

# **Draft Environmental Assessment**

## **Fire Station #50**

**City of San Antonio Fire Department  
San Antonio, Bexar County, Texas**

**EMW-2009-FC-05882**

**July 2010**

**U.S. Department of Homeland Security  
800 North Loop 288  
Denton, Texas 76209**



**FEMA**

## EXECUTIVE SUMMARY

This Environmental Assessment (EA) discusses the actual and potential social, economic, and environmental impacts of the construction of a new fire station, Fire Station #50 located at 15776 Applewhite Road, San Antonio, Bexar County, Texas on approximately 3.21 acres. This project is being funded by the Federal Emergency Management Agency (FEMA) with an Assistance to Firefighters Fire Station Construction Grant (AFGSCG) in the amount of \$4,133,118.

This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the President's Council on Environmental Quality (CEQ) regulations to implement NEPA (40 Code of Federal Regulations (CFR) Parts 1500-1508), and FEMA's regulations implementing NEPA (44 CFR Part 10). FEMA will use the findings in this EA to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

The purpose and need of the proposed project is to improve response times within the service area. Alternatives were reviewed for satisfying the purpose and need of the proposed project. Alternative A - No Action and Alternative B - Construct New Facility were identified as the reasonable alternatives and carried forward for further study. Following evaluation and consideration of the described social, economic, and environmental impacts of the reasonable alternatives and their ability to meet the project need and purpose, this EA identifies the Construct New Facility alternative as the preferred alternative.

Analysis of the following resources indicated no substantial direct effect(s) for the proposed project to floodplains, groundwater, threatened and impaired waters, waters of the U.S., migratory birds, threatened and endangered species, transportation, historical resources, archeological resources, environmental justice populations, or hazardous materials. Soil, vegetation, air, and noise each had minor direct impacts that were not considered substantial. No indirect or cumulative impacts were identified for the proposed project.

The City of San Antonio will notify the public of the availability of the draft EA through publication of a notice in the local newspaper of record. The draft EA will be available at both a local repository and at FEMA.gov. A 15-day public comment period will commence on the initial date of the public notice. FEMA will consider and respond to all public comments either individually or in the Final EA.

As part of the development of this EA, coordination with appropriate federal and state resource agencies was initiated. Agencies included the Natural Resource Conservation Service, Texas Commission on Environmental Quality, Texas Historical Commission, and Texas Parks and Wildlife Department. Mitigation and other conditions established in this EA and committed as part of the decision shall be implemented by FEMA and SAFD.

The finding of this EA concludes that the proposed construction of Fire Station #50 for the SAFD will result in no significant environmental impacts to the human or natural environment; therefore, the proposed action meets the requirements of a FONSI under NEPA and the preparation of an EIS will not be required.

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## List of Acronyms

APE	Area of Potential Effect
BMP	Best Management Practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CWA	Clean Water Act
EA	Environmental Assessment
EComm	Ecological Communications Corporation
EIS	Environmental Impact Statement
EMS	Emergency Medical Service
EO	Executive Order
EOR	Element Occurrence Record
EPA	Environmental Protection Agency
ERNS	Emergency Response Notification System
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FR	Federal Register
FSC	Fire Station Construction
FWPCA	Federal Water Pollution Control Act
GA	Geologic Assessment
LPST	Leaking Petroleum Storage Tank
MS4	Municipal Separate Storm Water Sewer System
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NDD	Natural Diversity Database
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NO <sub>2</sub>	Nitrogen Dioxide
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
O <sub>3</sub>	Ozone
PM	Particulate Matter
PPB	Parts Per Billion
PST	Petroleum Storage Tank
RCRA	Resource Conservation and Recovery Act

RRC	Texas Railroad Commission
SAFD	City of San Antonio Fire Department
SAL	State Archeological Landmark
SIP	State Implementation Plan
SO <sub>2</sub>	Sulphur Dioxide
SPL	State Priority List (Texas Superfund Registry)
SWFL	Solid Waste Landfill
SWPPP	Storm Water Pollution Prevention Plan
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
THC	Texas Historical Commission
TMDL	Total Maximum Daily Load
TPDES	Texas Pollutant Discharge Elimination System
TPWD	Texas Parks and Wildlife Department
TSS	Total Suspended Solids
TSWQS	Texas Surface Water Quality Standards
TxDOT	Texas Department of Transportation
SHPO	State Historic Preservation Officer
U.S.	United States
USACE	United State Army Corps of Engineers
USC	United State Code
USFWS	United State Fish and Wildlife Service
WPAP	Water Pollution Abatement Plan
WSS	Web Soil Survey

# **1 Introduction**

## **1.1 PROJECT AUTHORITY**

This project is being funded by the Federal Emergency Management Agency (FEMA) with an Assistance to Firefighters Fire Station Construction Grant (AFGSCG). The City of San Antonio Fire Department (SAFD) received \$ 9,115,335 to be used for the construction of two fire stations, Fire Station #50 located at Applewhite Road in South San Antonio in the amount of \$4,133,118 and Fire Station #51 located at Beckwith Boulevard in Northwest San Antonio in the amount of \$4,982,216. This Environmental Assessment (EA) was prepared for Fire Station #50 only. A separate EA is being prepared for Fire Station #51.

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the President's Council on Environmental Quality (CEQ) regulations to implement NEPA (40 Code of Federal Regulations (CFR) Parts 1500-1508), and FEMA's regulations implementing NEPA (44 CFR Part 10). The purpose of this EA is to analyze the alternatives and assess the potential environmental impacts associated with the proposed construction of Fire Station #50. FEMA will use the findings in this EA to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

## **1.2 PROJECT LOCATION**

The proposed project is located on a 3.21-acre tract of vacant land at 15776 Applewhite Road (29.2648378 by -98.5508111). The project site lies approximately 0.50 miles north of the intersection of Lone Star Pass and Applewhite Road within an area that was recently annexed by the City of San Antonio, on the south side of San Antonio, Bexar County, Texas (see **Figure 1**).

# **2 Purpose and Need**

The purpose and need of the proposed project is to improve response times within the service area. Fire Station #50 will establish a permanent engine company in response to the annexation of an area south of San Antonio which is the setting of recent urban growth and development.

A mobile facility was temporarily placed in this area to improve response times to the newly built and operational Toyota Plant and Texas A&M University campus, plus the new residential and commercial development on April 4, 2006. The existing temporary facility, which is housed in a mobile home located at 12703 Applewhite Road, San Antonio, Texas (approximately one mile north of the proposed Fire Station #50), has limited capacity and cannot be expanded to add an emergency medical service (EMS) unit or increase fire staffing. The existing temporary facility is 2,178 square feet and includes a kitchen, dayroom, and sleeping quarters.

According to a recent plan to expand the residential and commercial establishment of this area, 6,938 new residential units will be constructed and 5,977,200 square feet of commercial property will be developed. Additionally, this area will also include 150 acres of hospital and sports facilities. As a matter of cause and effect, increases in population and development produce an increased number of incidents that require first-due response. Currently, only one percent of the first-due response area can currently be protected within a five minute response time (from

the time of dispatch). Within the general area that Fire Station #50 responds to, the current first unit response time (dispatch to on scene) (without the addition of the existing engine company located in the temporary facility) average is approximately five minutes, 38 seconds.

The SAFD serves an urban community with a 469 square mile primary/first-due response area which includes critical state infrastructure, approximately 904 occupied commercial, industrial, residential or institutional structures that are over four stories tall, and a permanent resident population of 1,352,906. The SAFD also responds to mutual aid calls from the 12 regional surrounding counties covering 11,354 square miles and 1,807,868 people. Further, because San Antonio is the Alamo Regional Command and Logistics Center for Texas for major hurricane events, the SAFD also provides mutual aid to the 26 counties along the Texas Gulf Coast.

### **3 Alternatives**

This section describes the alternatives reviewed for satisfying the need and purpose of the proposed project. Following evaluation of project needs and goals, two reasonable alternatives were identified. From the reasonable alternatives, a preferred alternative has been recommended. This section serves to document the alternatives process and the rationale for the recommendation of a preferred alternative.

