

# **Draft Environmental Assessment**

## **Fire Station #51**

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

**EMW-2009-FC-05882**

**June 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 #51 located at 5040 Beckwith Boulevard, San Antonio, Bexar County, Texas on approximately 2.87 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 \$4,982,216.

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 need and purpose 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, 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, groundwater, 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 San Antonio Water System, Texas Commission on Environmental Quality, Texas Historical Commission, Texas Parks and Wildlife Department, and U.S. Fish and Wildlife Service. 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 #51 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
CHU	Critical Habitat Unit
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
IH	Interstate Highway
LEED	Leadership in Energy and Environment Development
LPST	Leaking Petroleum Storage Tank
MBTA	Migratory Bird Treaty Act of 1918
MS4	Municipal Separate Storm Water Sewer System
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NDD	Natural Diversity Mimic 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
PVC	polyvinyl chloride
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
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
UTSA	University of Texas at San Antonio
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 #51 only. A separate EA is being prepared for Fire Station #50.

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). The purpose of this EA is to analyze the alternatives and assess the potential environmental impacts associated with the proposed construction of Fire Station #51. 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 in the northwestern quadrant of the City of San Antonio, Bexar County, Texas. The proposed project address is 5040 Beckwith Boulevard, San Antonio, Texas (29.4607895505031 by -98.5230331983327) (see **Figure 1**), having an area of approximately 2.87 acres.

# **2 Purpose and Need**

The purpose and need of the proposed project is to improve response times within the service area. The proposed project area is defined as having extended response times since 2000. The proposed Fire Station #51 is located in the northwest area of the City of San Antonio. Helotes, a suburb of San Antonio, joins the City of San Antonio near Fire Station #51. Helotes is the third most notable high-growth area in the U.S. with a population growth of nearly 400% from 2000 to 2008. The first due response area for Fire Station #51 consists of 5,128 acres. Without this facility, only 2.6% of the area will be serviced by neighboring fire companies within a five minute response time (dispatch to on scene). Within the general area that Fire Station #51 responds to, the current first unit response time (dispatch to on scene) average is approximately seven minutes.

The City of San Antonio has been the setting of rapid urban growth and development. As a matter of cause and effect, increases in population and development produce an increased number of incidents that require first-due response. 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

Based on analysis of historical call response data, several significant areas of extended response were identified by the SAFD. The proposed project area was identified in the 2000 SAFD Master Plan as not meeting the facility placement goal of positioning resources to have the first arriving engine company within a 4.25 minute travel time of 90 percent of all city blocks. Several factors were considered to help 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. Once this area was identified, SAFD searched for available vacant land. The following goals were identified in the refinement process for Fire Station #51:

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

The proposed site and an adjacent lot were determined to best fit the identified goals. Deccan software was then used to verify response time impact. Deccan software is utilized for defining run orders, station location analysis, and response time analysis based on historical performance. Ultimately, the location of Fire Station #51 was determined as follows:

Site	Accessibility	Availability of Property	Cost Effective	Meets Need and Purpose
Proposed Site (5040 Beckwith Boulevard)	Good north/south access; access from Beckwith Boulevard favorable due to less traffic congestion	Yes	Yes	Yes
Adjacent Lot	Access from Vance Jackson less favorable due to traffic congestion	No	Yes	Yes

#### 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, only 2.6% of the 5,128-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 #51 (proposed project) will construct a new fire station and a partial sedimentation/filtration basin in the northwest area of the City of San Antonio. The proposed fire station will be constructed for two fire companies and an emergency medical service (EMS) unit. The station will host a dual response team as it will be home to the second heavy rescue team in San Antonio.

The proposed 14,051 square foot fire station will be built on three contiguous vacant lots (lots 17, 18, and 19) owned by the City of San Antonio. The station 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 #51 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 three 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, 51% of the first-due response area, 2,647 acres, will be within a 5-minute response time (dispatch to on scene). See **Figure 2: Site Map**.

The proposed partial sedimentation/filtration basin will be designed using the TCEQ technical guidance document, *Complying with the Edwards Aquifer Rules: Technical Guidance on Best management Practices* (2005) and will treat stormwater runoff. The individual treatment measure will consist of a sand filter basin designed for a watershed area of 2.87 acres and 1.40 acres of impervious cover. The basin will have a capture volume of 7,428 cubic feet (6,426 cubic feet required) and a sand filter area of 1,167 square feet (536 feet required). The concrete lined basin will have a water depth of four feet and filter media composed of 18 inches of sand separated by geotextile fabric from six inches of gravel over the perforated polyvinyl chloride (PVC) piping system.

