FINAL
Preliminary Assessment Report
Grand Prairie Army Aviation Support Facility
Texas

Perfluorooctanesulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA) Impacted Sites
ARNG Installations, Nationwide

July 2020

Prepared for:

Army National Guard Bureau
111 S. George Mason Drive
Arlington, VA 22204

UNCLASSIFIED

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Acronyms and Abbreviations

%	percent
AECOM	AECOM Technical Services, Inc.
AASF	Army Aviation Support Facility
AFFF	aqueous film forming foam
AOI	area of interest
ARNG	Army National Guard
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSM	conceptual site model
DNAS	Dallas Naval Air Station
EDR™	Environmental Data Resources, Inc.™
ºF	degrees Fahrenheit
FTA	fire training area
GMI	Geo-Marine, Inc.
HA	Health Advisory
IED	Installations and Environment Division
NOAA	National Oceanic and Atmospheric Administration
OMS	operational maintenance shop
OWS	oil-water separator
PA	Preliminary Assessment
PFAS	per- and poly-fluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
RCRA	Resource Conservation and Recovery Act
ppt	parts per trillion
SI	Site Inspection
TtNUS	Tetra Tech NUS, Inc.
TXARNG	Texas Army National Guard
UCMR3	Unregulated Contaminant Monitoring Rule 3
US	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USPFO	United States Property & Fiscal Office
VOC	volatile organic compound
VSI	visual site inspection
WWTP	wastewater treatment plant

Executive Summary

The Army National Guard (ARNG) is performing *Preliminary Assessments (PAs) and Site Inspections (SIs) for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) Impacted Sites at ARNG Facilities Nationwide*. A PA for per- and polyfluoroalkyl substances (PFAS)-containing materials was completed for Grand Prairie Army Aviation Support Facility (AASF) (also referred to as the "facility") in Grand Prairie, Texas, to assess potential PFAS release areas and exposure pathways to receptors. The performance of this PA included the following tasks:

- Reviewed available administrative record documents and Environmental Data Resources, Inc. (EDR)™ report packages to obtain information relevant to potential PFAS releases, such as: drinking water well locations, historical aerial photographs, Sanborn maps, and environmental compliance actions in the area surrounding the facility;
- Conducted a 1-day site visit on 23 April 2019 and completed visual site inspections (VSI) at locations where PFAS-containing materials were suspected of being stored, used, or disposed;
- Interviewed personnel during the site visit who were associated with Grand Prairie AASF activities including the Grand Prairie AASF Environmental Officer (on site since 2009), the Mechanic Supervisor (on site since 1991) and two Standardization Instructors (on site since 1989 and 1998);
- Identified areas of interest (AOIs) and developed a preliminary conceptual site model (CSM) to outline the potential release, pathway, and receptors of PFAS for Grand Prairie AASF.

Five suspected PFAS releases/storage areas were identified during the PA, as described below. These releases constitute three AOIs identified at Grand Prairie AASF. The AOIs are shown in **Figure ES-1** and summarized in **Table ES-1** below.

Table ES-1: AOIs at Grand Prairie AASF

Area of Interest	Description	Used by	Release Dates
AOI 1	Releases during AFFF fire extinguisher testing/training with mobile carts at the wash rack; discharged to oil-water separator (OWS). Depending on the position of a diverter valve, the flow path after the OWS is either to the sanitary sewer system or to the street, then to Cottonwood Bay via surface water flow. AFFF stored in the hazardous materials storage building and in Tri-Max™ units at the Fuel Station have been added to AOI 1 because of the potential for AFFF spills in those areas.	TXARNG	2000-2012
AOI 2	Releases during AFFF fire extinguisher testing/training with mobile carts at the ramp/taxiway. Surface runoff could have potentially migrated to surrounding grassy areas.	TXARNG	2000-2012

AOI 3	AFFF was stored in the firetruck historically located in the southern part of the facility. Although there are no recorded uses of AFFF in the area, there is the possibility of leaking in the area.	TXARNG	Unknown

Based on the reported AFFF release/storage at these AOIs, there is potential for exposure to PFAS contamination in surface soil to site and construction workers and in subsurface soil to construction workers via inhalation and accidental ingestion. The preliminary CSM for AOIs 1, 2, and 3 is shown on **Figure ES-2**. Based on the US Environmental Protection Agency (USEPA) Unregulated Contaminant Monitoring Rule 3 (UCMR3) data, it was indicated that no PFAS were detected in a public water system above the USEPA Health Advisory (HA) level within 20 miles of the facility. PFAS analyses performed in 2016 had method detection limits that were higher than currently achievable. Thus, it is possible that low concentrations of PFAS were not detected during the UCMR3 but might be detected if analyzed today.

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NOTES	Preliminary Assessment for PFAS at Grand Prairie AASF, TX			
REVISED	4/28/2020	GIS BY	MS	4/28/2020
SCALE	1:9,600	CHK BY	MC	4/28/2020
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	4/28/2020

Summary of Findings

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Figure ES-1

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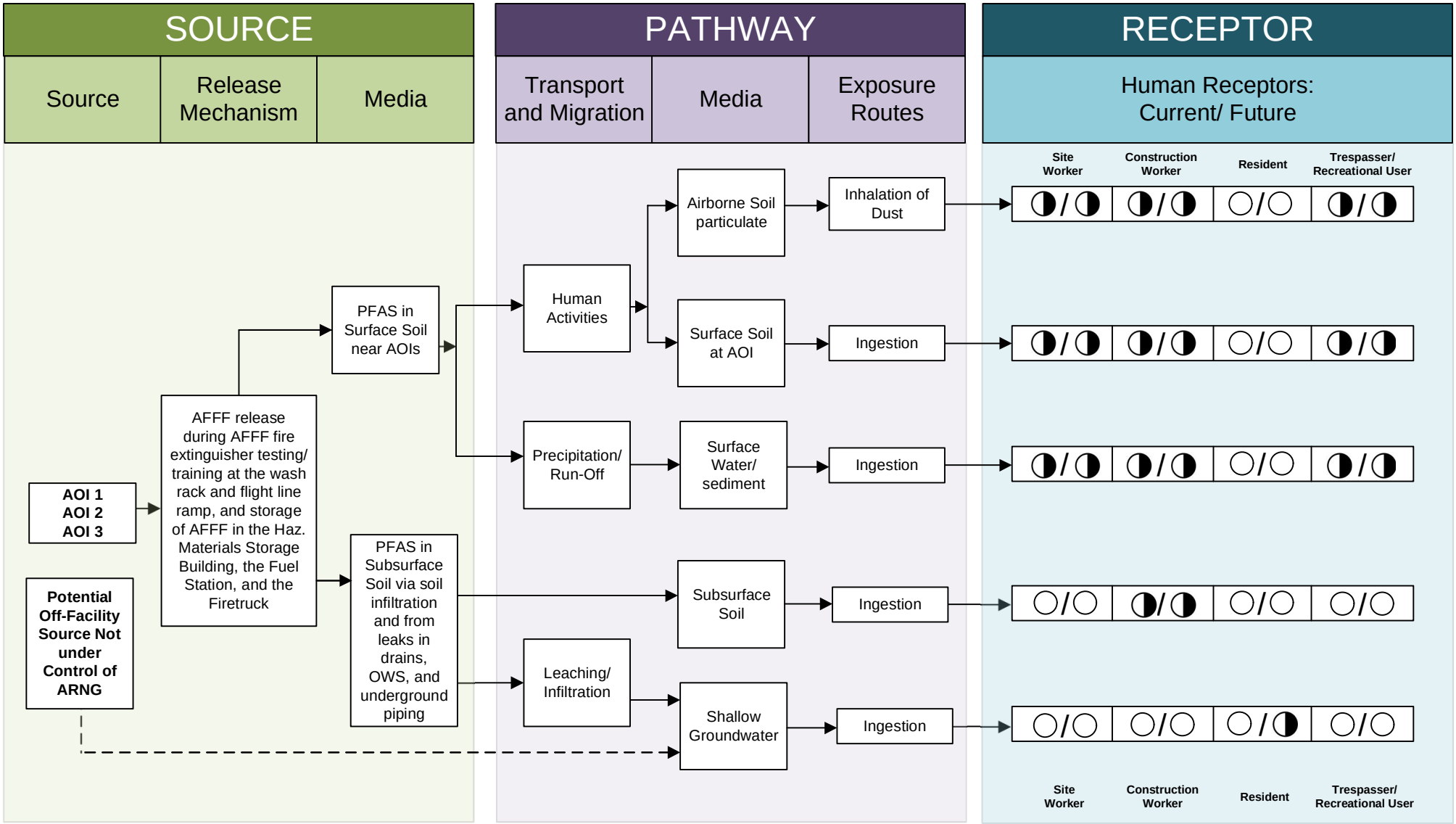


LEGEND

- Flow-Chart Stops
- Flow-Chart Continues
- Partial / Possible Flow
- Incomplete Pathway
- Potentially Complete Pathway
- Complete Pathway

Note:
1. The residential receptor refers to an off-facility receptor.

Figure ES-2
Preliminary Conceptual Site Model, AOI 1, 2, and 3

1. Introduction

1.1 Authority and Purpose

The Army National Guard (ARNG)-G9 is the lead agency in performing *Preliminary Assessments (PAs) and Site Inspections (SIs) for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) at Impacted Sites at ARNG Facilities Nationwide*. This work is supported by the United States (US) Army Corps of Engineers (USACE) Baltimore District and their contractor AECOM Technical Services, Inc. (AECOM) under Contract Number W912DR-12-D-0014, Task Order W912DR17F0192, issued 11 August 2017.

The ARNG is assessing potential effects on human health related to processes at their facilities that used per- and poly-fluoroalkyl substances (PFAS), primarily releases of aqueous film forming foam (AFFF) although other sources of PFAS are possible. In addition, the ARNG is assessing businesses or operations adjacent to the ARNG facility (not under the control of ARNG) that could potentially be responsible for a PFAS release.

PFAS are classified as emerging environmental contaminants that are garnering increasing regulatory interest due to their potential risks to human health and the environment. The regulatory framework at both federal and state levels continues to evolve. The US Environmental Protection Agency (USEPA) issued Drinking Water Health Advisories (HAs) for PFOA and PFOS in May 2016, but there are currently no promulgated national standards regulating PFAS in drinking water.