#### **3.1 ALTERNATIVES REFINEMENT**

In response to the annexation of an area south of San Antonio, the SAFD performed an analysis to identify an appropriate site for the location of a new fire station. Specifically, access and centralizing the station within the response area were given consideration. The facility placement goal of positioning resources to have the first arriving engine company within 4.25 minutes travel time of 90% of all city blocks was used to define an area where the station could be placed. The following goals were identified in the refinement process for Fire Station #50:

- Accessibility
- Availability of property
- Cost effectiveness (project will not require condemnation, demolition, or reconstruction)
- Ability to meet need and purpose

Once this area was identified, SAFD worked with Toyota to identify the proposed site which Toyota, in turn, donated to the City of San Antonio.

#### **3.2 REASONABLE ALTERNATIVES**

The No Action alternative and Construct New Facility were identified as the reasonable alternatives and carried forward for further study.

##### **3.2.1 Alternative A - No Action**

Although the No Action alternative does not satisfy the need and purpose for the proposed project, CEQ guidelines for the preparation of environmental documents require that the No Action alternative be carried forward as the basis of comparison for all reasonable alternatives. The No Action alternative will entail no construction of a new fire station for the City of San Antonio. Consequently, none of the 10,663-acre proposed first-due response area will be serviced by neighboring fire companies within a 5-minute response time (dispatch to on-scene).

### **3.2.2 Alternative B - Construct New Facility**

Fire Station #50 (proposed project) will construct a new fire station in south San Antonio. The proposed 12,412 square foot fire station will be built on vacant property owned by the City of San Antonio that is currently zoned for mixed light industrial development.

The station will be constructed for a permanent engine company and will accommodate three apparatus bays, one EMS bay, and living quarters for two fire companies and two EMS technicians. The building will be constructed on steel reinforced on grade concrete slab. The station's steel super structure will be clad in masonry. The building will be roofed with a standing seam metal roof and will be Silver Leadership in Energy and Environment Development (LEED) Certified. The proposed new fire station will be designed and built according to the most recently approved requirements and codes developed by the International Code Council as well as National Fire Protection Association (NFPA) standards that involve fire station construction including sprinkler systems (in accordance with NFPA 1, chapter 13) and fire alarms and vehicle exhaust extraction systems (in accordance with NFPA 1500, chapter 9).

Construction of Fire Station #50 will also include 28 regular parking spaces, two accessible spaces, and two van accessible spaces for a total of 30- nine-foot (typical) parking spaces. Plans include two access driveways to accommodate one 21' EMS bay, three apparatus bays (58' total width), and a 30' two-way driveway. Utilities are readily available to the project site and will be provided by San Antonio Water System (water and sewer), CPS Energy (gas and electric), AT&T (telephone), and Time Warner Cable (television). By establishing this station, 28% of the first-due response area, 3,002 acres, will be within a 5-minute response time (dispatch to on scene). See **Figure 2: Site Map**.

### **3.3 PREFERRED ALTERNATIVE**

Following evaluation and consideration of the described social, economic, and environmental impacts of the reasonable alternatives and their ability to meet the project need and purpose, this EA identifies the Construct New Facility alternative as the preferred alternative. The preferred alternative will best fulfill the need and purpose for the proposed project while minimizing impacts to the human and natural environment. Final selection of the preferred alternative will be made when comments on impacts and the environmental document and from the public have been fully evaluated.

## **4 Affected Environment and Impacts**

This section describes the existing social, economic, and environmental setting for the proposed Fire Station #50 project, as well as qualitative and quantitative analyses of the potential for environmental consequences resulting from the construction of the proposed project. Potential effects are presented for the No Action and the Construct New Facility alternatives.

**Table 1** presents a summary of effects and mitigation measures for each of the reasonable alternatives.

**Table 1: Summary of Project Effects and Mitigation Measures**

<b>Resource</b>	<b>Units</b>	<b>Alternative A: No Action</b>	<b>Alternative B: Construct New Facility</b>
Geology	Sensitive features	None; No effect.	None; No effect.
Soil	Acres	None; No effect.	Minor adverse effect. Construction of a new fire station at the proposed site will cause soil disturbance throughout the proposed project site.
Floodplains	Acres	None; No effect.	None; No effect.
Threatened and Impaired Waters	Number	None; No effect.	None; No effect.
Groundwater	Qualitative	None; No effect.	None; No effect.
Waters of the US, including wetlands	Acres	None; No effect.	None; No effect.
Vegetation	Acres	None; No effect.	3.21 acres; minor adverse effect.
Migratory Birds	Qualitative	No effect.	No effect. All vegetation removal, ground disturbing activities, and construction activities which produce noises that could harass nesting species will occur outside of the nesting season from March 15th to September 15th.
Threatened and Endangered Species	Qualitative	No effect.	No effect. FEMA has determined that the proposed project will have no effect to federally listed species or designated critical habitat.
Air Quality	Qualitative	No effect.	Minor adverse effect. Temporary increases in air pollutant emissions from construction activities, equipment, and related vehicles may result. The potential impacts of particulate matter emissions will be minimized by using fugitive dust control measures such as covering or treating disturbed areas with dust suppression techniques, sprinkling, covering loaded trucks, and other dust abatement controls, as appropriate.
Transportation	Qualitative	None; No effect.	None; No effect.
Noise	Impacted Receivers	None; No effect.	None; minor adverse effect. Noise levels within and adjacent to the proposed project will increase during construction. The noise levels generated will be limited to workday daylight hours for the duration of the construction work. The increase in noise is expected to be minor and will not affect any sensitive receivers. During operation of the facility, sirens operated by emergency response vehicles could have minor noise impacts to adjacent property

Resource	Units	Alternative A: No Action	Alternative B: Construct New Facility
			residents depending on the frequency and timing of emergency responses.
Historic Resources	Sites	None; No effect.	None; No effect.
Archeological Resources	Sites	None; No effect.	None; No effect. No archeological sites located within project area. In the event that archeological deposits, including any Native American pottery, stone tools, bones, or human remains, are uncovered, the project shall be halted and SAFD shall stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. All archeological findings will be secured and access to the sensitive area restricted. SAFD will inform FEMA immediately and FEMA will consult with the SHPO or THPO and Tribes and work in sensitive areas cannot resume until consultation is completed and appropriate measures have been taken to ensure that the project is in compliance with the National Historic Preservation Act.
Environmental Justice	Qualitative and Quantitative	No benefit provided to community in vicinity of the proposed project to improve response times.	Beneficial effect. Project will provide enhance fire protection coverage and emergency response. No adverse impacts to environmental justice populations.
Hazardous Materials	Sites	None; No effect.	None; No effect. If hazardous substances/wastes encountered unexpectedly during construction, appropriate management measures will be initiated per applicable federal, state, and local regulations.

#### 4.1 GEOLOGY AND SOILS

The proposed project site is located entirely within Fluvial terrace deposits (Qt). (**Figure 3: Geologic Atlas**). Qt consists of gravel, sand, silt, and clay deposits found predominantly above flood level along entrenched streams adjacent to the Edwards Plateau. The proposed project is not located within any zone (recharge, contributing, transition) of the Edwards Aquifer. Therefore, neither a Geological Assessment (GA) nor a contributing zone plan (CZP) nor a water pollution abatement plan (WPAP) is required.

The Farmland Protection Policy Act (FPPA of 1981, P.L. 97-98 and amendments, 7 United States Code (USC). 420(b)) authorizes the U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS) to develop criteria for identifying the effects of federal programs

on the conversion of farmland to non-agricultural uses. The proposed project is located within annexed area south of San Antonio. It is zoned for mixed light industrial development; however, since the proposed project area does not meet the definition of “already in urban development” or mapped as an urban area per 7 CFR Ch.VI, Section 658.2, FPPA applies to the proposed project and coordination with the NRCS is required. One soil unit exists within the project area. Venus clay loam (VcA), occurs as smooth terraces 20 to 40 feet above the flood plains of the San Antonio and Medina Rivers and their main tributaries (**Figure 4: Soil Types**).

Alternative A – No Action: The No Action alternative will have no impacts on the soils or geology within the proposed project area.