### 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 #51 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**

Resource	Units	Alternative A: No Action	Alternative B: Construct New Facility
Geology	Sensitive features	None; No effect.	None; No effect. If any sensitive feature (caves, solution cavities, sink holes) are discovered during construction, all regulated activities near the feature will be suspended immediately and environmental staff with the City of San Antonio will be notified immediately. Regulated activities near the feature will not proceed until the TCEQ has reviewed and approved methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality.
Soil	Acres	None; No effect.	Minor adverse effect. Construction of a new fire station and a partial sedimentation/filtration basin 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.	Minor adverse effect. The proposed project will result in the placement of approximately 1.40 acres of additional impervious cover over the Recharge Zone of the Edwards Aquifer. Permanent pollution

<b>Resource</b>	<b>Units</b>	<b>Alternative A: No Action</b>	<b>Alternative B: Construct New Facility</b>
			abatement measures appropriate for the proposed project were proposed in the WPAP and approved by the San Antonio Water System on November 3, 2009 and by the TCEQ on December 16, 2009.
Waters of the US, including wetlands	Acres	None; No effect.	None; No effect.
Vegetation	Acres	None; No effect.	2.87 acres; minor adverse effect. Landscaping will be incorporated according to the City of San Antonio's Landscaping Ordinance (July 2005), which to the extent practical, is in compliance with Executive Order 13112 on Invasive Species and the Executive Memorandum on Beneficial Landscaping.
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. No known occurrences or potential habitat for any threatened or endangered species occurs within the proposed project area. The proposed project will not destroy or adversely modify designated critical habitat. In the event that a karst feature is discovered during construction the project shall be halted and SAFD shall stop all work immediately in the vicinity of the feature until such time as an individual possession a Section 10(a)(1)(A) permit can assess the feature. If the feature is suitable for containing endangered karst invertebrate habitat, SAFD will inform FEMA immediately and FEMA will consult with the USFWS. Work in and around the karst feature cannot resume until consultation is completed and appropriate measures have been taken to ensure that the project is in compliance with the Endangered Species Act.
Air Quality	Qualitative	No effect.	Minor adverse effect. Temporary increases in air pollutant emissions from construction activities,

<b>Resource</b>	<b>Units</b>	<b>Alternative A: No Action</b>	<b>Alternative B: Construct New Facility</b>
			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 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	Beneficial effect. Project will provide enhance fire protection

Resource	Units	Alternative A: No Action	Alternative B: Construct New Facility
		proposed project to improve response times.	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 within the outcrop of the Person Formation (Ked) and Del Rio Clay (Kdr) (**Figure 3: Geologic Atlas**) and the Balcones fault zone, which separates the Edwards Plateau from the Gulf Coastal Plain physiographic province. Since it is also located over the Edwards Aquifer Recharge Zone, a Geological Assessment (GA) dated August 2006 was completed under the direction of a registered professional geologist and followed procedures prescribed by the Texas Commission on Environmental Quality (TCEQ) for evaluating potential recharge features on the Edwards Aquifer recharge zone (see **Appendix D: Technical Reports**). Geologic features within a 21.028-acre site inclusive of the proposed project site were assessed in accordance with 30 Texas Administrative Code (TAC) Chapter 213. None of the 13 identified features within the 21.028-acre survey area are located within the proposed project site (see **Figure 4: Geologic Assessment Features**). The GA, as an element of the water pollution abatement plan (WPAP), was approved by the San Antonio Water System on November 3, 2009 and by the TCEQ on December 16, 2009 (see **Appendix B: Correspondence**).

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 the San Antonio city limits and “already in or committed to urban development or water storage” (7 CFR 658). Therefore, the proposed project is exempt under the FPPA and coordination is not required with the NRCS. Soil units within the project area consist of Heiden clays (HnB), which rest at 1 to 3 percent slopes (**Figure 5: Soil Types**). They are deep, slowly permeable clays, forming a deep profile of sediments. A typical profile exhibits 80 inches of clays.