This report presents findings of a PA for PFAS-containing materials at Grand Prairie Army Aviation Support Facility (AASF) in Grand Prairie, Texas, in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, the National Oil and Hazardous Substances Pollution Contingency Plan (40 Code of Federal Regulations Part 300), and Army requirements and guidance.

This PA documents the locations where PFAS were historically stored and reportedly released into the environment at Grand Prairie AASF. The term PFAS will be used throughout this report to encompass all PFAS chemicals being evaluated, including PFOS and PFOA, which are key components of AFFF.

1.2 Preliminary Assessment Methods

The performance of this PA included the following tasks:

- Reviewed available administrative record documents and Environmental Data Resources, Inc. (EDR)™ report packages to obtain information relevant to potential PFAS releases, such as: drinking water well locations, historical aerial photographs, Sanborn maps, and environmental compliance actions in the area surrounding the facility;
- Conducted a 1-day site visit on 23 April 2019 and completed visual site inspections (VSIs) at locations where PFAS-containing materials were suspected of being stored, used, or disposed;
- Interviewed personnel associated with Grand Prairie AASF activities during the site visit including the Grand Prairie AASF Environmental Officer (on site since 2009), the Mechanic Supervisor (on site since 1991) and two Standardization Instructors (on site since 1989 and 1998);

- Identified areas of interest (AOIs) and developed a preliminary conceptual site model (CSM) to outline the potential release, pathway, and receptors of PFAS for Grand Prairie AASF.

1.3 Report Organization

This report has been prepared in accordance with the USEPA *Guidance for Performing Preliminary Assessments under CERCLA* (USEPA, 1991). The report sections and descriptions of each are:

- **Section 1** – **Introduction:** identifies the project purpose and authority and describes the facility location, environmental setting, and methods used to complete the PA
- **Section 2** – **Fire Training Areas:** describes the potential or suspected fire training areas (FTAs) at the facility identified during the site visit
- **Section 3** – **Non-Fire Training Areas:** describes other locations of potential or suspected PFAS releases at the facility identified during the site visit
- **Section 4** – **Emergency Response Areas:** describes areas of suspected or potential AFFF release at the facility, specifically in response to emergency situations
- **Section 5** – **Adjacent Sources:** describes sources of PFAS release adjacent to the facility that are not under the control of ARNG
- **Section 6** – **Preliminary Conceptual Site Model:** describes the pathways of PFAS transport and receptors at the AOIs
- **Section 7** – **Conclusions:** summarizes the data findings and presents the conclusions of the PA
- **Section 8** – **References:** provides the references used to develop this document
- **Appendix A** – Data Resources
- **Appendix B** – Preliminary Assessment Documentation
- **Appendix C** – Photographic Log

1.4 Facility Location and Description

Grand Prairie AASF (also referred to as the “facility”), home to the 149th Aviation Regiment of the Texas ARNG (TXARNG), is located within the southwest portion of the former Dallas Naval Air Station (DNAS), which was decommissioned in 1998. The facility is located 12 miles southwest of downtown Dallas and is situated adjacent to the northwest shore of Mountain Creek Lake (**Figure 1-1**), on property that overlaps into the cities of Dallas and Grand Prairie, Texas. As noted in the lease agreement (**Appendix A**), the TXARNG began leasing approximately 40 acres of land situated in Dallas County, Texas in 1975. Historically, the DNAS has provided support to the following tenants:

- Texas Air National Guard
- US Army Reserve
- TXARNG
- Various Navy and Marine groups

With the exception of TXARNG operations, the majority of military operations ceased at DNAS in September 1998, and the air station was put into caretaker status (Tetra Tech NUS, Inc. [TtNUS],

2001). The current TXARNG facility houses a hangar, a wash rack, fuel station, ramp and flight line, a hazardous materials storage building, an organizational maintenance shop (OMS), and an armory. The Grand Prairie AASF Hangar does not have an AFFF fire suppression system. Current activities at the Grand Prairie AASF include helicopter maintenance and training.

Historical operations at Grand Prairie AASF have included training at the Peace Prairie Hangar, located northeast of the current TXARNG facility boundary. The Peace Prairie Hangar has an AFFF fire suppression system and is adjacent to the Peace Prairie wash rack and oil-water separator (OWS).

1.5 Facility Environmental Setting

Grand Prairie AASF is located in north-central Texas, approximately 325 miles north of the Gulf of Mexico. The facility is situated near the headwaters of the Trinity River that flow in the upper margins of the Coastal Plain.

1.5.1 Geology

The general stratigraphic sequence present throughout the TXARNG facility consists of Holocene and Pleistocene alluvial terrace deposits overlaying the Cretaceous Eagle Ford Shale (**Figure 1-2**). The upper soil horizons and alluvium have been disturbed locally by industrial development; therefore, shallow surface and subsurface soils are composed of fill materials in some areas. The lithology of sediments is primarily clay and silty clay. The clays are interspersed with sporadic deposits of streambed sand and gravel (Geo-Marine, Inc [GMI], July 2002).

1.5.2 Hydrogeology

The surficial aquifer below the facility is within the alluvium overburden and the weathered portion of the underlying shale. This aquifer is heterogeneous and exhibits characteristics of unconfined aquifer systems and semi-confined to confined aquifer systems. These two types of aquifer systems are interconnected hydraulically to the adjacent water bodies; Mountain Creek Lake, Cottonwood Bay, and the Diversion Channel. Groundwater contour elevations are very similar to the land surface topography. In the central section of the facility, the potentiometric surface is primarily flat. Along the Cottonwood Bay and the Diversion Channel shorelines, the potentiometric surface is extremely steep, and along the east portion of the facility, across the flight line toward Mountain Creek Lake, the potentiometric surface is moderately steep. The groundwater flow pattern is radial and flows eastward toward Mountain Creek Lake, northward in the direction of Cottonwood Bay, and westward toward the Diversion Channel. Seepage velocity of the groundwater underlying the facility within the overburden is estimated to range from 0.12 to 0.23 foot per day (TtNUS, 2001) (**Figure 1-2**).

Shallow groundwater in the alluvial section flows primarily through the semi-confined to confined zones and in unconfined zones of sands and clayey sands. Shallow groundwater is estimated to be approximately 20 to 25 feet below ground surface at the facility (GMI, December 2003). Clay, silty clay, sandy clay, and gravelly clay comprise the semi-confined zones that are cut by joints, microfractures, partings, and other zones of macroporosity. The confined zones may be interconnected with the weathered and jointed upper surface of the Eagle Ford Shale. The surficial aquifer underlying the facility is most likely recharged by the downward migration of rainwater through the unconfined aquifer areas of the vadose zone. The aquifer is most likely recharged in semi-confined outcropping areas upgradient. The surficial aquifer is recharged at a lesser extent by downward migration through the vadose zone. Direction of groundwater flow was determined from potentiometric surface maps developed from static water level data collected during five separate water level gauging events (TtNUS, 2001).

The facility's drinking water is supplied by the City of Grand Prairie. A query of the Texas Water Development Board Submitted Drillers Reports Database identified 1 public supply well, 8 industrial water supply wells, and 97 monitoring wells within a one-mile radius of the facility. The public supply well is owned by the City of Grand Prairie and was installed 2,084 feet below ground surface. The industrial water supply wells range in depth from 1,180 to 2,148 feet and are located on the north side of Cottonwood Bay, in property owned historically by L.T.V. Aerospace Corporation. The majority of the monitoring wells are located in the same area north of the facility, but a few are located approximately 0.5 mile south of the facility. The monitoring wells range in depth from 10 to 68 feet. One irrigation well is located just over 1 mile west of the facility. According to the Submitted Drillers Reports Database, the irrigation well is owned by the First Church of the Nazarene (**Figure 1-2**). Based on the USEPA UCMR3 data, it was indicated that no PFAS were detected in a public water system above the USEPA HA level within 20 miles of the facility. PFAS analyses performed in 2016 had method detection limits that were higher than currently achievable. Thus, it is possible that low concentrations of PFAS were not detected during the UCMR3 but might be detected if analyzed today

1.5.3 Hydrology

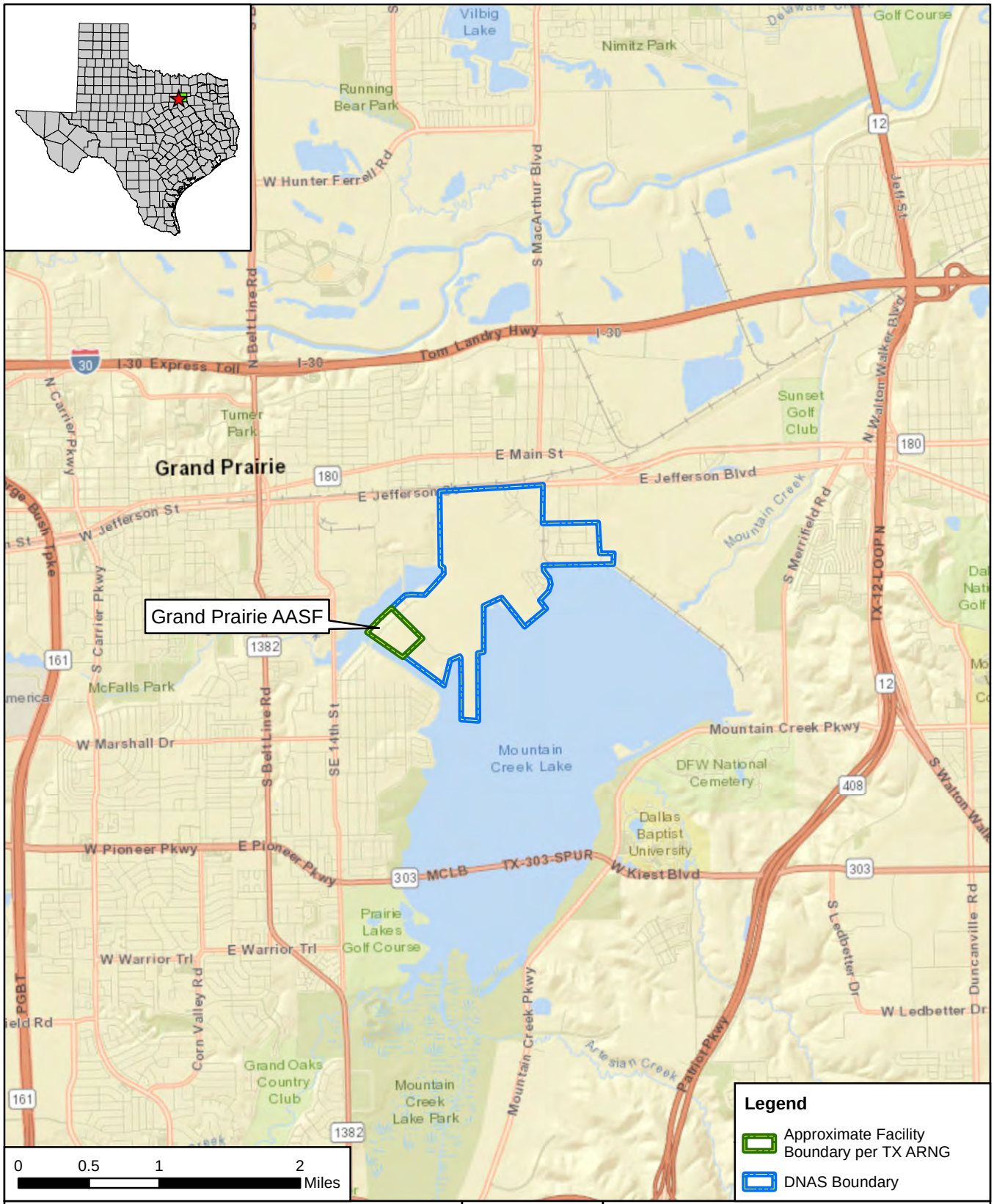
Surface water in the vicinity of Grand Prairie AASF flows primarily across paved or grassy areas and into the storm drainage system that discharges into Cottonwood Bay, the Diversion Channel, and Mountain Creek Lake (**Figure 1-3**). The stormwater drainage system follows the predominant slope of the ground surface and drains into the lake. Mountain Creek Lake drains to the northeast from the spillway located approximately 1.5 miles east of the facility (TtNUS 2001). .