Alternative B – Construct New Facility: Construction of a new fire station at the proposed site will cause soil disturbance throughout the proposed project site. The proposed project is zoned for mixed light industrial development. Coordination with the NRCS was conducted for impacts to prime farmland. Although the proposed project contains soils classified as Important Farmland, per the FPPA, sites with a rating less than 160 need no further consideration. The proposed project scored 104 and the NRCS concluded that no additional consideration will be needed for this project. (see NRCS coordination letters in **Appendix B: Agency Correspondence**).

## **4.2 WATER RESOURCES**

### **4.2.1 Floodplains**

Executive Order 11988 (Floodplain Management) requires federal agencies to avoid or minimize development in the floodplain except when there are no practicable alternatives. The Federal Emergency Management Agency administers the National Flood Insurance Program (NFIP). Bexar County is a participating member of the NFIP. Federal Insurance Rate Maps (FIRM) were assessed in order to determine the extent of the floodplains and regulatory floodways in the proposed project area. The proposed project area is not located within FEMA designated 100-year or 500-year floodplain (see **Figure 5: USGS/FEMA**). Since the fire station is considered a critical facility, it must be located above the 500-year floodplain. Coordination with the local Floodplain Administrator will not be required for implementation of the proposed project.

### **4.2.2 Section 303 - Threatened and Impaired Waters**

The Texas Surface Water Quality Standards (TSWQS) apply to all surface water features in the state. These standards are enumerated in Title 30, Chapter 307 of the TAC. The TCEQ monitors the quality of surface water in Texas to evaluate physical, chemical, and biological characteristics of aquatic systems. Water quality is monitored in relation to human health concerns, ecological condition, and designated uses. TSWQS data provide a basis for effective policies that promote the protection, restoration, and wise use of surface water in Texas.

Formerly called the "Texas Water Quality Inventory and 303(d) List," the TCEQ publishes the Texas Integrated Report which evaluates the quality of surface waters in Texas, and provides resource managers with a tool for making informed decisions when directing agency programs. The Texas Integrated Report satisfies the requirements of federal Clean Water Act (CWA)

Sections 305(b) and 303(d). The TCEQ produces a new report every two years in even-numbered years, as required by law and the 303(d) List must be approved by the U.S. Environmental Protection Agency (EPA) before it is final.

Leon Creek is located 700 feet from the proposed project area. As identified in the TCEQ 2008 Texas 303(d) list, the “Lower Leon Creek” (segment 1906) is located between the confluence with the Medina River in Bexar County and its headwaters northwest of San Antonio (see **Figure 6: Impaired Waters**). Lower Leon Creek is listed in the area closest to the proposed project (area 1906\_06) for unacceptable levels of bacteria under Category 5a which means that a total maximum daily load (TMDL) analysis is underway, scheduled, or will be scheduled.

### 4.2.3 Groundwater

The Edwards Aquifer and associated limestones is the most important aquifer in the San Antonio area. The proposed project is not located over any zone of the Edwards Aquifer (transition, recharge, contributing). Other geologic units forming the major and minor aquifers in the San Antonio area include the Carrizo Sand and the Wilcox Group. According to the Texas Water Development Board report, “*Ground-Water Resources of the San Antonio Area, Texas*”:

*The Carrizo Sand of Eocene age supplies water to the city of Devine in Medina County and to a few irrigation wells in the extreme southern part of Bexar County. The undifferentiated sands of the Wilcox Group have not been fully tested, but in wells used for domestic supply the water is generally of fair to poor quality.*

The proposed project is located over an outcrop of the Carrizo-Wilcox Aquifer. The Carrizo-Wilcox Aquifer is a porous media aquifer that is less susceptible to contamination than the Edwards Aquifer due to slower recharge rates and greater potential for attenuation of contaminants through rock-water interaction. Since the project is not located over any zone of the regulated Edwards Aquifer, compliance with 30 TAC 213, commonly referred to as the “Edwards Rules” or the “Edwards Aquifer Rules” as regulated by the TCEQ does not apply.

### 4.2.4 Waters of the U.S. (including wetlands)

The EPA, through the United States Army Corps of Engineers (USACE) is charged with the regulation of discharges of dredged or fill material into “waters of the United States (U.S.)” pursuant to the Federal Water Pollution Control Act (FWPCA) of 1972 and subsequently modified to the CWA in 1977. Section 404 of the CWA, overseen by EPA and administered by the USACE, regulates the discharge of dredged or fill material into waters of the United States, including wetlands. The term “waters of the United States,” as defined in 33 CFR 328.3 typically includes rivers, streams, creeks, lakes and adjacent or adjoining wetlands and specifically denotes:

- a. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

- b. All interstate waters including wetlands;
- c. All other waters such as intrastate lakes, rivers, streams ( including intermittent streams), mudflats, sandflats, wetlands, sloughs prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.

The term wetlands, as applied in the CWA and the USACE, includes those areas that are “inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances typically do support, a prevalence of vegetation typically adapted for life in saturated soils”. Inherent in this definition are the presence of three mandatory criteria; hydric soils, hydrophytic vegetation and wetland hydrology.

The proposed project was surveyed for waters of the U.S., including wetlands. The National Wetlands Inventory map was reviewed to identify potential wetlands within the proposed project site. No sites were identified. A consultant biologist conducted a field survey of the proposed project site on March 17, 2010. No wetlands or streams were identified within the proposed project site during the field surveys; therefore, the proposed project will have no impacts on waters of the U.S. Since no impacts to waters of the U.S. are anticipated, neither a USACE Section 404 Permit or nor Section 401 Certification will be required.

#### **4.2.5 Section 402 – Construction General Permit (CGP)**

This project will include an area of approximately 3.21 acres. Because the area of earth disturbance will be greater than one acre and less than five acres, a Construction General Permit (TXR150000) will apply to this project. The City of San Antonio will comply with TCEQ’s Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit (CGP). A Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented, and a signed construction site notice will be posted on the construction site. Neither a notice of intent (NOI) nor a notice of termination (NOT) will be required as long as the requirements of this general permit are followed.

Alternative A – No Action: The No Action alternative will have no impacts on water resources within the proposed project area.

Alternative B – Construct New Facility: The proposed project is not located within the 100-year or 500-year floodplain. Appropriate BMPs to prevent or reduce the discharge of pollutants into threatened and impaired waters will be implemented for stormwater runoff from the proposed project within the project Construction General Permit. The proposed project will not result in a discharge of dredged or fill material in any waters of the U.S.; therefore, a USACE Section 404 Permit will not be required.

## 4.3 BIOLOGICAL RESOURCES

### 4.3.1 Vegetation

According to the Texas Parks and Wildlife Department's (TPWD) map, *Natural Regions of Texas* the proposed project lies just within the Blackland Prairie Ecological Region (bordering the South Texas Brush Country). According to the map *The Vegetation Types of Texas* (TPWD, 1984), the proposed project is located within vegetation type "crops" (See **Figure 7: Vegetation Types**) and immediately adjacent to Mesquite-Live Oak-Bluewood Parks. The "crops" type refers to farmland while commonly associated plants of the Mesquite-Live Oak-Bluewood Parks vegetation type include Huisache (*Acacia farnesiana*), Whitebrush (*Aloysia gratissima*), Granjeno (*Celtis pallida*), Lotebush (*Ziziphus obtusifolia*), Desert Yaupon (*Schaefferia cuneifolia*), Mexican Persimmon (*Diospyros texana*), Agarito (*Berberis trifoliata*), Texas Pricklypear (*Opuntia lindheimeri*), Purple Three-awn (*Aristida purpurea*), and Hall Panicum (*Panicum hallii* var. *hallii*). Distribution of this vegetation type is primarily in the South Texas Plains.

The proposed project is located within the city limits of San Antonio. The vegetation on the proposed project site is comprised of grasses and annuals with scattered Honey Mesquite (*Prosopis glandulosa*) saplings. No mature trees are present on the project site. Other vegetation included India Mustard (*Brassica juncea*), Texas Pricklypear, Bedstraw (*Galium aparine*), Dakota Vervain (*Glandularia bipinnatifida*), Giant Ragweed (*Ambrosia trifida*), and Roosevelt Weed (*Baccharis neglecta*). See **Appendix C: Site Photos** for representative views of vegetation areas.

