240	20	20	0.43	0.51	0.94
CO	12.4	15.7	60	240	20	20	3.94	4.98	8.92
NOx	0.95	1.22	60	240	20	20	0.30	0.39	0.69
PM-10	0.0052	0.0065	60	240	20	20	0.00	0.00	0.00
PM 2.5	0.0049	0.006	60	240	20	20	0.00	0.00	0.00
CO2	369	511	60	240	20	20	117.11	162.18	279.29

Heavy Duty Trucks Delivery Supply Trucks to Construction Site									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	10,000-19,500 lb Delivery Truck	33,000-60,000 lb semi trailer rig	Mile/day	Day/yr	Number of trucks	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	0.29	0.55	60	240	2	2	0.01	0.02	0.03
CO	1.32	3.21	60	240	2	2	0.04	0.10	0.14
NOx	4.97	12.6	60	240	2	2	0.16	0.40	0.56
PM-10	0.12	0.33	60	240	2	2	0.00	0.01	0.01
PM 2.5	0.13	0.36	60	240	2	2	0.00	0.01	0.02
CO2	536	536	60	240	2	2	17.01	17.01	34.02

Daily Commute New Staff Associated with Proposed Action									
Pollutants	Emission Factors		Assumptions				Results by Pollutant		
	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of Cars	Number of trucks	Total Emissions cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	1.36	1.61	20	240	29	29	0.21	0.25	0.46
CO	12.4	15.7	20	240	29	29	1.90	2.41	4.31
NOx	0.95	1.22	20	240	29	29	0.15	0.19	0.33
PM-10	0.0052	0.0065	20	240	29	29	0.00	0.00	0.00
PM 2.5	0.0049	0.006	20	240	29	29	0.00	0.00	0.00
CO2	369	511	20	240	29	29	56.60	78.39	134.99

Truck Emission Factor Source: MOBILE6.2 USEPA 2005 Emission Facts: Average annual emissions and fuel consumption for gasoline-fueled passenger cars and light trucks. EPA 420-F-05-022 August 2005. Emission rates were generated using MOBILE.6 highway.

CALCULATION SHEET-TRANSPORTATION COMBUSTIBLE EMISSIONS-CONSTRUCTION

Conversion factor:	gms to tons
	0.000001102

Carbon Equivalents	Conversion Factor
N2O or NOx	311
Methane or VOCs	25

Source: EPA 2010 Reference, Tables and Conversions, Inventory of U.S. Greenhouse Gas Emissions and Sinks;
<http://www.epa.gov/climatechange/emissions/usinventoryreport.html>

CARBON EQUIVALENTS

Construction Commuters	Conversion	Emissions CO2 tons/yr	Total CO2
VOCs	25	23.57	
NOx	311	0.69	
Total		24.25	303.54

Delivery Trucks	Conversion	Emissions CO2 tons/yr	Total CO2
VOCs	25	0.67	
NOx	311	173.42	
Total		174.09	208.11

Kirtland AFB staff and Students	Conversion	Emissions CO2 tons/yr	Total CO2
VOCs	25	11.39	
NOx	311	103.52	
Total		114.91	249.90

CALCULATION SHEET-FUGITIVE DUST-CONSTRUCTION

Construction Fugitive Dust Emissions

Construction Fugitive Dust Emission Factors

	Emission Factor	Units	Source
General Construction Activities	0.19	ton PM10/acre-month	MRI 1996; EPA 2001; EPA 2006
New Road Construction	0.42	ton PM10/acre-month	MRI 1996; EPA 2001; EPA 2006

PM2.5 Emissions

PM2.5 Multiplier	0.10	(10% of PM10 emissions assumed to be PM2.5)	EPA 2001; EPA 2006
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Control Efficiency

Control Efficiency	0.50	(assume 50% control efficiency for PM10 and PM2.5 emissions)	EPA 2001; EPA 2006
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Project Assumptions

Construction Area (0.19 ton PM10/acre-month)

Duration of Construction Project	12	months
Length	0	miles
Length (converted)	0	feet
Width	0	feet
Area	22.00	acres

Conversion Factors

Conversion Factor 1	0.000022957	acres per feet
Conversion Factor 2	5280	feet per mile

Staging Areas

Duration of Construction Project		months
Length		miles
Length (converted)		feet
Width		feet
Area	0.00	acres

	Project Emissions (tons/year)			
	PM10 uncontrolled	PM10 controlled	PM2.5 uncontrolled	PM2.5 controlled
Construction Area (0.19 ton PM10/ac)	50.16	25.08	5.02	2.51
Staging Areas	0.00	0.00	0.00	0.00
Total	50.16	25.08	5.02	2.51

References:

EPA 2001. *Procedures Document for National Emissions Inventory, Criteria Air Pollutants, 1985-1999*. EPA-454/R-01-006. Office of Air Quality Planning and Standards, United States Environmental Protection Agency. March 2001.

EPA 2006. *Documentation for the Final 2002 Nonpoint Sector (Feb 06 version) National Emission Inventory for Criteria and Hazardous Air Pollutants*. Prepared for: Emissions Inventory and Analysis Group (C339-02) Air Quality Assessment Division Office of Air Quality Planning and Standards, United States Environmental Protection Agency. July 2006.