1.5.4 Climate

The Dallas-Fort Worth climate is humid subtropical with hot summers. The climate is also continental, characterized by a wide annual temperature range. Precipitation also varies considerably, ranging from less than 20 to more than 50 inches. Average annual precipitation for the facility is 37.35 inches. Winters are mild, but northers occur about three times each month and often are accompanied by sudden drops in temperature. The highest temperatures of summer are associated with fair skies, westerly winds and low humidity. Characteristically, hot spells in summer are broken into three-to-five day periods by thunderstorm activity. There are only a few nights each summer when the low temperature exceeds 80 degrees Fahrenheit (ºF). Summer daytime temperatures frequently exceed 100°F. Average yearly minimum and maximum temperatures are 36.5°F and 96.2°F, respectively, with an average annual temperature of 66.6°F. Throughout the year, rainfall occurs more frequently during the night. Usually, periods of rainy weather last for only a day or two and are followed by several days with fair skies. A large part of the annual precipitation results from thunderstorm activity, with occasional heavy rainfall over brief periods of time. Thunderstorms occur throughout the year, but are most frequent in the spring (National Oceanic and Atmospheric Administration [NOAA], 2019).

1.5.5 Current and Future Land Use

The Grand Prairie AASF currently includes storage buildings, operational maintenance shop (OMS) activities, training, administration, and a hangar. Current land use in the direct vicinity of the Grand Prairie AASF includes residential to the west, industrial to the north, open areas and parks, commercial and retail, and governmental institutions. A representative from the Texas Military Department noted plans to move the Grand Prairie AASF to the Naval Air Station Joint Reserve Base Fort Worth soon. No other future changes to the current use were noted during personnel interviews.



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Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	4/28/2020

Facility Location

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Figure 1-1

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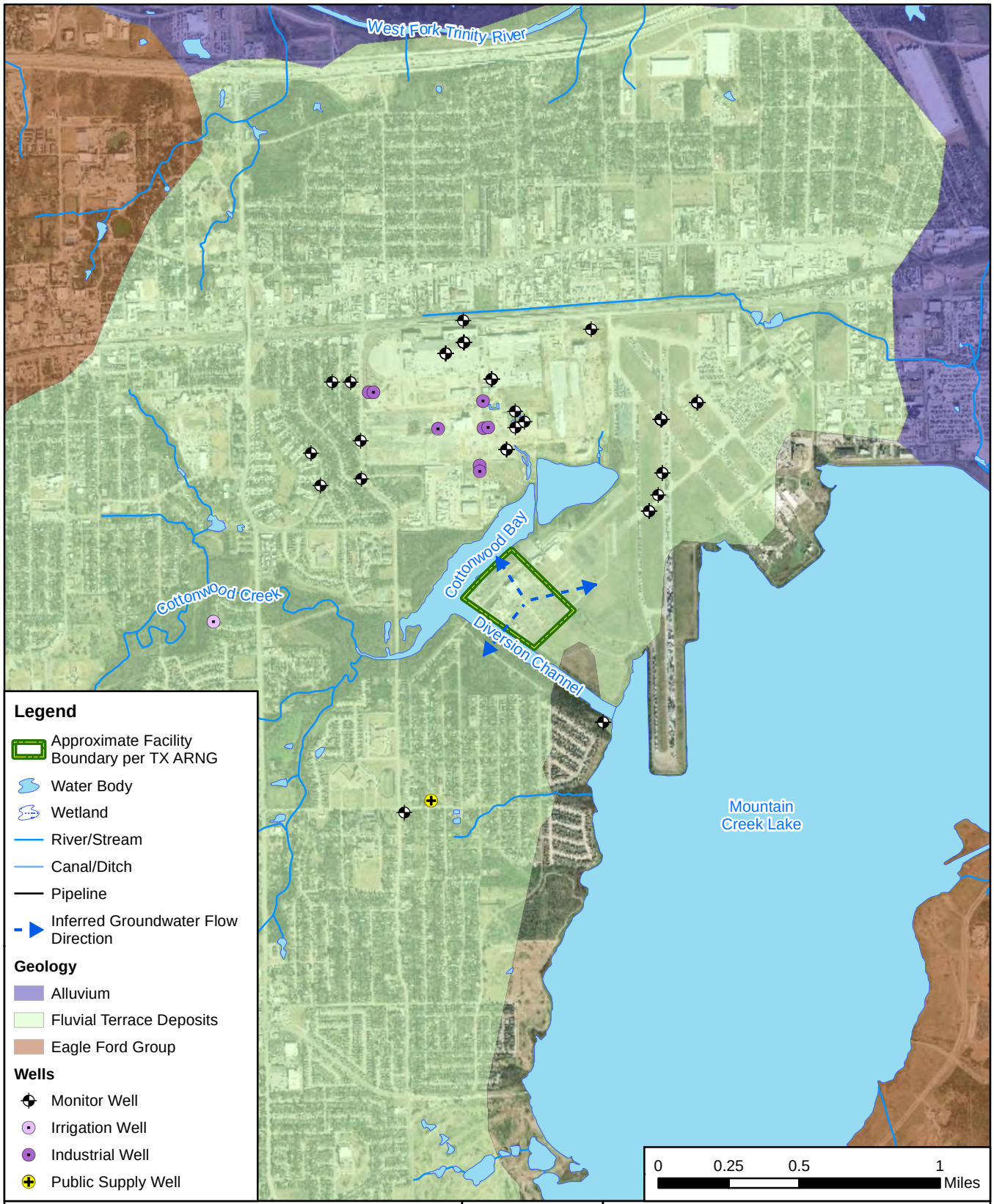

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Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	4/28/2020

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Groundwater Features

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Figure 1-2

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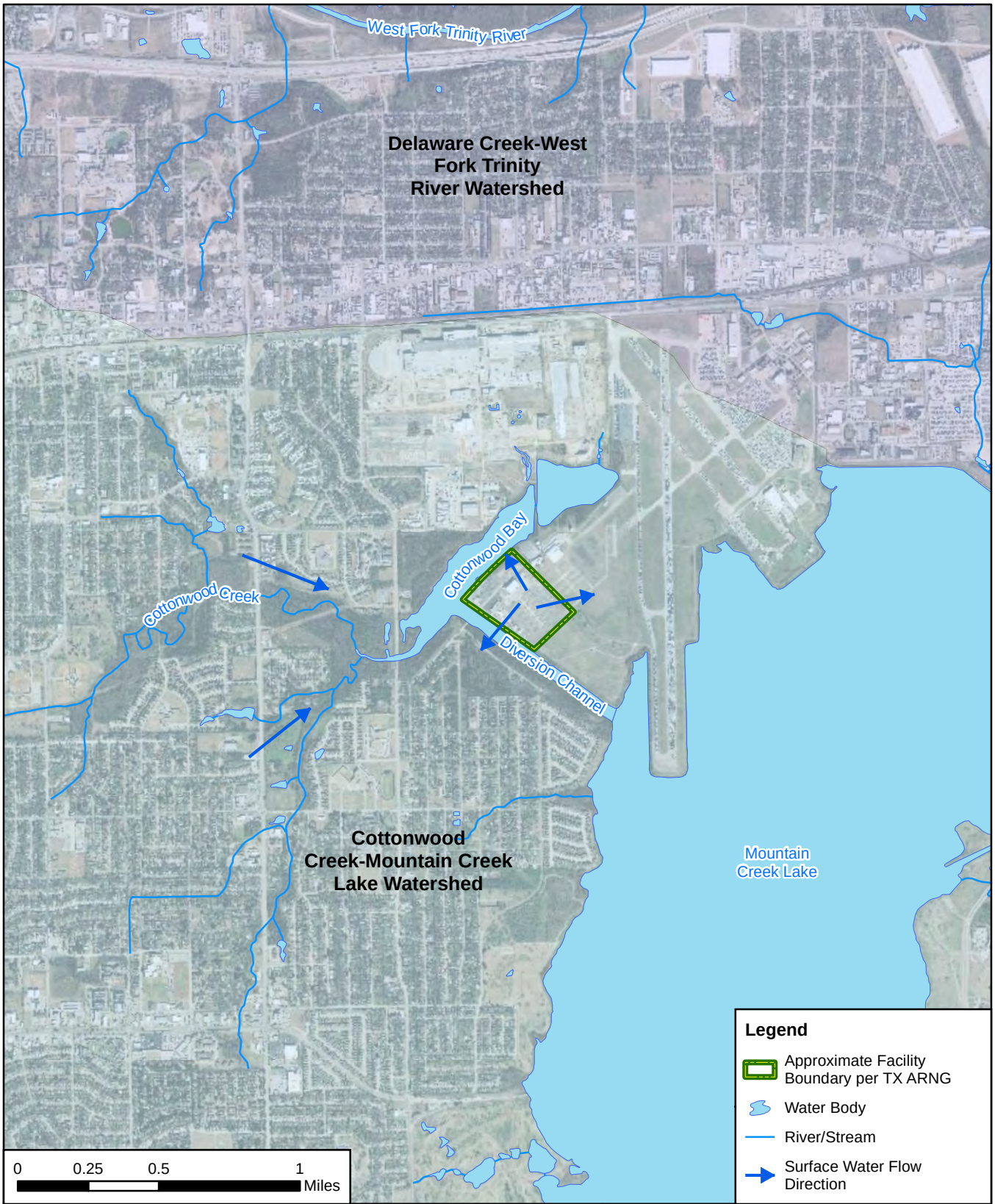

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Surface Water Features

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Figure 1-3

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2. Fire Training Areas

With the exception of mobile cart extinguisher testing/training at the wash rack area and ramp to the flight line (described in **Sections 3.1** and **3.2**, respectively), Grand Prairie AASF personnel confirmed there are no designated FTAs at the facility.