### 4.3.2 Migratory Bird Treaty Act

The terms of the Migratory Bird Treaty Act (MBTA) of 1918 apply to the proposed project. The MBTA prohibits all negative impacts to birds, young, eggs, or occupied nests in part or whole for all birds on the migratory birds list, except as authorized by federal permit. In the event that migratory birds are encountered on-site during project construction, every effort will be made to avoid adverse impacts to protected birds, active nests, eggs, and/or young. All vegetation removal, ground disturbing activities, and construction activities which produce noise that could harass nesting species will occur outside of the nesting season from March 15th to September 15<sup>th</sup>. See **Appendix B** for TPWD recommendations regarding migratory birds.

### 4.3.3 Threatened and Endangered Species

**Table 1** summarizes species which are listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS) or the TPWD, and their federal and state status and project effect. Each of these species is considered by these agencies as having the potential to occur in Bexar County.

A consultant biologist performed a search of Texas Parks and Wildlife Department's Natural Diversity Database (NDD) dated March 11, 2010 for possible Element Occurrence Records (EOR) within the project vicinity. The USFWS species by county report (March 15, 2010) as well as the TPWD County report (March 12, 2010) were also searched. One record is located east of the proposed project area. Element Occurrence Record Identification Number (EOID)

6014 is located 15 miles south of San Antonio and two miles east of the proposed project site where Sandhill Woollywhite (*Hymenopappus carrizoanus*) was collected in 1921 and 1980. No federal/state-listed threatened or endangered species or any other rare species or vegetation types were identified within 1.5 miles of the proposed project area. **Table 2** provides pertinent data on habitat and effect to federal and state-listed species or critical habitat.