MRI 1996. *Improvement of Specific Emission Factors (BACM Project No. 1)*. Midwest Research Institute (MRI). Prepared for the California South Coast Air Quality Management District, March 29, 1996.

Construction Fugitive Dust Emission Factors

General Construction Activities Emission Factor

0.19 ton PM10/acre-month Source: MRI 1996; EPA 2001; EPA 2006

The area-based emission factor for construction activities is based on a study completed by the Midwest Research Institute (MRI) Improvement of Specific Emission Factors (BACM Project No. 1), March 29, 1996. The MRI study evaluated seven construction projects in Nevada and California (Las Vegas, Coachella Valley, South Coast Air Basin, and the San Joaquin Valley). The study determined an average emission factor of 0.11 ton PM10/acre-month for sites without large-scale cut/fill operations. A worst-case emission factor of 0.42 ton PM10/acre-month was calculated for sites with active large-scale earth moving operations. The monthly emission factors are based on 168 work-hours per month (MRI 1996). A subsequent MRI Report in 1999, Estimating Particulate Matter Emissions from Construction Operations, calculated the 0.19 ton PM10/acre-month emission factor by applying 25% of the large-scale earthmoving emission factor (0.42 ton PM10/acre-month) and 75% of the average emission factor (0.11 ton PM10/acre-month).

The 0.19 ton PM10/acre-month emission factor is referenced by the EPA for non-residential construction activities in recent procedures documents for the National Emission Inventory (EPA 2001; EPA 2006). The 0.19 ton PM10/acre-month emission factor represents a refinement of EPA's original AP-42 area-based total suspended particle (TSP) emission factor in Section 13.2.3 Heavy Construction Operations. In addition to the EPA, this methodology is also supported by the South Coast Air Quality Management District and the Western Regional Air Partnership (WRAP) which is funded by the EPA and is administered jointly by the Western Governor's Association and the National Tribal Environmental Council. The emission factor is assumed to encompass a variety of non-residential construction activities including building construction (commercial, industrial, institutional, governmental), public works, and travel on unpaved roads. The EPA National Emission Inventory documentation assumes that the emission factors are uncontrolled and recommends a control efficiency of 50% for PM10 and PM2.5 in PM nonattainment areas.

New Road Construction Emission Factor

0.42 ton PM10/acre-month Source: MRI 1996; EPA 2001; EPA 2006

The emission factor for new road construction is based on the worst-case conditions emission factor from the MRI 1996 study described above (0.42 tons PM10/acre-month). It is assumed that road construction involves extensive earthmoving and heavy construction vehicle travel resulting in emissions that are higher than other general construction projects. The 0.42 ton PM10/acre-month emission factor for road construction is referenced in recent procedures documents for the EPA National Emission Inventory (EPA 2001; EPA 2006).

PM2.5 Multiplier

0.10

PM2.5 emissions are estimated by applying a particle size multiplier of 0.10 to PM10 emissions. This methodology is consistent with the procedures documents for the National Emission Inventory (EPA 2006).

Control Efficiency for PM10 and PM2.5

0.50

The EPA National Emission Inventory documentation recommends a control efficiency of 50% for PM10 and PM2.5 in PM nonattainment areas. Wetting controls will be applied during project construction (EPA 2006).

References:

EPA 2001. *Procedures Document for National Emissions Inventory, Criteria Air Pollutants, 1985-1999*. EPA-454/R-01-006. Office of Air Quality Planning and Standards, United States Environmental Protection Agency. March 2001.

EPA 2006. *Documentation for the Final 2002 Nonpoint Sector (Feb 06 version) National Emission Inventory for Criteria and Hazardous Air Pollutants*. Prepared for: Emissions Inventory and Analysis Group (C339-02) Air Quality Assessment Division Office of Air Quality Planning and Standards, United States Environmental Protection Agency. July 2006.

MRI 1996. *Improvement of Specific Emission Factors (BACM Project No. 1)*. Midwest Research Institute (MRI). Prepared for the California South Coast Air Quality Management District, March 29, 1996.

CALCULATION SHEET-SUMMARY OF EMISSIONS

Alternative 1 Construction Emissions for Criteria Pollutants (tons per year)									
Emission Source	VOC	CO	NOx	PM-10	PM-2.5	SO2	CO2	CO2 Equivalents	Total CO2
Combustible Emissions	1.61	6.68	13.44	1.28	1.24	1.74	1265.20	4219.05	5484.25
Construction Site-Fugitive PM-10	NA	NA	NA	25.08	2.51	NA	NA	NA	NA
Construction Workers Commuter & Trucking	0.97	9.06	1.25	0.02	0.02	NA	279.29	411.84	691.13
Total emissions-CONSTRUCTION	2.58	15.74	14.68	26.38	3.77	1.74	1544.49	4630.89	6175.38
Ongoing emissions from commuters	0.46	4.31	0.33	0.00	0.00	NA	134.99	167.92	302.91
De minimis Threshold (1)	100	100	100	100	100	100	NA	NA	25,000

1. Nueces County is in attainment for all NAQQS

Carbon Equivalents	Conversion Factor
N2O or NOx	311
Methane or VOCs	25

Source: EPA 2010 Reference, Tables and Conversions, Inventory of U.S. Greenhouse Gas Emissions and Sinks;
<http://www.epa.gov/climatechange/emissions/usinventoryreport.html>