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 and a partial sedimentation/filtration basin at the proposed site will cause soil disturbance throughout the proposed project site. If any sensitive feature (caves, solution cavities, sink holes) are discovered during construction, all regulated activities near the feature will be suspended immediately and environmental staff with the City of San Antonio will be notified immediately. Regulated activities near the feature will not proceed until the TCEQ has reviewed and approved methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality.

The proposed project is located in an area “already in or committed to urban development or water storage”; therefore, the proposed project is exempt under the FPPA and coordination is not required with the NRCS.

## **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 6: 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.

Runoff from this project will not discharge directly into Section 303 (d) listed threatened or impaired water, or into a stream within 5 miles upstream of Section 303 (d) listed or impaired water. The 2008 303 (d) list was utilized in this assessment.

### **4.2.3 Groundwater**

The entire proposed project is located over the Edwards Aquifer Recharge Zone (see **Figure 7: Edwards Aquifer**). The TCEQ regulates development within the Edwards Aquifer Contributing Zone and the Edwards Aquifer Recharge Zone as specified in 30 TAC 213, commonly referred to as the “Edwards Rules” or the “Edwards Aquifer Rules”.

The TCEQ regulations require the use of temporary and permanent Best Management Practices (BMP)s for the treatment of stormwater runoff from areas of impervious cover. The regulations require the removal of 80% of total suspended solids (TSS) in stormwater runoff from the increase in impervious cover. A WPAP will be required for project implementation and approval acquired from the TCEQ prior to construction.

The proposed project will result in the placement of approximately 1.40 acres of additional impervious cover over the Recharge Zone of the Edwards Aquifer. Permanent pollution abatement measures appropriate for the proposed project were proposed in the WPAP and approved by the San Antonio Water System on November 3, 2009 and by the TCEQ on December 16, 2009 (see **Appendix B: Correspondence**). The City of San Antonio will comply with the special conditions and standard conditions listed in the TCEQ approval letter.

#### **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. No wetlands or streams were identified during field surveys within the proposed project area; 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 2.87 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, nor will it discharge into a 303(d) threatened or impaired water. Construction of a new fire station at the proposed site will add approximately 1.40 acres of impervious cover over the Edwards Aquifer Recharge Zone. To prevent pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a partial sedimentation/filtration basin, designed using *Guidance on Best Management Practices* (2005), will be constructed to treat stormwater runoff. The required TSS treatment for the proposed project is 1,142 pounds of TSS generated from the 1.40 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the proposed project. 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 within the Edwards Plateau Ecological Region. According to the map *The Vegetation Types of Texas* (TPWD, 1984), the proposed project is located within vegetation type Live Oak-Ashe Juniper-Parks (See **Figure 8: Vegetation Types**). Commonly associated plants of the Live Oak-Ashe Juniper-Parks vegetation type include Ashe juniper (*Juniperus asheii*), cedar elm (*Ulmus crassifolia*), netleaf hackberry (*Celtis reticulata*), flameleaf sumac (*Rhus lanceolata*), Texas persimmon (*Diospyros texana*), agarito (*Berberis trifoliata*), Texas pricklypear (*Opuntia lindheimeri*), greenbriar (*Smilax bona-nox*), Texas wintergrass (*Stipa leucotricha*), and little bluestem (*Schizachyrium scoparium*). Distribution of these vegetation types is mainly on level to gently rolling uplands and ridge tops of the Edwards Plateau.

The proposed project is located within the corporate city limits of San Antonio. The vegetation on the proposed project site is consistent with that of an open savannah comprised of grasses and annuals with a scattering of oak trees (*Quercus* spp.), one mature juniper (*Juniperus asheii*), honey mesquite (*Prosopis glandulosa*), and hackberry (*Celtis* sp.). Overall canopy is estimated

to be less than 10 percent with little or no deciduous shrub foliage cover. See **Appendix C: Project Photos** for representative views of vegetation areas and **Appendix B** for TPWD recommendations regarding vegetation impacts.

#### **4.3.2 Invasive Species and Beneficial Landscaping**

The City of San Antonio is committed to obtain Silver Certification in LEED for the proposed project. To that end, water efficient landscaping will be included in project plans. Landscaping will be incorporated according to the City of San Antonio's Landscaping Ordinance (July 2005), which to the extent practical, is in compliance with Executive Order 13112 on Invasive Species and the Executive Memorandum on Beneficial Landscaping.