**Table 2: State and Federally Listed Threatened/ Endangered Species in Bexar County, Texas and Project Effect**

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
A cave obligate crustacean ( <i>Monodella texana</i> )	Subaquatic, subterranean obligate; underground freshwater aquifers	No	No	The project is not located over the Edwards Aquifer. No sensitive features were identified within the proposed project area. This species will not be impacted by the proposed project.
A ground beetle ( <i>Rhadine exilis</i> ) FE	Small, essentially eyeless ground beetle; karst features in north and northwest Bexar County	No	No	The project is not located over the Edwards Aquifer. No known occurrences or potential habitat for this species occurs within the proposed project area.
A ground beetle ( <i>Rhadine infernalis</i> ) FE	Small, essentially eyeless ground beetle; karst features in north and northwest Bexar County	No	No	The project is not located over the Edwards Aquifer. No known occurrences or potential habitat for this species occurs within the proposed project area.
American Peregrine Falcon ( <i>Falco peregrinus anatum</i> ) FDL, ST	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.	No	No	Could migrate over area, but will not be impacted by the proposed project.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
Arctic Peregrine Falcon ( <i>Falco peregrinus tundrius</i> ) FDL	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.	No	No	Could migrate over area, but will not be impacted by the proposed project.
Big Red Sage ( <i>Salvia pentstemonoides</i> )	Texas endemic; moist to seasonally wet, steep limestone outcrops on seeps within canyons or along creek banks; occasionally on clayey to silty soils of creek banks and terraces, in partial shade to full sun; basal leaves conspicuous for much of the year; flowering June-October	No	No	No suitable habitat present.
Black bear ( <i>Ursus americanus</i> ) FT/SA, NL, ST	Within historical range of Louisiana Black Bear in eastern Texas, inhabits bottomland hardwoods and large tracts of undeveloped forested areas.	No	No	No suitable bottomland hardwoods or large tracts of undeveloped forested areas exists within or adjacent to the proposed project.
Black-capped Vireo ( <i>Vireo atricapilla</i> ) FE, SE	Typically occur in areas with thin soil and limestone bedrock that support scrubby vegetation dominated by broad-leaved shrubs. Shin oak or evergreen sumac ( <i>Rhus virens</i> ), and mountain laurel ( <i>Sophora secundiflora</i> ) are usually common in areas occupied by vireos in central Texas. Foliage volume generally high; relatively open upper canopy layer; territories typically range in size from about 2 to 4 acres.	No	No	No suitable habitat for use by this species was found in or adjacent to the proposed project.
Bracted Twistflower ( <i>Streptanthus bracteatus</i> )	Texas endemic; shallow, well-drained gravelly clays and clay loams over limestone in oak juniper woodlands and associated openings, on steep to moderate slopes and in canyon bottoms; several known soils include Tarrant, Brackett, or Speck over Edwards, Glen Rose, and Walnut geologic formations; populations fluctuate widely from year to year, depending on winter rainfall; flowering mid April-late May, fruit matures and foliage withers by early summer	No	No	No suitable habitat present.
Braken Bat Cave Meshweaver ( <i>Cicurina venii</i> ) FE	Small, eyeless, or essentially eyeless spider; karst features in north and northwest Bexar County	No	No	The project is not located over the Edwards Aquifer. No known occurrences or potential habitat for this species occurs within the proposed project area.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
Cascade Caverns Salamander ( <i>Eurycea latitans complex</i> ) ST	Endemic; subaquatic; springs and caves in Medina River, Guadalupe River, and Cibolo Creek watersheds within Edwards Aquifer area	No	No	Outside range, no suitable habitat present
Cave Myotis Bat ( <i>Myotis velifer</i> )	Colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow ( <i>Hirundo pyrrhonota</i> ) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum cave of Panhandle during winter; opportunistic insectivore. This species is found primarily at lower elevations (the Sonoran and Transition life zones) of the southwest, in areas dominated by creosote bush, palo verde, brittlebush, and cactus.	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Cokendolpher Cave Harvestman ( <i>Texella cokendolpheri</i> ) FE	Small, eyeless harvestman; karst features in north and northwest Bexar County	No	No	The project is not located over the Edwards Aquifer. No known occurrences or potential habitat for this species occurs within the proposed project area.
Comal Blind Salamander ( <i>Eurycea tridentifera</i> ) ST	Endemic; semi-troglobitic; found in springs and waters of caves	No	No	No suitable habitat present.
Comal Springs Dryopid Beetle ( <i>Stygoparnus comalensis</i> ) FE	Known to occur at Comal Springs in Comal County and at Fern Bank Springs in Hays County. Both springs are fed by flow from the Edwards Aquifer. Comal Springs Dryopid Beetle is the only known subterranean species in family Dryopidae and larval are presumed to inhabit the air-filled voids within the aquifer	No	No	Outside range of springs. The project will not affect a designated critical habitat. There is no suitable habitat within or adjacent to the proposed project area.
Comal Springs Riffle Beetle ( <i>Heterelmis comalensis</i> ) FE	Known only from San Marcos Springs in Hays County and from Comal Springs in Comal County. The springs are fed by flow from the Edwards Aquifer and are within the Guadalupe River Basin.	No	No	Outside range of springs. The project will not affect a designated critical habitat. There is no suitable habitat within or adjacent to the proposed project area.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
Correll's False Dragon-head ( <i>Physostegia correllii</i> )	Plant found in wet, silty clay loams on streamsides, in creek beds, irrigation channels and roadside drainage ditches; or seepy, mucky, sometimes gravelly soils along riverbanks or small islands in the Rio Grande; or underlain by Austin Chalk limestone along gently flowing spring-fed creek in central Texas; flowering May-September	No	No	No suitable habitat present.
Creeper (Squawfoot) ( <i>Strophitus undulatus</i> )	Mollusk that inhabits small to large streams, prefers gravel or gravel and mud in flowing water; Colorado, Guadalupe, San Antonio, Neches (historic), and Trinity (historic) River basins	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Elmendorf's Onion ( <i>Allium elmendorfii</i> )	Texas endemic plant; known in 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	No	No	No suitable habitat present.
False Spike Mussel ( <i>Quincuncina mitchelli</i> ) ST	Inhabits substrates of cobble and mud, with water lilies present; Rio Grande, Brazos, Colorado, and Guadalupe (historic) river basins	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Fountain Darter ( <i>Etheostoma fonticola</i> ) FE	Fountain darters require clean, spring-fed waters with bottom vegetation. Only two populations exist in the world. They are most often found in mats of filamentous green algae.	No	No	This small fish lives only in the San Marcos and Comal River headwaters (where the rivers begin) in Hays and Comal counties, Texas. There is no suitable habitat within or adjacent to the proposed project area, and the project will not affect designated critical habitat.
Ghost-faced Bat ( <i>Mormoops megalophylla</i> )	Colonially roosts in caves, crevices, abandoned mines, and buildings; insectivorous; breeds late winter-early spring; single offspring born per year	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
Golden Orb ( <i>Quadrula aurea</i> ) ST	Mollusk that inhabits sand and gravel in some locations and mud at others; intolerant of impoundment in most instances; Guadalupe, San Antonio, and Nueces River basins	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Golden-cheeked Warbler ( <i>Dendroica chrysoparia</i> ) FE, SE	Live oak /Ashe juniper ( <i>Juniperus ashei</i> ) woodlands; mature Ashe juniper and high canopy closure needed for nesting material; broad-leafed deciduous species such as lacey oak ( <i>Quercus glaucoides</i> ) and Texas Oak ( <i>Quercus buckleyi</i> ) necessary for insect prey; range usually 6 to 20 acres. Restricted to habitats in Hill Country and on Edwards Plateau.	No	No	No suitable habitat present.
Government Canyon Bat Cave Meshweaver ( <i>Cicurina vespera</i> ) FE	Small, eyeless, or essentially eyeless spider; karst features in north and northwest Bexar County	No	No	The project is not located over the Edwards Aquifer. No known occurrences or potential habitat for this species occurs within the proposed project area.
Government Canyon Bat Cave Spider ( <i>Neoleptoneta microps</i> ) FE	Small, eyeless, or essentially eyeless spider; karst features in north and northwest Bexar County	No	No	The project is not located over the Edwards Aquifer. No known occurrences or potential habitat for this species occurs within the proposed project area.
Gray Wolf ( <i>Canis lupus</i> ) FE, SE	Extirpated; formerly known throughout the western two-thirds of the state in forests, brushlands, or grasslands	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Guadalupe Bass ( <i>Micropterus treculii</i> )	Endemic to perennial streams of the Edward's Plateau region; it was introduced in the Nueces River system. Guadalupe Bass build gravel nests for spawning, preferably in shallow water.	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Helotes Mold Beetle ( <i>Batrissodes venyivi</i> ) FE	Small, eyeless mold beetle; karst features in northwestern Bexar County and northeastern Medina County	No	No	The project is not located over the Edwards Aquifer. No known occurrences or potential habitat for this species occurs within the proposed project area.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
Hill Country Wild-mercury ( <i>Argythamnia aphoroides</i> )	Texas endemic plant; mostly in bluestem-grama grasslands associated with plateau live oak woodlands on shallow to moderately deep clays and clay loams over limestone on rolling uplands, also in partial shade of oak-juniper woodlands in gravelly soils on rocky limestone slopes; flowering April-May with fruit persisting until midsummer	No	No	No suitable habitat present.
Interior Least Tern ( <i>Sterna antillarum athalassos</i> ) FE, SE	This subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish & crustaceans, when breeding forages within a few hundred feet of colony	No	No	Could migrate over area, but will not be impacted by the proposed project.
Madla Cave Meshweaver ( <i>Cicurina madla</i> ) FE	Small, eyeless, or essentially eyeless spider; karst features in north and northwest Bexar County	No	No	The project is not located over the Edwards Aquifer. No known occurrences or potential habitat for this species occurs within the proposed project area.
Manfreda Giant-skipper ( <i>Stallingsia maculosus</i> )	Habitat for the Manfreda Giant-skipper is subtropical thorn and pine forests. The larval Host plant is Texas tuberose (also known as spice lily) ( <i>Manfreda maculosa</i> ).; skipper larvae usually feed inside a leaf shelter and pupate in a cocoon made of leaves fastened together with silk. Adult Manfreda Giant-skipper aren't known to feed, but in similar species males get moisture from dung and wet earth.	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area. Neither the laval host plant nor this butterfly identified in proposed project area.
Mimic Cavesnail ( <i>Phreatodrobia imitata</i> )	Subaquatic mollusk; only known from two wells penetrating the Edwards Aquifer	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Mountain Plover ( <i>Charadrius montanus</i> )	During breeding season, nests on high plains or shortgrass prairie, on ground in shallow depression. During non-breeding season, frequents shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous.	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Ocelot ( <i>Leopardus pardalis</i> ) FE, SE	Dense chaparral thickets; mesquite-thorn scrub and live oak mottes; avoids open areas; breeds and raises young June-November	No	No	Habitat for the ocelot is not present within or adjacent to the proposed project area.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
Parks' Jointweed ( <i>Polygonella parksii</i> )	Texas endemic plant; mostly found on deep, loose, whitish sand blowouts (unstable, deep, xeric, sandhill barrens) in Post Oak Savanna landscapes over the Carrizo and Sparta formations; also occurs in early successional grasslands, along right-of-ways, and on mechanically disturbed areas; flowering June-late October or September-November	No	No	No suitable habitat present.
Peck's Cave Amphipod ( <i>Stygobromus (=Stygonectes) pecki</i> ) FE	Crustacean that occupies subterranean habitats of the Edwards Aquifer near several spring openings in Comal County.	No	No	The project will not affect a designated critical habitat. There is no suitable habitat within or adjacent to the proposed project, and the project will not affect recharge of the Edwards Aquifer in Hays County, Texas.
Peregrine Falcon ( <i>Falco peregrinus</i> ) FDL, ST	Both subspecies (Arctic and American) migrate across the state from more northern breeding areas in US and Canada to winter along coast and farther south. Subspecies ( <i>F. p. anatum</i> /American Peregrine) is also a resident breeder in west Texas; the two subspecies' listing statuses differ, thus the species level shows this dual listing status because the subspecies are not easily distinguishable at a distance. Reference is generally made only to the species level.	No	No	Could migrate over area, but will not be impacted by the proposed project.
Pistolgrip ( <i>Tritogonia verrucosa</i> )	Mollusk known to inhabit stable substrate, rock, hard mud, silt, and soft bottoms, often buried deeply; east and central Texas, Red through San Antonio River basins	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
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	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Rawson's Metalmark ( <i>Calephelis rawsoni</i> )	Inhabits moist areas in shaded limestone outcrops in central Texas, desert scrub or oak woodland in foothills, or along rivers elsewhere; larval hosts are <i>Eupatorium havanense</i> , <i>E. greggi</i> .	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Red Wolf ( <i>Canis rufus</i> ) FE, SE	Extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal prairies	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
Robber Baron Cave Meshweaver ( <i>Cicurina baronia</i> ) FE	Small, eyeless, or essentially eyeless spider; karst features in north and northwest Bexar County	No	No	The project is not located over the Edwards Aquifer. No known occurrences or potential habitat for this species occurs within the proposed project area.
Rock Pocketbook ( <i>Arcidens confragosus</i> )	Mollusk known to inhabit mud, sand, and gravel substrates of medium to large rivers in standing or slow flowing water, may tolerate moderate currents and some reservoirs, east Texas, Red through Guadalupe River basins.	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
San Marcos Gambusia ( <i>Gambusia georgei</i> ) FE	The San Marcos gambusia lives in clear spring water coming from the headwaters of the San Marcos River.	No	No	This species is found only in the San Marcos River, Hays County, Texas. The project will not affect a designated critical habitat. There is no suitable habitat within or adjacent to the proposed project area.
San Marcos Salamander ( <i>Eurycea nana</i> ) FT	Clear, flowing spring water coming from the headwaters of the San Marcos River provide habitat for the San Marcos salamander.	No	No	The San Marcos Salamander occurs only in Spring Lake and an adjacent downstream portion of the upper San Marcos River. The project will not affect a designated critical habitat. There is no suitable habitat within or adjacent to the proposed project area.
Sandhill Woollywhite ( <i>Hymenopappus carrizoanus</i> )	Texas endemic plant; disturbed or open areas in grasslands and post oak woodlands on deep sands derived from the Carrizo Sand and similar Eocene formations; flowering April-June	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Spot-tailed Earless Lizard ( <i>Holbrookia lacerate</i> )	Species known to 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	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
Texas Blind Salamander ( <i>Typhlomolge rathbuni</i> ) FE	Habitat is underground aquifer system of the Edwards Plateau, where water temperature averages 21°C.	No	No	Historically, known only from Hays County, Texas. At present, known in the San Marcos Pool of the Edwards Aquifer in Hays County, Texas. There is no suitable habitat within or adjacent to the proposed project area.
Texas Fatmucket ( <i>Lampsilis bracteata</i> ) ST	Mollusk that inhabits streams and rivers on sand, mud, and gravel substrates; intolerant of impoundment; broken bedrock and coarse gravel or sand in moderately flowing water; Colorado and Guadalupe River basins	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Texas Garter Snake ( <i>Thamnophis sirtalis annectens</i> )	Wet or moist microhabitats are conducive to the species occurrence, but is not necessarily restricted to them; hibernates underground or in or under surface cover; breeds March-August	No	No	This species may occur or migrate through the project area to brumate.
Texas Horned Lizard ( <i>Phrynosoma cornutum</i> ) ST	Open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soils may vary in texture from sandy to rocky. Diet consists primarily of harvester ants ( <i>Pogonomyrmex</i> sp.) and their distribution is tied closely with their prey items.	No	No	A harvester ant mound was identified within the project site; however, no suitable habitat was present (see <b>Appendix C: Site Photos</b> ).
Texas Indigo Snake ( <i>Drymarchon melanurus erebennus</i> ) ST	Texas south of the Guadalupe River and Balcones Escarpment; inhabits thornbush-chaparral woodlands of south Texas, in particular dense riparian corridors, but can do well in suburban and irrigated croplands if not molested or indirectly poisoned; requires moist microhabitats; may use rodent burrows for shelter	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Texas Pimpleback ( <i>Quadrula petrina</i> ) ST	Mollusk that inhabits mud, gravel and sand substrates, generally in areas with slow flow rates; Colorado and Guadalupe river basins	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Texas Salamander ( <i>Eurycea neotenes</i> )	Endemic; troglobitic; springs, seeps, cave streams, and creek headwaters; often hides under rocks and leaves in water	No	No	This species is restricted to Helotes and Leon Creek drainages.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
Texas Tortoise ( <i>Gopherus berlandieri</i> ) ST	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	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
Timber/Canebrake Rattlesnake ( <i>Crotalus horridus</i> ) ST	This snake is known in swamps, floodplains, upland pine and deciduous woodlands, riparian zones, abandoned farmland; limestone bluffs, sandy soil or black clay; prefers dense ground cover, i.e. grapevines or palmetto	No	No	Potential suitable habitat and suitable foraging resources for use by this species was not present.
Toothless Blindcat ( <i>Trogloglanis pattersoni</i> ) ST	Troglobitic, blind catfish endemic to the San Antonio Pool of the Edward's Aquifer	No	No	Found only in southern Bexar County at depths of 1,350 to 2,000 feet below the surface; overpumping of the aquifer presents a threat. The proposed project will not impact this species.
Western Burrowing Owl ( <i>Athene cunicularia hypugaea</i> )	Inhabits 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	No	No	No suitable habitat is located on or immediately adjacent to the proposed project area.
White-faced Ibis ( <i>Plegadis chihi</i> ) ST	The ibis 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	No	No	Could migrate over area, but will not be impacted by the proposed project.
Widemouth Blindcat ( <i>Satan eurystomus</i> ) ST	Troglobitic, blind catfish endemic to the San Antonio Pool of the Edward's Aquifer	No	No	Found in the deep artesian Edwards Aquifer in Bexar County in the south and eastern part of San Antonio at depths of 1,350 to 2,000 feet below the surface; overpumping of the aquifer presents a threat. The proposed project will not impact this species.
Whooping Crane ( <i>Grus Americana</i> ) FE, SE	A potential migrant of the plains areas throughout most of the state and coast. Commonly winters in coastal marshes of Aransas, Calhoun, and Refugio Counties.	No	No	Could migrate over area, but will not be impacted by the proposed project.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
Wood Stork ( <i>Mycteria Americana</i> ) ST	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	No	No	Could migrate over area, but potential nesting sites were not observed in the area; therefore, this species will not be impacted by the proposed project.
Zone-tailed Hawk ( <i>Buteo albonotatus</i> ) ST	This hawk prefers arid open country, including open deciduous or pine-oak woodland, mesa or mountain county, often near watercourses, and wooded canyons and tree-lined rivers along middle-slopes of desert mountains; nests in various habitats and sites, ranging from small trees in lower desert, giant cottonwoods in riparian areas, to mature conifers in high mountain regions	No	No	Potential for occurring in Bexar County during spring and fall migration, but preferred habitat does not occur within the project area; therefore, this species will not be impacted by the proposed project.