3. Non-Fire Training Areas

In addition to FTAs, the PA evaluated areas where PFAS-containing materials may have been broadly used, stored, or disposed. This may include buildings with fire suppression systems, paint booths, AFFF storage areas, and areas of compliance demonstrations. Information on these features obtained during the PA are included in **Appendices A** and **B**. The Grand Prairie AASF comprises the ramp to the flight line, several buildings (hangar, armory, administrative buildings, and storage), and a wash rack area. These non-FTAs were investigated during the PA. These and other areas are described below and shown on **Figure 3-1,** with photographs provided in **Appendix C**.

Wastewater that collects in the wash rack flows to an OWS and then (depending of the positioning of a manual diverter valve) discharges to either the sanitary sewer system or to the street, where it then flows to Cottonwood Bay. The sanitary sewer system extends generally southwestward, adjacent to the main entrance road across the Diversion Channel and eventually flows to the Trinity River Authority of Texas Central Regional Wastewater Treatment Plant (WWTP) located at 6500 W. Singleton Blvd., Dallas, Texas 75212.

3.1 Wash Rack Area

The wash rack area is located to the northeast of the hangar and hazardous materials storage building. From 2000 to 2012, mobile firefighting carts containing AFFF solution (Tri-Max™ units) were serviced at the wash rack, approximately once every two years. The AFFF solution stored in the Tri-Max™ units was poured down the drain in the wash rack. There were approximately six Tri-Max™ units at the facility that were serviced in this way. Additionally, training took place with the Tri-Max™ units at the wash rack approximately every two years from 2000 to 2012. Training on the wash rack area typically occurred with two or three Tri-Max™ units. While the majority of fluids drained to an OWS, it is possible that AFFF produced during fire training activities reached areas surrounding the wash rack and subsequently infiltrated into the soil. Depending on the positioning of a manual diverter valve, fluids entering the wash rack flowed either to the sanitary sewer system or were discharged to the street northeast of the OWS. The troops had to manually change the system from discharge to the sanitary sewer to discharge to surface water depending on the work they were performing. Interviews indicated that the valve may not have been diverted to the sanitary sewer for some events where the TriMax™ units were emptied or used.

The OWS was constructed in 1984-1985, and the Resource Conservation and Recovery Act (RCRA) Facility Investigation conducted in 2001 revealed leaking joints in the sewer system, so PFAS contamination may have infiltrated to subsurface soil via leaks in drains, OWS or underground wastewater conveyance piping beneath the wash rack, or leaks along piping from the facility to the municipal WWTP. To the best of their knowledge, TXARNG staff who had been working at the facility since 1989 reported no other releases in this area. Geographic coordinates for the wash rack are 32°43'57.0"N; 96°58'40.7"W.

3.2 Ramp to Flight Line

The ramp to the flight line is a large concrete pad located directly to the southeast of the hangar in the central portion of the facility. Currently, non-AFFF mobile firefighting carts are available on the flight line in the case of an emergency. According to PA interviews, AFFF was used during fire training activities on the ramp to the flight line between 2000 and 2012. During training events, Tri-Max™ wheeled portable units were used on the ramp to put out fires. Two or three Tri-Max™ units were trained with during each training event, which occurred approximately every two years. During training events, a burn barrel was set on fire, and TXARNG personnel practiced using the Tri-Max™ units to extinguish the fire. Wastewater and precipitation that falls on the ramp to the

flight line most likely drains to perimeter grassy areas, then infiltrates into the subsurface. The geographic coordinates for the ramp to the flight line are 32°43'53.5"N; 96°58'42.4"W.

3.3 Hangar

The hangar is located in the central portion of the facility, adjacent to the northwestern side of the flight line. The hangar is used for helicopter maintenance, storage, and training. The current hangar was built in 1976. TXARNG staff report the hangar is not equipped with a fire suppression system. The geographic coordinates for the hangar are 32°43'54.4"N; 96°58'43.1"W.

3.4 Armory

The armory is located to the southwest of the hangar, just north of the Diversion Channel. The armory is used for mainly administrative purposes and contains various offices, classrooms, an assembly hall, a kitchen, and storage cages for personnel equipment (GMI, July 2002). No TXARNG staff reported the historic or current use of AFFF in the armory building. The geographic coordinates for the AASF hangar are 32°43'50.2"N; 96°58'46.3"W.

3.5 Hazardous Materials Storage Building

The hazardous materials storage building is located northeast of the hangar. Various hazardous materials are stored inside the building. Historically, 30 5-gallon sealed buckets of 3 percent (%) AFFF were stored inside the building. The 5-gallon buckets were added to helicopter buckets for firefighting offsite. Around 2012, the 5-gallon buckets of AFFF were removed from the facility and sent to the Camp Mabry United States Property & Fiscal Office (USPFO) in Austin, Texas. To the best of their knowledge, TXARNG staff who had been working at the facility since 1989 reported no releases of any materials in this area. No floor drain was observed in the hazardous materials storage building. Geographic coordinates for the hazardous materials storage building are 32°43'56.3"N; 96°58'42.7"W.

3.6 Fuel Station

Historically, AFFF containing Tri-Max™ units were stationed near the Fuel Station at the facility. TXARNG staff who had been working at the facility since 1989 reported no releases of any materials in this area. Precipitation and wastewater flow in this area would most likely infiltrate into the soil. Geographic coordinates for the fuel station are 32°43'56.0"N; 96°58'39.5"W.

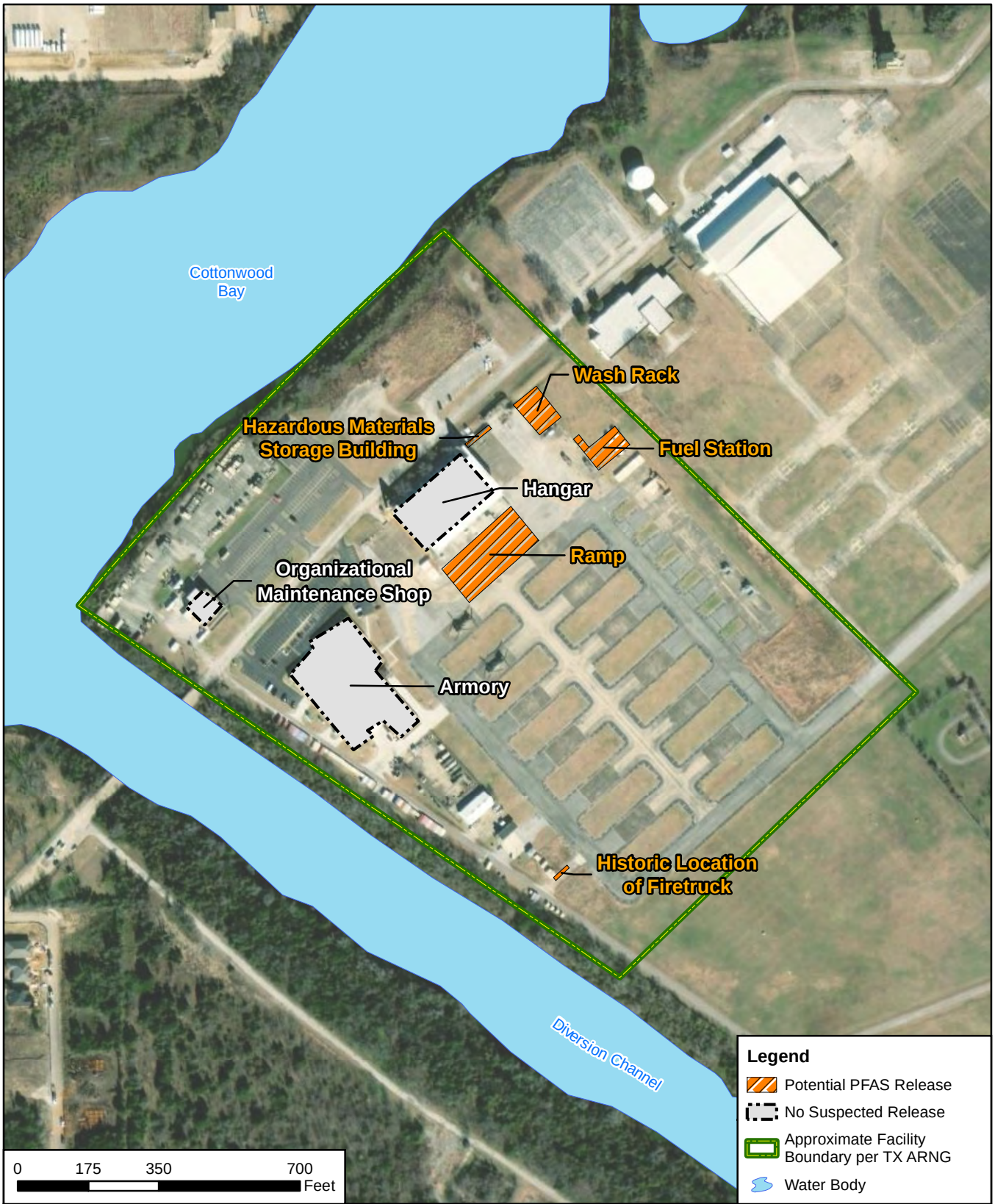
3.7 Firetruck

A large green Osh Kosh™ firetruck was historically located in the southern corner of the facility. The firetruck was equipped with AFFF, but the foam was never deployed. Eventually, the firetruck was turned in, and it no longer is located at the facility. A small containment was located beneath the firetruck in case of spills. TXARNG staff who had been working at the facility since 1989 reported no releases of any materials in this area. Precipitation and wastewater flow in this area would most likely infiltrate into the surrounding grassland. Geographic coordinates for the fuel station are: 32°43'45.7"N; 96°58'40.5"W.