#### **4.3.3 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.

#### **4.3.4 Threatened and Endangered Species**

**Table 2** 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. Coordination between FEMA and USFWS is ongoing.

A consultant biologist performed a search of Texas Parks and Wildlife Department's Natural Diversity Database (NDD) dated February 26, 2009 for possible Element Occurrence Records (EOR) within the project vicinity. The consultant biologist as accessed and reviewed the USFWS species by county report on February 24, 2010. Two records are located northeast of the proposed project area. Element Occurrence Record (EOID) 8233 is located in a limestone cave or sinkhole (Elm Springs Cave) where a Comal Blind Salamander (*Eurycea tridentifera*) was collected in 1978. EOID 5488 is located in Shavano Park Cave where a Comal Blind Salamanders were collected on two occasions in 1972. Both of these records are located within 1.5 mile radius of the proposed project area and are shown in **Table 3**. No other 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 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	Site does not contain features with the potential to contain suitable karst invertebrate habitat.
A ground beetle ( <i>Rhadine infernalis</i> ) FE	Small, essentially eyeless ground beetle; karst features in north and northwest Bexar County	No	No	Site does not contain features with the potential to contain suitable karst invertebrate habitat.
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.
Arctic Pregrine 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.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
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	Site does not contain features with the potential to contain suitable karst invertebrate habitat.
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.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
Cokendolpher Cave Harvestman ( <i>Texella cokendolpheri</i> ) FE	Small, eyeless harvestman; karst features in north and northwest Bexar County	No	No	Site does not contain features with the potential to contain suitable karst invertebrate habitat.
Comal Blind Salamander ( <i>Eurycea tridentifera</i> ) ST	Endemic; semi-troglobitic; found in springs and waters of caves	No	No	Within range, but 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	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	The project will not affect a designated critical habitat. There is no suitable habitat within or adjacent to the proposed project area.
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 elmendorffii</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.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
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.
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 glaucooides</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	Site does not contain features with the potential to contain suitable karst invertebrate habitat.
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	Site does not contain features with the potential to contain suitable karst invertebrate habitat.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
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	Site does not contain features with the potential to contain suitable karst invertebrate habitat.
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.
Indigo Snake ( <i>Drymarchon corais</i> ) ST	The Indigo Snake is known in 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	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	Site does not contain features with the potential to contain suitable karst invertebrate habitat.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
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.
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.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
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.
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	Site does not contain features with the potential to contain suitable karst invertebrate habitat.
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.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
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 present.
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.
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.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
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	Potential suitable habitat and suitable foraging resources for use by this species was not present.
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.
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	Potential suitable habitat and suitable foraging resources for use by this species was not present.
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.

Species	Species Habitat Description	Habitat Present?	Effect	Pertinent Information
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.
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 country, 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

**Table 3: Species of Concern Elements of Occurrence within 1.5 Miles of the Proposed Project**

Element of Occurrence ID No.	Common Name	Scientific Name	Federal/State Status	Location
8233	Comal Blind Salamander	<i>Eurycea tridentifera</i>	ST	0.8 miles south/southeast from the junction of Loop 1604 and FM 1535; Elm Springs Cave
5488	Comal Blind Salamander	<i>Eurycea tridentifera</i>	ST	2-4 miles north of San Antonio; Shavano Park Cave

In December 2009, Ventajas, LLC completed a review of the proposed project site in order to identify potential habitat for the Golden-cheeked Warbler (*Dendroica chrysoparia*) and the Black-capped Vireo (*Vireo atricapilla*). No potential habitat for either of these species was identified within the project area (see **Appendix D: Technical Reports**).