**USFWS Status**

FE Federal Endangered  
 FT Federal Threatened  
 FDL Federal De-listed  
 FC Federal Candidate  
 PDL Proposed De-listed  
 FP/T Federal Proposed Threatened

FT/SA Federal Threatened due to similarity of appearance  
 NL Not listed

**TPWD Status**

ST State Threatened  
 SE State Endangered

A field visit was conducted for the proposed project on March 17, 2010 to identify potential habitat for threatened and endangered species. No suitable habitat for any of these species was identified within the proposed project area.

Alternative A – No Action: The No Action alternative will have no impacts on biological resources within the proposed project area.

Alternative B – Construct New Facility: Construction of a new fire station at the proposed project site will impact up to approximately 3.21 acres of vegetation; predominately grasses and forbs within the proposed project area.

Under the proposed project, the site will be cleared and graded for the construction of a fire station and associated drives and parking areas. There is no suitable habitat for federally protected species at the project site. Therefore, no impact to federally protected species is anticipated. FEMA has determined that the proposed project will have no effect to federally listed species or designated critical habitat.

#### 4.4 AIR QUALITY

The Clean Air Act (CAA) requires that states adopt ambient air quality standards. The standards have been established in order to protect the public from potentially harmful amounts of pollutants. The EPA has established Nation Ambient Air Quality Standards (NAAQS) for six air pollutants. These pollutants included sulfur dioxide (SO<sub>2</sub>), particulate matter with a diameter less than or equal to ten micrometers (PM<sub>10</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), and lead. The EPA has designated specific areas as NAAQS attainment or non-attainment areas. Non-attainment areas are any areas that do not meet (or that contribute to ambient air quality in a nearby area that does not meet) the quality standard for a pollutant. Attainment areas are any areas that meet ambient air quality standards. The proposed project is located in Bexar County which is currently classified as being in attainment status of the NAAQS. The San Antonio area (Bexar, Comal, Guadalupe and Wilson Counties) entered into an Early-Action Compact agreement with EPA in 2004. As part of the agreement, proactive efforts were implemented to improve air quality and the San Antonio area was designated as a deferred nonattainment area for ozone based on the 1997 ozone NAAQS of 80 parts per billion (ppb). EPA designated the San Antonio area in attainment on April 2, 2008.

The ozone NAAQS was lowered in 2008 to 75 ppb (73 Federal Register (FR) 16436), and in a March 12, 2009 letter from Governor Perry to the EPA, Bexar County was recommended to be designated as nonattainment for ozone. On January 6, 2010, the EPA proposed lowering the threshold for the acceptable amount of ground-level ozone from its 2008 standard of 75 ppb to a level within the range of 60 and 70 ppb. Following a reconsideration of the over 1,700 scientific studies, the recommendation of the independent Clean Air Scientific Advisory Committee, and the public comments that led to its decision to lower the threshold in 2008, the EPA said it had determined that the 2008 adjustment to the ozone threshold had not gone far enough to protect human health and the environment.

The EPA accepted written public input through March 22, 2010 on exactly where, within the 60 to 70 ppb range, the threshold should be set. The EPA held three public hearings on the proposal, one of which was in Houston on February 2, 2010. The EPA expects to announce its final decision regarding the clean air standard threshold in August 2010. It expects that the new standard designations of “attainment” or “nonattainment” will be made by August 2011. The proposed project will not violate any implementation plan for the county.