3.8 Landfills

During PA interviews, TXARNG staff noted no current or former landfills located at or in the vicinity of Grand Prairie AASF.

Landfills are not usually a primary release area of PFAS, but materials disposed in landfills may create a secondary source of contamination. Such materials may include sludge from a WWTP that processes PFAS-laden water, used AFFF storage containers, or products associated with waterproofing uniforms or boots.



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Non-Fire Training Areas

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Figure 3-1

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4. Emergency Response Areas

To the best of their knowledge, TXARNG personnel who have been working at the facility since 1989 reported no past emergency responses.

5. Adjacent Sources

Adjacent sources of potential PFAS include the Peace Prairie Hangar, an adjacent Superfund site, and industrial activities. **Figure 5-1** shows the various adjacent sources described in this section.

5.1 Peace Prairie Hangar

The Peace Prairie Hangar was built in 1976 and was initially owned and operated by the TXARNG. Singapore Air Force troops were trained at the Peace Prairie facility by TXARNG personnel. In 1998, the Peace Prairie Hangar was expanded, and a fire suppression system was added. The Peace Prairie Hangar is located northeast of the Grand Prairie AASF. An Operations Officer working at the Peace Prairie Hangar indicated that since he had been at the facility (2013), the suppression system had never been triggered, and no leaks had been detected. The system is currently inspected once a month and has been inspected monthly since 2015. The Peace Prairie Hangar is no longer part of the TXARNG lease and is currently owned by the City of Dallas.

The Peace Prairie Division had Tri-Max™ units, which hangar maintenance personnel inspected. Peace Prairie personnel reported training monthly with Tri-Max™ units. It is unknown where this training occurred, but it most likely occurred at the Peace Prairie wash rack. AFFF is stored as a concentrate in the Peace Prairie Hangar and in the Peace Prairie bulk storage facility. Tri-Max™ units were serviced by a contractor, and it is not clear what happened to the old solution.

In 2003, the AFFF fire suppression system at the Peace Prairie Hangar released. According to the TXARNG Environmental Spill Report, less than 150 gallons of Chemguard™ Standard Grade 3% AFFF was released in the Peace Prairie Hangar on 5 May 2003. The accidental release was caused by a malfunction of the pull station due to vibration, triggering the fire suppression system. Once the system was triggered, the 3% AFFF chemical mixed with water to produce approximately 5,000 gallons of liquid and 15,000 gallons of foam that filled the hangar. Facility personnel washed the liquid/foam mixture into the floor drain, which is connected to holding sumps and an OWS. Eagle Construction and Environmental was contracted to put the foam/water and any other liquid in the sumps and the OWS into holding pods in case of rain, awaiting lab results and then disposal. Some AFFF was released to the ground because of a defective diverter valve. Approximately 20,000 gallons of liquid and residue were removed and held on site, awaiting the test results for waste determination and disposal. A waste determination profile was made after reviewing the test results and the waste profile and test results were sent to Cold Springs Processing plant. Eagle Construction transported the wastewater to Cold Springs Processing for disposal. The spill report can be found in **Appendix A**.

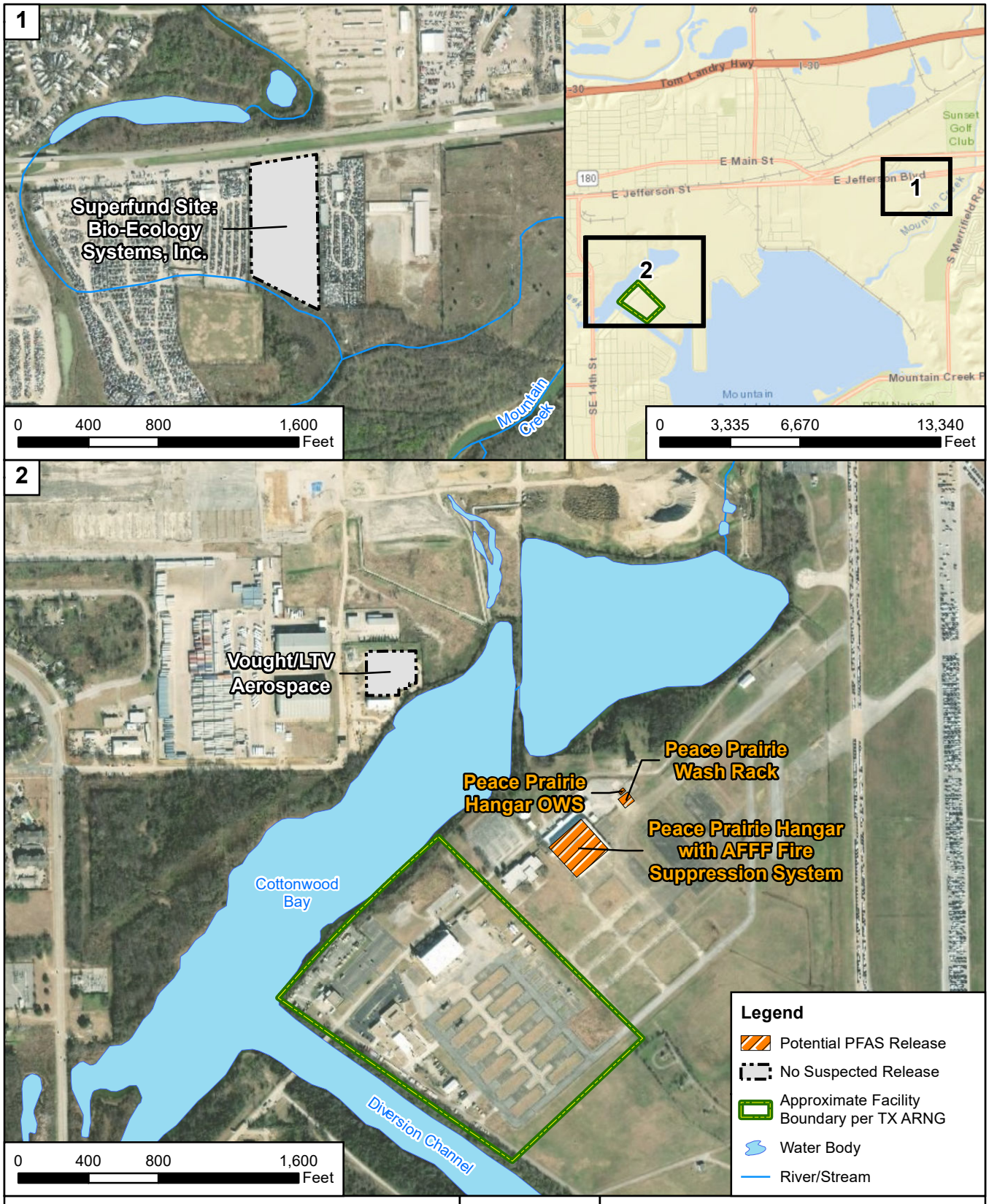
5.2 Bio-Ecology Systems Inc.

The closest Superfund site to the facility (approximately 2.7 miles to the northeast) is the Bio-Ecology Systems Inc. Site, located at 4100 East Jefferson, Grand Prairie, Texas (USEPA Registry ID 110009313322). Solid waste management activities at the site include contaminated soil and groundwater with heavy metals and volatile organic compounds (VOCs). Following cleanup, USEPA took the site off the Superfund program's National Priorities List in 1996 (USEPA, 2018).

5.3 Industrial Activities

Vought/LTV Aerospace is a military aerospace contractor that historically built engines. The company is no longer active in the industrial facilities located approximately 1,700 feet north of

the facility. The land historically owned by Vought Industries now appears to be owned by Lockheed Martin.



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Grand Prairie AASF, TX			
REVISED	4/28/2020	GIS BY	MS	4/28/2020
SCALE	1:9,600	CHK BY	MC	4/28/2020
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	4/28/2020

N

Adjacent Source

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 5-1

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6. Preliminary Conceptual Site Model

Based on the PA findings, the AFFF release area and storage areas associated with the Grand Prairie AASF wash rack, hazardous materials storage building, and fuel station were identified as AOI 1. The flight line ramp was identified AOI 2, and the historic location of the firetruck is identified as AOI 3. This section describes the preliminary CSM components developed for these three AOIs. The CSM identifies the three components necessary for a potentially complete exposure pathway: (1) source, (2) pathway, and (3) receptor. If any of these elements are missing, the pathway is considered incomplete. The AOIs are shown on **Figure 6-1**, and the preliminary CSM for AOI 1, 2, and 3 is presented on **Figure 6-2**.

In general, the potential PFAS exposure pathways are ingestion and inhalation. Human exposure via the dermal contact pathway may occur, and current risk practice suggests it is an insignificant pathway compared to ingestion; however, exposure data for dermal pathways is sparse and continues to be the subject of PFAS toxicological study. Receptors at Grand Prairie AASF include site workers, construction workers, trespassers, and residents and recreational users outside the facility boundary. As described below, the preliminary CSM for the AOIs indicate the specific receptors that could potentially be exposed to PFAS.

6.1 AOI 1 Wash Rack, Hazardous Materials Storage Building, and Fuel Station

AFFF was used during fire training from 2000 to 2012 at the wash rack. An unknown quantity of AFFF was released during these fire training events.

Releases at the wash rack would have been conveyed to the drain and OWS, and then depending on the positioning of a diverter valve, either flowed to the sanitary sewer system, and ultimately discharged to the municipal WWTP, or flowed to the street, and ultimately discharged to Cottonwood Bay. The position of the diverter valve during AFFF use at the wash rack is unknown.

Based on the nature of the release (during maintenance/routine testing/training) it appears unlikely AFFF would have been discharged to the ground surface outside of the wash rack, except potentially via runoff to the grassy areas surrounding the wash rack (**Figure 6-1**). PFAS contamination may have infiltrated to subsurface soil via leaks in drains, OWS or underground wastewater conveyance piping beneath the wash rack, or leaks along piping from the facility to the municipal WWTP. Under such scenarios ground disturbing activities in these areas could result in site or construction worker exposure to PFAS via inhalation of dust or ingestion of exposed surface soil, or construction worker exposure to PFAS via inhalation of dust or ingestion of exposed subsurface soil.