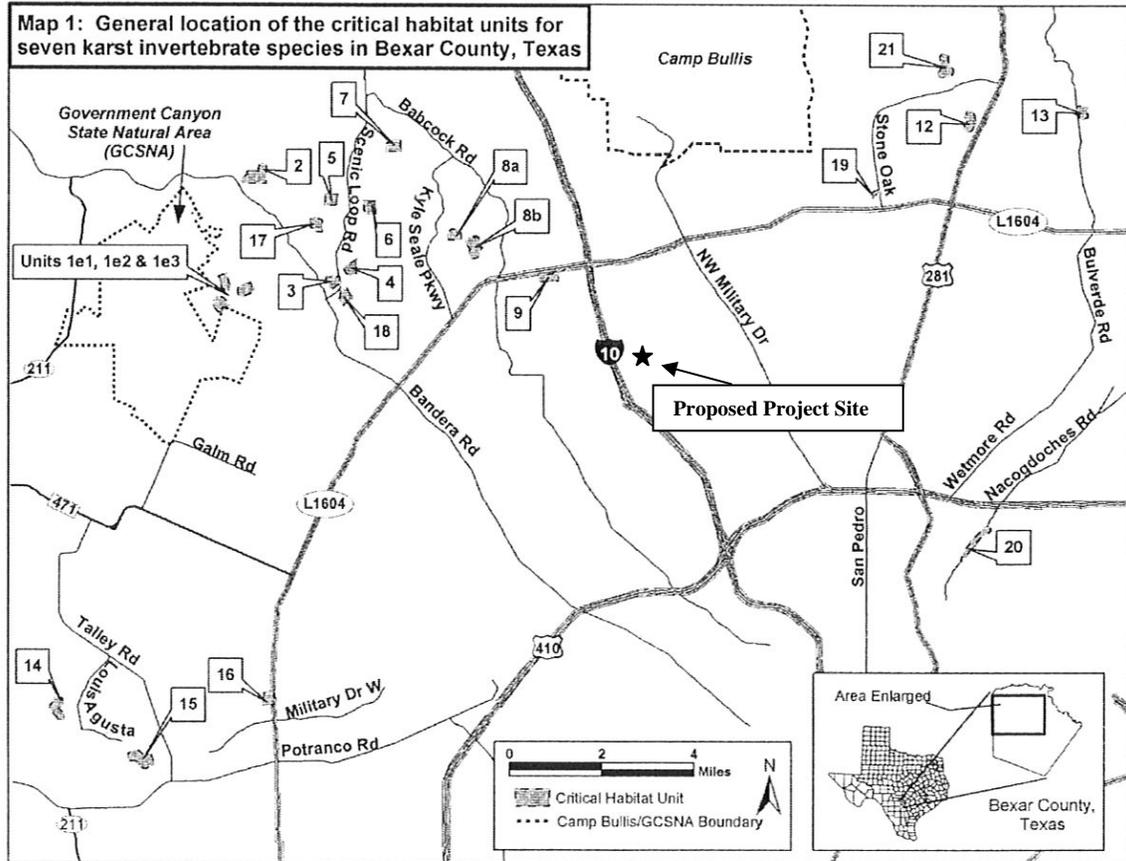
#### 4.3.5 Karst Endangered Species

The proposed project area is located in Karst Zone 2. Karst Zone 2 is identified as a high probability area for containing suitable habitat for karst endangered species. In December 2009, Ventajas, LLC also completed a review of the proposed project site to identify potential habitat for the nine karst endangered species (listed alphabetically in **Table 2**) including one harvestman; *Texella cokendolpheri* (Cokendolpher Cave Harvestman); five spiders; *Cicurina baronia* (Robber Baron Cave Meshweaver), *Neoleptoneta microps* (Government Canyon Bat Cave Spider), *Cicurina venii* (Bracken Bat Cave Meshweaver), *Cicurina madla* (Madlas Cave Meshweaver), and *Cicurina vespera* (Government Canyon Bat Cave Meshweaver) and three beetles: *Rhadine exilis* (beetle, no common name), *Rhadine infernalis* (beetle, no common name), and *Batrissodes venyivi* (Helotes mold beetle). Karst is the term applied to a region made up of porous limestone containing deep fissures and sinkholes and characterized by underground caves and streams.

These nine karst species were listed as endangered in 2000 (65 FR 81419 – 81433). Designated critical habitat was delineated for seven of the nine species in 2003 (68 FR 17155 – 17231). Critical habitat has not been designated for the Government Canyon Bat Cave Meshweaver or for the Government Canyon Bat Cave Spider as these species and their habitats are protected by their location within the Government Canyon State Natural Area.

Lands designated as critical habitat occur in 22 separate units in Bexar County, with a total area of approximately 1,063 acres. The general locations of critical habitat units (CHU) are depicted in **Map 1** (USFWS 2003). The closest CHU to the proposed project area is CHU 9 which is located northwest and approximately three miles from the proposed project area. CHU 9 is

approximately 40 acres in size, contains one cave, Mastadon Pit, occupied by *R. exilis*. The surface of CHU 9 consists of a large tract of undeveloped land owned by the University of Texas at San Antonio (UTSA).