Alternative A – No Action: The No Action alternative will have no impacts on air quality within the proposed project area.

Alternative B – Construct New Facility: During the construction phase of this project there may be temporary increases in air pollutant emissions from construction activities, equipment, and related vehicles. The primary construction related emissions are particulate matter (fugitive dust) from site preparation and construction and non-road mobile source air toxics (MSAT)’s from construction equipment and vehicles. The primary MSAT emission related to construction is diesel particulate matter from diesel powered construction equipment and vehicles.

These emissions are temporary in nature (only occurring during actual construction) and it is not reasonably possible to estimate impacts from these emissions due to limitations of the existing models. However, the potential impacts of particulate matter emissions will be minimized by using fugitive dust control measures such as covering or treating disturbed areas with dust suppression techniques, sprinkling, covering loaded trucks, and other dust abatement controls, as appropriate. The MSAT emissions will be minimized by the small scale of the project. However, considering the temporary and transient nature of construction related emissions as well as the mitigation actions to be utilized, it is not anticipated that this project will have any significant short or long-term impacts on air quality in the area.

#### **4.5 TRANSPORTATION**

The proposed project is located within the southern side of the City of San Antonio. The Toyota manufacturing plant is immediately adjacent to the proposed project site at the intersection of Applewhite Road and Lone Star Pass. Applewhite Road intersects with State Highway (SH) 16 south of Loop 410 and then runs roughly parallel to SH 16.

Alternative A – No Action: The No Action alternative will have no impacts on transportation within the proposed project area.

Alternative B – Construct New Facility: Detours or road closures will not be necessary for construction of the proposed project, allowing access during construction hours. Applewhite Road is a four-lane divided roadway with sparse commercial and residential development. It is not anticipated that operation of the proposed Fire Station #50 will increase traffic congestion, cause delays, or alter existing travel patterns.

#### **4.6 NOISE**

NEPA provides broad authority and responsibility for evaluating and mitigating adverse environmental effects, including noise. NEPA directs federal agencies to use all practical means and measures to promote the general welfare and foster a healthy environment. Noise is commonly defined as unwanted sound. A noise receiver is a specific location of an outdoor area where frequent human activity occurs that might be impacted by noise and may benefit from reduced noise levels. No sensitive noise receivers are located adjacent to the proposed project.

Alternative A – No Action: The No Action alternative will have no impacts on noise within the proposed project area.

Alternative B – Construct New Facility: Noise levels within and adjacent to the proposed project site will increase during the proposed construction activities as a result of construction equipment and vehicular traffic. The noise levels generated will be limited to workday daylight hours for the duration of the construction work. The increase in noise is expected to be minor and will not affect any sensitive receivers. During operation of the facility, sirens operated by emergency response vehicles could have minor noise impacts to adjacent property residents depending on the frequency and timing of emergency responses.

## **4.7 CULTURAL RESOURCES**

Cultural resources are structures, buildings, archeological sites, districts (a collection of related structures buildings, and/or archeological sites), cemeteries and objects. Both federal and state laws require consideration of cultural resources during project planning. At the federal level, NEPA and the National Historic Preservation Act (NHPA) of 1966, among others apply to federal projects. In addition, state laws such as the Antiquities Code of Texas apply to these projects. Compliance with these laws requires consideration with the Texas Historical Commission (THC)/Texas State Historic Preservation Officer (SHPO) and/or federally-recognized tribes to determine the project's effects on cultural resources. Review and coordination of this project followed approved procedures for compliance with federal and state laws. The proposed project area of potential effect (APE) for historical resources is 150 feet from the limits of the proposed project site. The APE for archeological resources is defined as 125,017 square feet (the area of disturbance).

### **4.7.1 Historic Resources**

A review of the National Register of Historic Places (NRHP), the list of State Archeological Landmarks (SAL), and the list of Recorded Texas Historical Markers indicates that no properties within the APE are listed in the NRHP. No historic districts or structures 50 years of age or older (built prior to 1960) exist within the project APE. No historically significant properties have been previously documented within the APE. There are no Official Texas Historical Markers located within the project's APE.

### **4.7.2 Archeology**

On behalf of the City of San Antonio, Ecological Communications Corporation (EComm) consulted the Texas Archeological Sites Atlas maintained by the THC and the Web Soil Survey (WSS) maintained by the NRCS. The Texas archeological sites atlas indicates that the APE has been previously surveyed by UTSA's Center for Archaeological Research (CAR) in 2004. This survey covered a large area, including this project's entire APE. The landscape northeast of the Applewhite Road and Watson Road intersection, southwest of Leon Creek, was intensively investigated under TAC Permit No. 2982. In addition, the segment of Applewhite Road adjacent to the project area was also surveyed by CAR in 1998.

The project area contains deep clayey loam soils with some potential for buried archeological deposits. No previously recorded archeological sites are within the APE. No cemeteries, historical markers or NRHP listed properties are within the APE or within a 0.61 mile radius of the APE. Two known archeological sites are situated within a 0.6 mile radius of the APE, neither of which has been determined eligible as an SAL or NRHP. Site 41BX681 lies about 600 meters south of the project area and consisted of a historic site that was destroyed during the Toyota plant construction. No further work was recommended. Site 41BX548 lies about 1,000 meters west of the project area. It contained lithic debris within a small knoll adjacent to a margin of terrace along Leon Creek. Further work was recommended.

Despite the presence of soils concurrent with prehistoric human occupation and the proximity of a reliable water source, archaeological survey within the Fire Station #50 project area is not warranted since the entire project area has already been subject to an archeological field survey as recently as 2004. No archaeological resources that could be adversely affected by the

proposed development have been documented in this locality. Therefore, it is the recommendation of EComm that further archaeological investigations are not warranted in association with development of the Fire Station #50.

Alternative A – No Action: The No Action alternative will have no impacts on cultural resources within the proposed project area.

Alternative B – Construct New Facility: On behalf of the City of San Antonio, EComm submitted a request for SHPO consultation on May 11, 2010 to the THC. THC concurred that there will be no effect to historic properties and no survey is required on May 28, 2010 (see **Appendix B**). In the event that archeological deposits, including any Native American pottery, stone tools, bones, or human remains, are uncovered, the project shall be halted and SAFD shall stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. All archeological findings will be secured and access to the sensitive area restricted. SAFD will inform FEMA immediately and FEMA will consult with the SHPO or THPO and Tribes and work in sensitive areas cannot resume until consultation is completed and appropriate measures have been taken to ensure that the project is in compliance with the National Historic Preservation Act.

#### 4.8 ENVIRONMENTAL JUSTICE

Executive Order (EO) 12898 “Federal Actions to Address Environmental Justice in Minority Populations” requires each Federal agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations.”

A low income population is defined as one with a median annual income for a family of four equal to or below the 2009 national poverty level of \$22,050 according to the 2009 US Health and Human Services Poverty Guidelines<sup>1</sup>. Based on 2000 US Census Bureau data, the median annual income in the proposed project area is \$24,338 within Census Tract 1520 (**Table 3**). A total of 64 of the 173 study area households were below the poverty level. Low income households constitute a 37.9 percent of the population within this census tract.

**Table 3: Median Household Income and Poverty Status: 1999**

Area/Census Block Group	Total Households	Median Household Income	Households Below Poverty Level	
			Number	Percent
Bexar County	489,252	\$38,328	69,987	14.3%
City of San Antonio	405,887	\$36,214	63,250	15.6%
<b>Project Area</b>				
CT 1818.01	173	\$24,338	64	37.9%

Note: CT = census tract.

Source: U.S. Census Bureau. Census 2000. Tables P53 and P92. <http://factfinder.census.gov/>

<sup>1</sup> Federal Register: January 22, 2010 (Volume 75, Number 14), Page 3734-3735, Department of Health and Human Services, 2009 HHS Poverty Guidelines Extended Until March 1, 2010.