The hazardous materials storage building historically housed 30 5-gallon sealed buckets of 3% AFFF until 2012. Although there were no known releases of AFFF at the storage building, it is possible that spills occurred in the area. AFFF spills in the storage building would have most likely been washed to the nearby wash rack for disposal.

Tri-Max™ units containing AFFF were stationed at the fuel station in case a fire broke out in the area. Although there were no reports of Tri-Max™ use at the fuel station, it is possible that a spill occurred in the area without being reported. AFFF spills in the fuel station area would most likely infiltrate into the surrounding soil.

Based on the nature of the possible release, PFAS contamination may have further infiltrated to subsurface soil at the wash rack or beneath the fuel station. Under such scenarios ground disturbing activities in these areas could result in site or construction worker exposure to PFAS

via inhalation of dust or ingestion of exposed surface soil, or construction worker exposure to PFAS via inhalation of dust or ingestion of exposed subsurface soil.

Potential PFAS contamination may have further infiltrated to shallow groundwater, which is anticipated to follow topography and flow radially toward Mountain Creek Lake, Cottonwood Bay, and the Diversion Channel.

6.2 AOI 2 Flight Line Ramp

AFFF was used during fire training from 2000 to 2012 at the flight line ramp (**Figure 6-1**). An unknown quantity of AFFF was released during these fire training events.

Based on the nature of the release (during maintenance/routine testing/training) it appears unlikely AFFF would have been discharged to the ground surface outside of the flight line ramp, except potentially via runoff to the grassy areas to the southeast of the flight line ramp. PFAS contamination may have further infiltrated to subsurface soil in the grassy areas in the vicinity of the flight line ramp. Under such scenarios ground disturbing activities in these areas could result in site or construction worker exposure to PFAS via inhalation of dust or ingestion of exposed surface soil, or construction worker exposure to PFAS via inhalation of dust or ingestion of exposed subsurface soil.

Potential PFAS contamination may have further infiltrated to shallow groundwater, which is anticipated to follow topography and flow radially toward Mountain Creek Lake, Cottonwood Bay, and the Diversion Channel.

6.3 AOI 3 Historic Location of Firetruck

The firetruck that was historically located on site was equipped with AFFF. Although no interviewees recollected AFFF ever being deployed from the firetruck, there t is possible that spills occurred in that location that were not recorded or recollected. AFFF spills in the historic location of the firetruck would have infiltrated into soil.

Based on the nature of the possible release, PFAS contamination may have further infiltrated to subsurface soil through precipitation from rain events. Under such scenarios, ground disturbing activities in this area could result in site or construction worker exposure to PFAS via inhalation of dust or ingestion of exposed surface soil, or construction worker exposure to PFAS via inhalation of dust or ingestion of exposed subsurface soil.

Potential PFAS contamination may have further infiltrated to shallow groundwater, which is anticipated to follow topography and flow radially toward Mountain Creek Lake, Cottonwood Bay, and the Diversion Channel.

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Grand Prairie AASF, TX			
REVISED	4/28/2020	GIS BY	MS	4/28/2020
SCALE	1:9,600	CHK BY	MC	4/28/2020
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	4/28/2020

N

Areas of Interest

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Figure 6-1

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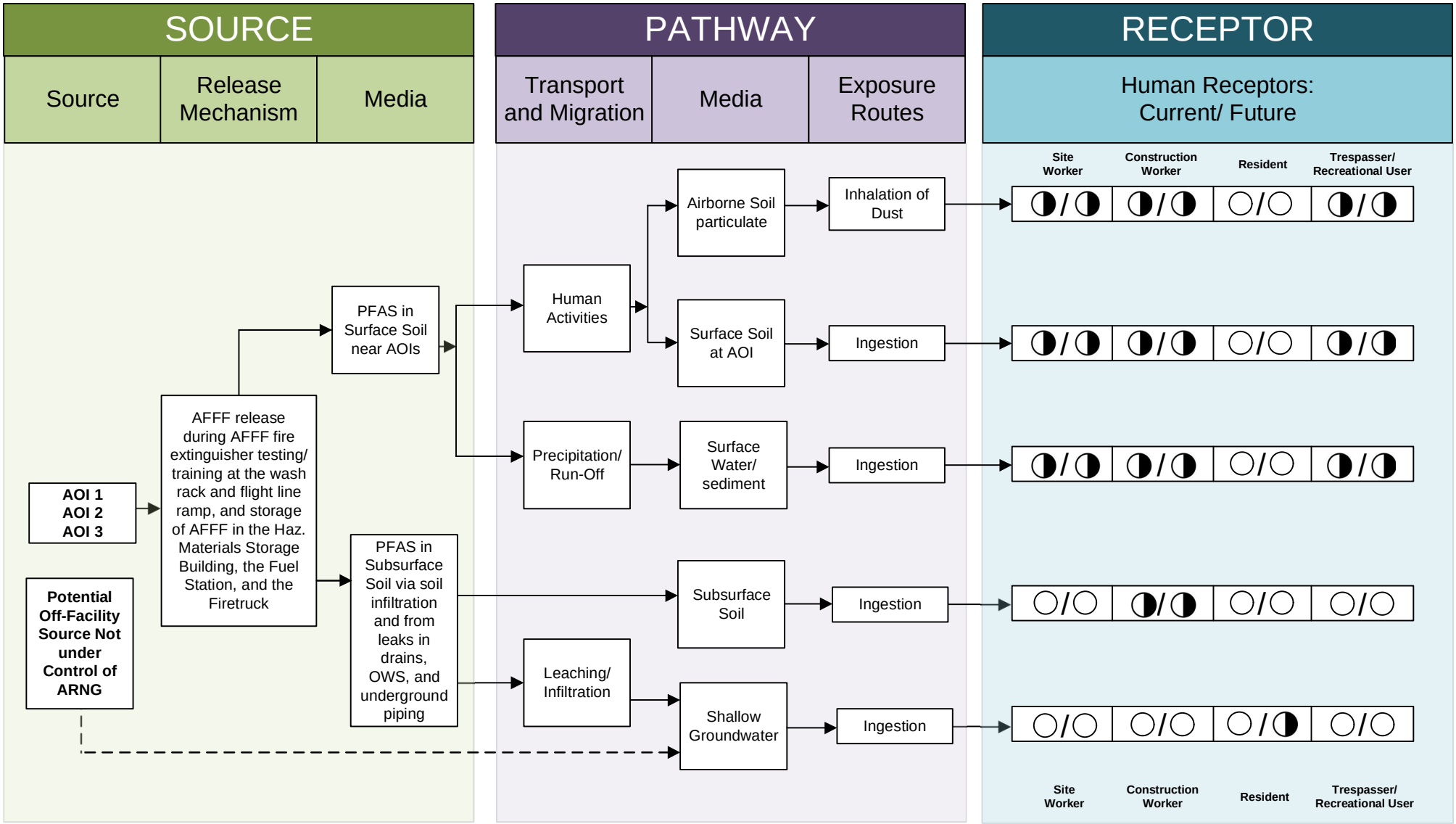

LEGEND

- Flow-Chart Stops
- Flow-Chart Continues
- Partial / Possible Flow
- Incomplete Pathway
- Potentially Complete Pathway
- Complete Pathway

Note:
1. The residential receptor refers to an off-facility receptor.

Figure 6-2
Preliminary Conceptual Site Model, AOI 1, 2, and 3

7. Conclusions

Three AOIs were identified at Grand Prairie AASF during the PA (**Figure 7-1**).

7.1 Findings

Based on interviews with current AASF personnel, reported historical AFFF releases are associated with the AFFF fire extinguisher testing/training at the wash rack and flight line ramp, and AFFF was stored at the hazardous materials storage building, in Tri-Max™ units at the fuel stations, and in the old firetruck. These indicate the potential for PFAS contamination in surface and subsurface soil to intercept one or more receptors. No evidence of other accidental or incidental spills or leaks from AFFF storage containers/areas were identified during the site visit. The remaining buildings associated with the AASF are not equipped with or store AFFF. The findings of potential AFFF release are summarized in **Table 7-1** below.

Table 7-1: AOIs at Grand Prairie AASF

Area of Interest	Description	Used by	Release Dates
AOI 1	Releases during AFFF fire extinguisher testing/training with mobile carts at the wash rack; discharged to OWS, and then to sanitary sewer system or to the street, then to Cottonwood Bay, depending on the position of a diverter valve. AFFF stored in the hazardous materials storage building and in Tri-Max™ units at the Fuel Station have been added to AOI 1 because of the potential for AFFF spills in those areas.	TXARNG	2000-2012
AOI 2	Releases during AFFF fire extinguisher testing/training with mobile carts at the ramp/taxiway. Surface runoff could potentially migrate to surrounding grassy areas.	TXARNG	2000-2012
AOI 3	AFFF was stored in the firetruck historically located in the southern part of the facility. Although there are no recorded uses of AFFF in the area, there is the possibility of leaking in the area.	TXARNG	Unknown

7.2 Uncertainties

Available information sources were investigated during this PA to determine the potential for PFAS-containing materials to have been present, used, or released at the facility. Historically, documentation of PFAS use was not required because PFAS were considered benign. Therefore, records were not typically kept by the facility or available during the PA on the use of PFAS in training, firefighting, or other non-traditional activities, or on its disposal.

The conclusions of this PA are based on all available information, including: previous environmental reports, EDRs™, observations made during the VSI, and interviews. Interviews of

personnel with direct knowledge of a facility generally provided the most useful insights regarding a facility's historical and current PFAS-containing materials. Sometimes the provided information was incomplete. Gathered information has a degree of uncertainty due to the absence of written documentation, the limited number of personnel with direct knowledge due to staffing changes, the time passed since PFAS was first used (1969 to present), and a reliance on personal recollection. Inaccuracies may arise in potential PFAS release locations, dates of release, volume of releases, and the concentration of AFFF used. There is also a possibility the PA has missed a source of PFAS, as the science of how PFAS may enter the environment continually evolves.

In order to minimize the level of uncertainty, readily available data regarding the use and storage of PFAS were reviewed, current personnel were interviewed, multiple persons were interviewed for the same potential source area, and potential source areas were visually inspected.