Impacts to karst invertebrate species in the project areas were assessed per the March 2006 *United States Fish and Wildlife Service, Section 10(a)(1)(A) Scientific Permit Requirements for Conducting Presence/Absence Surveys for Endangered Karst Invertebrates in Central Texas* guidance document. In accordance with USFWS guidance, a GA was prepared following TCEQ's *Instructions to Geologists for Geologic Assessments (GA)* as revised October 1, 2004. Approximately 21 acres were surveyed, including areas on the eastern and western boundaries of the project area. The GA did not identify any surface evidence of subsurface caves or mesocavernous voids (see **Figure 4**). Based upon this report, the site does not contain features with the potential to contain suitable karst invertebrate habitat. Per the USFWS 2005 guidance, no additional survey work for karst invertebrate species is required.

The City of San Antonio contacted the USFWS on June 3, 2010 to discuss the proposed project and its location relative to CHU 9 and possible impacts to endangered karst species. City of San Antonio staff provided the USFWS with the 2006 GA, the December 2009, Ventajas, LLC report, as well as maps for the proposed project area. Following review of project materials and

communication with TPWD (including project concurrence dated April 12, 2009), USFWS concurred with the TPWD review and approval of the proposed project. (See **Appendix B** for USFWS correspondence and No Action approval dated June 21, 2010).

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 and a partial sedimentation/filtration basin at the proposed project site will impact approximately 2.87 acres of vegetation, predominately grasses and scattered oaks, hackberry, and mesquite within the proposed project area.

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

In the event that a karst feature is discovered during construction the project shall be halted and SAFD shall stop all work immediately in the vicinity of the feature until such time as an individual possession a Section 10(a)(1)(A) permit can assess the feature. If the feature is suitable for containing endangered karst invertebrate habitat, SAFD will inform FEMA immediately and FEMA will consult with the USFWS. Work in and around the karst feature cannot resume until consultation is completed and appropriate measures have been taken to ensure that the project is in compliance with the Endangered Species Act.

#### **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 met 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 0.080 parts per billion (ppb). EPA designated the San Antonio area in attainment on April 2, 2008.

The ozone NAAQS was lowered in 2008 to 0.075 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. However, 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, any implementation plan, or current EPA designation for the county.

Alternative B – Construct New Facility: During the construction phase of this project there can 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 northwest quadrant of the City of San Antonio. There is adjacent vacant land zoned for commercial development and existing commercial and residential development surrounding the proposed project area. Access to Beckwith Boulevard exists from both the IH 10 frontage road and Vance Jackson Road.

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 and road closures will not be necessary for construction of the proposed project, allowing access during construction hours. It is not anticipated that operation of the proposed Fire Station #51 will increase traffic congestion, cause delays, or alter existing travel patterns. Beckwith Boulevard is lined solely with commercial properties with minimal traffic.

#### **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 coordination 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 project area has not been previously surveyed. In 2007, UTSA's Center for Archaeological Research conducted archaeological survey along Interstate Highway (IH) 10, and some survey work was carried out north of the project area for the EPA in 1977. However, no archaeological work has been carried out within the boundaries of the APE.

No previously recorded archeological sites are within the APE. No cemeteries, historical markers or NRHP listed properties are within the APE. Two archeological sites are situated within a one-kilometer (0.6 miles) radius of the APE. Site 41BX11 was recorded as a Late Archaic midden in 1969. Further work was not suggested. Site 41BX367 is located about 800 meters east of the APE. It was a circular lime kiln that was recorded in 1977. Further work was recommended.

The project area contains deep clays with low potential for deeply buried archeological deposits. While soil mapping data suggest that the soils within the APE are not concurrent with prehistoric human occupation, an archaeological survey is warranted since this locality has not been subject to archaeological investigation and moreover does not appear to currently be impacted by modern development based on aerial photograph analysis. On this basis, EComm recommended that the proposed project area be archeologically surveyed. A Texas Antiquities Permit was secured and work was completed in April 2010.