According to the 2000 U.S. Census Bureau, the project area is primarily Hispanic. Overall, the minority population of the project area represents 86.0%, of the total population which exceeds the overall minority percentages found in Bexar County and the City of San Antonio, 64.4% and 68.2 %, respectively (see **Table 4**).

**Table 4: Racial and Ethnic Composition of the Population**

Area/Census Block Group	Total Population	Population of One Race / Not Hispanic or Latino				Other / Two or More Races	Hispanic or Latino of Any Race	Total Minority Population
		White	Black or African American	American Indian / Alaska Native	Asian and Pacific Islander			
<b>Comparison Areas</b>								
City of San Antonio	1,144,554 100.0%	363,870 31.8%	72,926 6.4%	2,291 0.2%	18,031 1.6%	16,236 1.4%	671,200 58.6%	780,684 68.2%
Bexar County	1,292,931 100.0%	495,275 35.6%	94,147 6.8%	3,106 0.2%	22,471 1.6%	20,928 1.5%	757,004 54.3%	897,656 64.4%
<b>Project Area</b>								
CT 1818.01	715 100.0%	100 48.8%	16 5.7%	0 0.0%	22 6.5%	10 2.0%	567 37.0%	615 86.0%

Source: U.S. Census Bureau, Census 2000. Table P7. <http://factfinder.census.gov/>

Alternative A – No Action: The No Action alternative will provide no benefit to community in the vicinity of the proposed project to improve response times.

Alternative B – Construct New Facility: The proposed Fire Station #50 project will provide enhanced fire protection coverage and emergency response. All populations within south San Antonio and beyond will benefit from the enhanced capacity of the SAFD. The proposed project will not create a disproportionate adverse impact to any minority or low income population within the proposed project area.

#### 4.9 HAZARDOUS MATERIALS

A Phase I Environmental Site Assessment dated December 29, 2009 was prepared for the proposed project (see **Appendix D: Technical Reports**). Numerous federal and state regulatory databases were reviewed including: TCEQ’s Petroleum Storage Tank (PST) and Leaking Petroleum Storage Tank (LPST) Registry; Texas Superfund Registry (SPL) and State Voluntary Clean-up; the EPAs National Priority List (NPL); the Texas Railroad Commission (RRC); Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS); Emergency Response Notification System (ERNS); solid waste landfills (SWLF); and Resource Conservation and Recovery Act (RCRA).

No Recognized Environmental Areas of Concern in the immediate vicinity of the proposed project area were identified. A Phase II Environmental Site Assessment was not recommended.

Alternative A – No Action: The No Action alternative will not disturb any hazardous materials or create any potential hazard to human or environmental health.

Alternative B – Construct New Facility: Based on the assessment of this area, there is no indication that there are nearby releases into soils and/or shallow groundwater which may affect the proposed construction of a new fire station. If hazardous substances/wastes are encountered unexpectedly during construction, appropriate measures for proper management of the contamination will be initiated in accordance with all applicable federal, state, and local regulations.

## **5 Indirect and Cumulative Impacts**

The CEQ defines indirect effects as those which are caused by an action and are later in time and farther removed in distance, but are still reasonably foreseeable. They may include growth induced effects and changes in the pattern of land use, population densities, or growth rates and related changes in air, water, or other natural resources and ecosystems. These effects may not necessarily be restricted to just the study area.

The CEQ defines cumulative effects as those which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. As such, it may be difficult to understand the role that a proposed action may have in contributing to the overall or cumulative impacts to an area or resource.

The analysis of indirect and cumulative impacts relies heavily on both existing land use impacts and the land use changes anticipated to occur in the proposed project area and the effects these changes will have on the resources evaluated in the EA. The proposed project area is a rural area recently annexed into the City of San Antonio. The Toyota manufacturing plant is located immediately adjacent to the proposed project. Other existing and proposed (reasonably foreseeable) projects within the proposed project area are included in the Texas A&M University-San Antonio Master Plan. According to the Plan, expansion of residential and commercial establishments is anticipated including the development of 6,938 new residential units and 5,977,200 square feet of commercial property. At full build-out, the University is expected to serve a student population of up to 25,000.

Alternative A – No Action: The No Action alternative will not impose indirect or cumulative impacts on the resources analyzed in the EA.

Alternative B – Construct New Facility: As stated previously, the purpose and need of the proposed project is to improve response times within the service area. Neither economic development nor any opportunity for growth is proposed as a benefit of the proposed project. Development is ongoing and implementation of the proposed project will not change this condition.

As discussed in the EA, the proposed project will not have any substantial direct or indirect impacts. Therefore, the proposed project will have no cumulative impact on the human or natural environment. The proposed project is limited in scope with the construction of a new fire

station. Construction of the new fire station is necessary for the safety of citizenry at the local, regional, and state levels.

## **6 Public Involvement**

FEMA is the lead agency for ensuring environmental compliance for the proposed Fire Station #50 project. It is the goal of the lead agency to be responsive to the needs of the community and the purpose and need of the proposed action, while meeting the intent of federal environmental and cultural resource laws, including NEPA, and complying with all necessary provisions.

The City of San Antonio will notify the public of the availability of the draft EA through publication of a notice in the local newspaper of record. The draft EA will be available at both a local repository and at FEMA.gov. A 15-day public comment period will commence on the initial date of the public notice. FEMA will consider and respond to all public comments either individually or in the Final EA.

## **7 Agency Coordination and Permits**

As part of the development of this EA, coordination with appropriate federal and state resource agencies was initiated. The agencies and their respective required permits pertinent to the proposed project are summarized below.

### Natural Resource Conservation Service

No permit required

### Texas Commission on Environmental Quality

TPDES  
SWPPP

### Texas Historical Commission

No permit required

### Texas Parks and Wildlife Department

No permit required

## **8 Mitigation Measures**

Mitigation is defined as “the attempt to offset potential adverse effects of human activity on the environment.” The development of mitigation measures has become an integral part of the regulatory process and of conservation planning efforts. Specifically, NEPA regulations define mitigation as follows:

1. Avoiding adverse impacts by not taking an action.
2. Minimizing impacts by limiting the degree of action.
3. Rectifying by repairing, rehabilitating, or restoring the affected environment.

4. Reducing or eliminating impacts over time through preservation and maintenance activities.
5. Compensating for an impact by replacing or providing substitute resources or environments.

Throughout the NEPA process of evaluation of impacts to the human and natural environment for Fire Station #50, mitigating measures were considered to avoid or minimize environmental harm. Mitigation and other conditions established in this EA and committed as part of the decision shall be implemented by FEMA and SAFD. SAFD is required to obtain any necessary local, state, or federal permits prior to project implementation.

**Water Quality** – The City of San Antonio will comply with TCEQ’s TPDES Construction General Permit (CGP). A SWPPP will be prepared and implemented, and a signed construction site notice will be posted on the construction site.

**Migratory Bird Treaty Act** – All vegetation removal, ground disturbing activities, and construction activities which produce noise that could harass nesting species will occur outside of the nesting season from March 15th to September 15th.

**Air Quality** – The potential impacts of particulate matter emissions will be minimized by using fugitive dust control measures such as covering or treating disturbed areas with dust suppression techniques, sprinkling, covering loaded trucks, and other dust abatement controls, as appropriate.

**Noise** – The noise levels generated will be limited to workday daylight hours for the duration of the construction work.

**Archeological Resources** – In the event that archeological deposits, including any Native American pottery, stone tools, bones, or human remains, are uncovered, the project shall be halted and SAFD shall stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. All archeological findings will be secured and access to the sensitive area restricted. SAFD will inform FEMA immediately and FEMA will consult with the SHPO or THPO and Tribes and work in sensitive areas cannot resume until consultation is completed and appropriate measures have been taken to ensure that the project is in compliance with the National Historic Preservation Act.

**Hazardous Materials** – If hazardous substances/wastes encountered unexpectedly during construction, appropriate management measures will be initiated per applicable federal, state, and local regulations.

## 9 Conclusions

The finding of this Environmental Assessment concludes that the proposed construction of Fire Station #50 for the SAFD will result in no significant environmental impacts to the human or

natural environment; therefore, the proposed action meets the requirements of a FONSI under NEPA and the preparation of an EIS will not be required.

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