Table 7-2 summarizes the uncertainties associated with the PA:

Table 7-2: Uncertainties

Area of Interest	Source of Uncertainty
AOI 1	The position of the diverter valve at the OWS during AFFF training and maintenance activities is unknown, so it is unclear if wastewater flowed to the sanitary sewer or to surface water during these activities.
AOI 2	The flow path of AFFF used for fire training on the flight line ramp is unknown. It is assumed that wastewater would flow to nearby grassy areas.

7.3 Potential Future Actions

Based on the documented absence (1989-present) of the release of PFAS-containing materials at the AASF Hangar and Armory, evidence does not indicate that current or former TXARNG activities in these areas contributed PFAS contamination to soil, groundwater, surface water, or sediment at Grand Prairie AASF. The AASF Hangar and Armory will not move forward in the CERCLA process.

Interviews (covering 1989 to present) indicate that releases during AFFF fire extinguisher testing/training in the wash rack area (AOI 1) and flight line ramp (AOI 2) may have resulted in potential PFAS releases identified during the PA. Additionally, AFFF stored in the hazardous materials storage building and fuel station (AOI 1) and at the old firetruck (AOI 3) may have resulted in AFFF spills that occurred unreported. Based on the preliminary CSM developed for the AOIs, there is potential for receptors to be exposed to PFAS contamination in soil at the AOIs. **Table 7-3** summarizes the rationale used to determine if the AOIs should be considered for further investigation under the CERCLA process and undergo an SI.

ARNG will evaluate the need for an SI at AOIs 1, 2, and 3 at Grand Prairie AASF based on the presence of a PFAS release, possible receptors, the migration potential of PFAS contamination to receptors, and the availability of resources.

Table 7-3: Rationale

Area of Interest	AOI Location	Rationale	Potential Future Action
AOI 1: Wash Rack, Hazardous Materials Storage Building, and Fuel Station	32°43'57.0"N; 96°58'40.7"W 32°43'56.3"N; 96°58'42.7"W 32°43'56.0"N; 96°58'39.5"W	Releases during AFFF fire extinguisher testing/training with mobile carts at the wash rack; discharged to OWS, and then to either the sanitary sewer system or to the street, which would then flow via surface water flow to Cottonwood Bay. There is also potential for releases to have occurred at the hazardous materials storage building and at the fuel station. Releases at the hazardous materials storage building would have likely been washed to the wash rack, and releases at the fuel station would likely infiltrate into soil.	Proceed to an SI, focus on soil and shallow groundwater
AOI 2: Flight Line Ramp	32°43'53.5"N; 96°58'42.4"W	Releases during AFFF fire extinguisher testing/training with mobile carts at the ramp/taxiway. Surface runoff could potentially migrate to surrounding grassy areas.	Proceed to an SI, focus on soil and shallow groundwater
AOI 3: Historic Location of Firetruck	32°43'45.7"N; 96°58'40.5"W	There is potential for AFFF to have leaked into the soil surrounding the historic location of the firetruck.	Proceed to an SI, focus on soil and shallow groundwater

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Grand Prairie AASF, TX			
REVISED	4/28/2020	GIS BY	MS	4/28/2020
SCALE	1:9,600	CHK BY	MC	4/28/2020
Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	4/28/2020

Summary of Findings

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 7-1

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8. References

Geo-Marine, Inc (GMI). July 2002. Draft Site Assessment Survey (SAS). Texas Army National Guard (TXARNG) Dallas Naval Air Station (DNAS) Facilities. Grand Prairie, Texas.

GMI. December 2003. Letter Report. Phase II Environmental Confirmation Sampling and Analysis at the Texas Army National Guard Dallas Naval Air Station Aviation Support Facility. Grand Prairie, TX.

National Oceanic and Atmospheric Administration (NOAA). 2019. Dallas/Fort Worth Climatology. https://www.weather.gov/fwd/dfwclimo. Accessed 8 May 2019.

Tetra Tech NUS, Inc. (TtNUS). 2001. RCRA Facility Investigation (RFI) Report for Category A Naval Air Station Dallas.

United States Environmental Protection Agency (USEPA). 1991. *Guidance for Performing Preliminary Assessments under CERCLA*. EPA/540/G-91/013. September 1991.

USEPA. 2018. Superfund Site: Bio-Ecology Systems Inc. https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0602464. Accessed 15 May 2019.

Appendix A
Data Resources

Data resources will be provided separately on CD. Data resources for Grand Prairie AASF include:

Previous Investigations Completed

- Naval Air Station, Dallas, Texas. DRAFT Finding of Suitability and Environmental Baseline Survey to Modify Lease NOY(R)-44881. April 1997.
- Geo-Marine, Inc. July 2002. Draft Site Assessment Survey (SAS). Texas Army National Guard (TXARNG) Dallas Naval Air Station (DNAS) Facilities. Grand Prairie, Texas.
- Geo-Marine, Inc. December 2003. Final Phase II Environmental Confirmation Sampling and Analysis at the TXARNG DNAS Aviation Support Facility. Grand Prairie, Texas.
- Freese and Nichols, Inc. September 2018. Environmental Condition of Property Phase I Environmental Site Assessment Singapore Air Force Lease Property. Prepared for Texas Military Department.

Miscellaneous Data Resources

- EDR™ Aerial Photo Decade Package, December 2019. Grand Prairie AASF, 1013 Lakecrest Dr, Grand Prairie, TX 75051.
- EDR™ Radius Map Report with GeoCheck, December 2019. Grand Prairie AASF, 1013 Lakecrest Dr, Grand Prairie, TX 75051.
- EDR™ Certified Sanborn Map Report, December 2019. Grand Prairie AASF, 1013 Lakecrest Dr, Grand Prairie, TX 75051.
- McCowan, Leon. Texas Army National Guard Environmental Spill Report. 2003.
- Lease Agreement between the County of Dallas and Texas National Guard Armory Board. 1988.

Appendix B
Preliminary Assessment Documentation

Appendix B.1
Interview Records

PA Interview Questionnaire – ~~Fire Station~~ Townhall

Facility: Grand Prairie AASF
Interviewer: [redacted]
Date/Time: 4/23/19 9am

Interviewee: Refer to sign-in sheet **Title:** NA **Phone Number:** NA **Email:** NA	Can your name/role be used in the PA Report? (Y) or N Can you recommend anyone we can interview? Y or N _____

1. Roles or activities with the Facility/years working at the Facility.

   Refer to sign-in sheet.

2. What can you tell us about the history of AFFF at the Facility? Was it used for any of the following activities, circle all that apply and indicate years of active use, if known? Identify these locations on a facility map.

   Maintenance (e.g., ramp washing) no
   Fire Training Areas Ramp & washrack, flight line (2000 to 2012, trained once every 2yrs)
   Firefighting (Active Fire) no
   Crash no
   Fire Suppression Systems (Hangers/Dining Facilities) only in Peace Prairie Hangar
   Fire Protection at Fueling Stations Tri-Max fire extinguishers were at fuel station but never used
   Non-Technical/Recreational/ Pest Management no

3. Are any current buildings constructed with AFFF dispensing systems or fire suppression systems? What are the AFFF/suppression system test requirements? What is the frequency of testing at the AFFF/suppression systems?

   Only Peace Prairie Hangar.

4. Are fire suppression systems currently charged with AFFF or have they been retrofitted for use of high expansion foam?

   Only Peace Prairie Hangar.

5. How is AFFF procured? Do you have an inventory/procurement system that tracks use?

   Purchased through the state procurement system.

PA Interview Questionnaire – Fire Station

Facility:_____
Interviewer:_____
Date/Time:_____

6. What type of AFFF has been/is being used (3%, 6%, Mil Spec Mil-F-24385, High Expansion)? Manufacturer (3M, Dupont, Ansul, National Foam, Angus, Chemguard, Buckeye, Fire Service Plus)?

3% AFFF was used historically. Manufacturer unknown.

7. Is AFFF formulated on base? If so, where is the solution mixed, contained, transferred, etc.?

It was mixed near washrack.

8. Where is the AFFF stored? How is it stored (tanks, 55-gallon drums, 5-gallon buckets)? What size are the storage tanks? Is the AFFF stored as a mixed solution (3% or 6%) or concentrated material?

Historically it was stored in 30-5 gal buckets in the chemical storage building (as a concentrated material).

9. How is the AFFF transferred to emergency response vehicles, suppression systems, flightline extinguishers? Is/was there a specified area on the facility where vehicles are filled with AFFF and does this area have secondary containment in case of spills? How and where are vehicles storing AFFF cleaned/decontaminated?

Transfers occurred in washrack & ramp areas adjacent to Building 1009. No secondary containment in this area.

10. Provide a list of vehicles that carried AFFF, now and in the past, and where are/were they located?

Historic fire truck was located near south end of site. See map. Small containment was located underneath fire truck.

11. Any vehicles have a history of leaking AFFF? Do you/did you test the vehicles spray patterns to make sure equipment is working properly? How often are/were these spray tests performed and can you provide the locations of these tests, now and in the past?

No history of leaking vehicles. No testing of spray patterns.

PA Interview Questionnaire – Fire Station

Facility:_____
Interviewer:_____
Date/Time:_____

12. How many FTAs are/were on this facility and where are they? Locate on a map. How many FTAs are active and inactive? For inactive FTAs, when was the last time that fire training using AFFF was conducted at them?

FTAs include the washrack & ramp/flightline area. Fire training using AFFF was conducted once every 2 yrs from 2000 to 2012 (approximately). 6 Tri-Max units were tested.

13. What types of fuels/flammables were used at the FTAs?

Burn barrels.

14. What was the frequency of AFFF use at each location? When a release of AFFF occurs during a fire training exercise, now and in the past, how is/was the AFFF cleaned and disposed of? Were retention ponds built to store discharged AFFF? Was the AFFF trickled to the sanitary sewer or left in the pond to infiltrate?

AFFF use occurred approximately every 2 yrs from 2000 to 2012. AFFF was primarily washed down the wash rack, into the OWS, and then discharged to ~~storm water~~ sanitary sewer @ drainage. Alternatively, some AFFF may have been washed off of flightline into grass. No retention ponds on site. Appears stormwater may flow into lake.

15. Are there mutual aid/use agreements between county, city, local fire department? Please list, even if informal. If formalized, may we have a copy of the agreement? Can you recall specific times when city, county, state personnel came on-post for training? If so, please state which state/county agency, military entity? Do you have any records, including photographs to share with us?