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: Construction a new fire station and a partial sedimentation/filtration basin will have no impact on historical resources. An archeological survey of the proposed project area was conducted. Based on the results of a 100 percent pedestrian survey of the entire APE and 11 shoveltests, EComm recommended that no further archaeological work is required prior to the construction of Fire Station #51 in San Antonio, Bexar County, Texas. No archaeological sites were observed to rest within the APE. Since no cultural resources were identified that meet eligibility requirements for designation as an SAL according to 13 Texas Administrative Code (TAC) 26, additional archaeological work in connection with the proposed undertaking was not recommended. EComm recommended that the proposed Fire Station #51 project proceed to completion (see **Appendix D**). FEMA has made a determination that there will be no effect to historic properties and a letter was sent by FEMA to the SHPO on May 19, 2010. 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 \$44,600 within Census Tract 1818.01 (**Table 4**). (See **Exhibit 10** for census tract location). A total of 265 of the 2,621 study area households were below the poverty level. Low income households constitute a 10.1 percent of the population within this census tract. There are no substantial groups of low-income persons in the study area, thus no disproportionately high or adverse impacts are anticipated.

**Table 4: 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	2,621	\$44,600	265	10.1%

Note: CT = census tract.

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

According to the 2000 U.S. Census Bureau, the project area is primarily White and Hispanic. Overall, the minority population of the project area represents 51.2%, of the total population which does not approach the overall minority percentages found in Bexar County and the City of San Antonio, 64.4% and 68.2 %, respectively (see **Table 5**).

**Table 5: 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%

<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.

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	6,031 100.0%	2,944 48.8%	343 5.7%	0 0.0%	391 6.5%	120 2.0%	2,233 37.0%	3,087 51.2%

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 #51 project will provide enhanced fire protection coverage and emergency response. All populations within northwest San Antonio and beyond will benefit from the enhanced capacity of the SAFD. The proposed project will not create adverse impacts to any minority or low income population within the proposed project area.

#### 4.9 HAZARDOUS MATERIALS

A Phase I Environmental Site Assessment, dated June 2008 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 EPA's 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). Other referenced resources included historical documents, personal interviews, and a field inspection.

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 and a partial sedimentation/filtration basin. 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 anticipated 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 urban with adjacent commercial, residential, and vacant land zoned for commercial development. The City of San Antonio Master Development Plan was reviewed to assess existing and proposed (reasonably foreseeable) projects within the proposed project area.

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. Although the project area is urban and has experienced development and growth, the proposed project is not intended to serve any specific development. Further, this EA does not describe economic development or any opportunity for growth as a benefit of the proposed project. The surrounding proposed project area is commercial and zoned for commercial use. 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 and the addition of 1.40 acres of impervious cover. 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 #51 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 (if applicable) pertinent to the proposed project are summarized below.

### San Antonio Water System

WPAP

### Texas Commission on Environmental Quality

WPAP

TPDES

SWPPP

### Texas Historical Commission

Texas Antiquities Permit

### Texas Parks and Wildlife Department

No permit required

### U.S. Fish and Wildlife Service

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 #51, 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.

**Geology** – If any sensitive feature (caves, solution cavities, sink holes) are discovered during construction, all regulated activities near the feature will be suspended immediately and environmental staff with the City of San Antonio will be notified immediately. Regulated activities near the feature will not proceed until the TCEQ has reviewed and approved methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality.

**Groundwater** – Permanent pollution abatement measures appropriate for the proposed project proposed in the WPAP and approved by the San Antonio Water System on November 3, 2009 and by the TCEQ on December 16, 2009 will be implemented.

**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. To prevent pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a partial sedimentation/filtration basin, designed using *Guidance on Best Management Practices* (2005), will be constructed to treat stormwater runoff.

**Vegetation** – Landscaping will be incorporated according to the City of San Antonio's Landscaping Ordinance (July 2005), which to the extent practical, is in compliance with Executive Order 13112 on Invasive Species and the Executive Memorandum on Beneficial Landscaping. SAFD will comply with the City of San Antonio Tree Ordinance for vegetation impacts.

**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.

**Karst Endangered Species** – In the event that a karst feature is discovered during construction the project shall be halted and SAFD shall stop all work immediately in the vicinity of the feature until such time as an individual possession a Section 10(a)(1)(A) permit can assess the feature. If the feature is suitable for containing endangered karst invertebrate habitat, SAFD will inform FEMA immediately and FEMA will consult with the USFWS. Work in and around the karst feature cannot resume until consultation is completed and appropriate measures have been taken to ensure that the project is in compliance with the Endangered Species Act.

**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 #51 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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