City of Grand Prairie conducts annual fire training. Last AFFF training occurred in ~2010. City of Grand Prairie is ~~respon~~ responsible for fire protection on site, or Dallas. Fire protection originally provided by Navy.

16. Did individual units come on-post with their own safety personnel, did they also bring their own AFFF? Was training with AFFF part of these exercises? How were emergencies handled under these circumstances?

No other units trained with AFFF on-post, except Singapore trained monthly with Tri-Max units.

PA Interview Questionnaire – Fire Station

Facility:_____
Interviewer:_____
Date/Time:_____

17. Did military routinely or occasionally fire train off-post? List units that you can recall used/trained at various areas.

No fire training off-post.

18. Are there specific emergency response incident reports (i.e., aircraft or vehicle crash sites and fires)? If so, may we please copy these reports? Who (entity) was the responder?

No emergency responses.

19. Do you have records of fuel spill logs? Was it common practice to wash away fuel spills with AFFF? Is/was AFFF used as a precaution in response to fuel releases or emergency runway landings to prevent fires?

No large fuel spills - AFFF was not used in response.

20. Was AFFF used for forest fires or fire management on-post/off-post? If so, please describe what happened and who was involved?

~5 gals of AFFF would be added to 2000 gal buckets on helicopters for potential off-site use. No recollection of AFFF helicopter buckets ever being used (only a training exercise).

21. Can you provide any other locations where AFFF has been stored, released, or used (i.e. hangars, buildings, fire stations, firefighting equipment testing and maintenance areas, emergency response sites, storm water/surface water, waste water treatment plants, and AFFF ponds)?

Stored in haz. waste storage building. Used for fire training at wash rack and at ramp / flightline. AFFF fire extinguishers were stored but not used at fuel station. AFFF was stored but not used in fire truck.
AFFF released at Peace Prairie Hangar.

PA Interview Questionnaire – Fire Station

Facility:_____
Interviewer:_____
Date/Time:_____

22. Are you aware of any other creative uses of AFFF? If so, how was AFFF used? What entities were involved?

No creative uses.

23. How is off-spec AFFF disposed (used for training, turned in, or given to a local Fire Station)? If applicable, do you know the name of the vendor that removes off-spec AFFF? Do you have copies of the manifest or B/L?

Off-spec AFFF solution was either used for fire training, or dumped down the drain in the wash rack. This occurred with 6 Tri-Max units approximately every 2 years.

24. Do you recommend anyone else we can interview? If so, do you have contact information for them?

[redacted] TMD Fire Marshall [redacted]

Grand Prairie **Preliminary Assessment Sign-In Sheet** 4/23/19

Name	Position	Years at the Facility	Phone Number/Email	May AECOM use your name in the PA Report?
[redacted]	TMD Reg Env Spec		[redacted]	Yes
	Trng Region Supervis			
	Mech Supervisor	28		
	Environ Officer/Mech	10		
	Quality Assurance	29		
	Standards Inst.	~~30~~		
	Mechanic	1		
	TI supervisor	20		
	Flight OPS	8		
	Instructor Pilot	6		
	Standardization Instructor	21		
	Ops. Officer	5		

Appendix B.2
Visual Site Inspection Checklists

Facility ST
Visual Survey Inspection Log

Recorded by: [redacted] Jo
ARNG Contact:
Date: 4/23/19

Site Name / Area Name / Unique ID: Grand Prairie AASF
Site / Area Acreage: ~16 ~~18~~ acres
Historic Site Use (Brief Description): Former US Navy Naval Air Station. Decommissioned at as a naval air station in December 1998
Current Site Use (Brief Description): Currently serves as a Texas Army National Guard Army Aviation Support Facility (AASF).

1. Was AFFF used at the site/area? (Y) / N
   3a. If yes, document how AFFF was used and usage time (e.g., *fire fighting training 2001 to 2014*) fire fighting training from 2000 to 2012 (~once every 2 yrs). Trained with 2 or 3 Tri-Max units
2. Has usage been documented? Y / (N)
   2a. If yes, keep a record (place electronic files on a disk)

Significant Topographical Features:

1. Has the infrastructure changed at the site/area? Y / (N)
   1a. If so, please describe change: (*ex. Structures ~~structures~~ longer exist.*)
2. Is the site/area vegetated? (Y) / N
   2a. If not vegetated, briefly describe the site/area composition: the site is mostly comprised of impervious cover, with some grassy areas throughout
3. Does the site or area exhibit evidence of erosion? Y / (N)
   3a. If yes, describe the location and extent of the erosion :
4. Does the site/area exhibit any areas of ponding or standing water? Y / (N)
   4a. If yes, describe the location and extent of the ponding :

Migration Potential:

1. Does site/area drainage flow off installation? (Y) / N
   1a. If so, please note observation and location: Appears to flow into the lake
2. Is there standing water or drainage issues within the site/area? Y / (N)
   2a. If so, please note observation and location:
3. Is there channelized flow within the site/area? (Y) / N
   3a. If so, please note observation and location: There are storm water drains throughout the site that seem to end at the lake
4. Have man-made drainage channels been constructed within the site/area? (Y) / N
   4a. If so, please note the location of the channel: There is a storm water drainage network.

Additional Notes
Water from the wash rack flows into the OWS, and then into the ~~storm water system or sanitary system~~ sanitary sewer (MC). Stormwater drains throughout the site seem to lead to the lake.

Appendix B.3
Conceptual Site Model Information

Preliminary Assessment – Conceptual Site Model Information

Site Name: Grand Prairie AASF

Why has this location been identified as a site?

2003 AFFF release in hangar (Peace Prairie Hangar – outside of site boundary). Historic use of AFFF for fire training.

Are there any other activities nearby that could also impact this location?

Peace Prairie Hangar (north east of site). Navy fire fighting/training activities. Vaught (aerospace military contractor) to north of site (no longer there). Mountain Creek Station (electric utility) to east of site, across lake.

Training Events

Have any training events with AFFF occurred at this site? Yes

If so, how often? Once every 2 yrs from 2000 to 2012 (approximately)

How much material was used? Is it documented? Approximately 2 or 3 Tri-Max units used per training.

Identify Potential Pathways: Do we have enough information to fully understand over land surface water flow, groundwater flow, and geological formations on and around the facility? Any direct pathways to larger water bodies? It appears that stormwater flows to lake.

Surface Water:

Surface water flow direction? Radial flow Storm drainage system discharges into Cottonwood Bay, the Diversion Channel & Mountain Creek Lake system

Average rainfall? ~30 in/yr

Any flooding during rainy season? Frequent heavy rain leads to occassional flooding

Direct or indirect pathway to ditches? Surface water flows along streets into storm water inlets.

Direct or indirect pathway to larger bodies of water? Direct pathway to surrounding lake via SW system

Does surface water pond any place on site? No

Any impoundment areas or retention ponds? No

Any NPDES location points near the site? Yes, along Cottonwood Bay and the Diversion Channel (5 stormwater outfalls)

How does surface water drain on and around the flight line? No

Preliminary Assessment – Conceptual Site Model Information

Groundwater:

Groundwater flow direction? Radial: east toward Mountain Creek Lake, north to Cottonwood Bay, west toward Diversion Channel

Depth to groundwater? 30-35 ft

Uses (agricultural, drinking water, irrigation)? 1 irrigation well ~1 mi W of site. Industrial wells north of site.

Any groundwater treatment systems? No

Any groundwater monitoring well locations near the site? 2 plugged MWs near site

Is groundwater used for drinking water? No

Are there drinking water supply wells on installation? No

Do they serve off-post populations? No

Are there off-post drinking water wells downgradient No

Waste Water Treatment Plant:

Has the installation ever had a WWTP, past or present? No

If so, do we understand the process and which water is/was treated at the plant? N/A

Do we understand the fate of sludge waste? N/A

Is surface water from potential contaminated sites treated? N/A

Equipment Rinse Water

1. Is firefighting equipment washed? Where does the rinse water go?

Washed down the washrack, which then goes to the OWS, which is either diverted to the sanitary sewer or to the storm sewer.

2. Are nozzles tested? How often are nozzles tested? Where are nozzles tested? Are nozzles cleaned after use? Where does the rinse water flow after cleaning nozzles?

Nozzles were tested on Tri-Max units ~ every 2 years from 2000-2012. Rinse water flows to washrack or near flightline

3. Other?

Solution was dumped down washrack ~ every 2 yrs. There were 6 Tri-Max units.

Preliminary Assessment – Conceptual Site Model Information

Identify Potential Receptors:

Site Worker Yes

Construction Worker Yes

Recreational User No

Residential ~~No~~ Yes

Child No

Ecological Yes

Note what is located near by the site (e.g. daycare, schools, hospitals, churches, agricultural, livestock)?

Site is surrounded on three sides by water. Industrial activities to the north, residential to the south.

Documentation

Ask for Engineering drawings (if applicable). No as-builts available for storm sewer.

Has there been a reconstruction or changes to the drainage system? When did that occur? Not known.

Appendix C
Photographic Log

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Grand Prairie AASF	Grand Prairie, Texas

Photograph No. 1

Description:

April 23, 2019

Facing NE, looking out at the Fueling Station. Historically, Tri-Max fire extinguishers were stationed at the fuel station (but never used).

Photograph No. 2

Description:

April 23, 2019

Facing west, looking at the Ramp/Flightline Area where Tri-Max fire extinguishers were historically used for fire training purposes.

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Grand Prairie AASF	Grand Prairie, Texas

Photograph No. 3

Description:

April 23, 2019

Facing SE, looking at flight lines with existing fire extinguishers (non-AFFF).

Photograph No. 4

Description:

April 23, 2019

Facing north, looking at the bulk chemical storage building. Historically, 30 – 5 gallon buckets of 3% AFFF was stored in this building.

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Grand Prairie AASF	Grand Prairie, Texas

Photograph No. 5

Description:

April 23, 2019

Looking inside of the bulk chemical storage building. Historically, 30 – 5 gallon buckets of 3% AFFF was stored in this building. No floor drains were observed inside the storage area.

Photograph No. 6

Description:

April 23, 2019

Facing SW, looking at location where old fire truck with AFFF was located. Historically a small secondary containment/spill pad was located underneath the fire truck. The historic fire truck was never used, and was later turned in.