FINAL
Preliminary Assessment Report
Camp Beauregard, Louisiana

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

°F	degrees Fahrenheit
bgs	below ground surface
AASF	Army Aviation Support Facility
AECOM	AECOM Technical Services, Inc.
AFFF	aqueous film forming foam
AOI	Area of Interest
ARNG	Army National Guard
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CSM	conceptual site model
EDR™	Environmental Data Resources, Inc.™
FTA	fire training area
HA	Health Advisory
LAARNG	Louisiana Army National Guard
LNG	Lousiana National Guard
NGWA	National Ground Water Association
NGVD 29	National Geodetic Vertical Datum of 1929
NOAA	National Oceanic and Atmospheric Administration
OWS	oil/water separator
PA	Preliminary Assessment
PFAS	per- and poly-fluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
SI	Site Inspection
UCMR3	Unregulated Contaminant Monitoring Rule 3
US	United States
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAEHA	United States Army Environmental Hygiene Agency
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VSI	visual site inspection

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 Camp Beauregard Cantonment Area near Pineville, Louisiana, 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 site visit on 24 January 2019 and completed visual site inspections at locations where PFAS-containing materials were suspected of being stored or used;
- Interviewed current and former Louisiana ARNG (LAARNG) Camp Beauregard personnel during the site visit and LAARNG environmental managers and operations staff;
- Developed a preliminary conceptual site model (CSM) to outline the potential release and pathway of PFAS for the Area(s) of Interest (AOIs) and the facility (**Figure ES-1**).

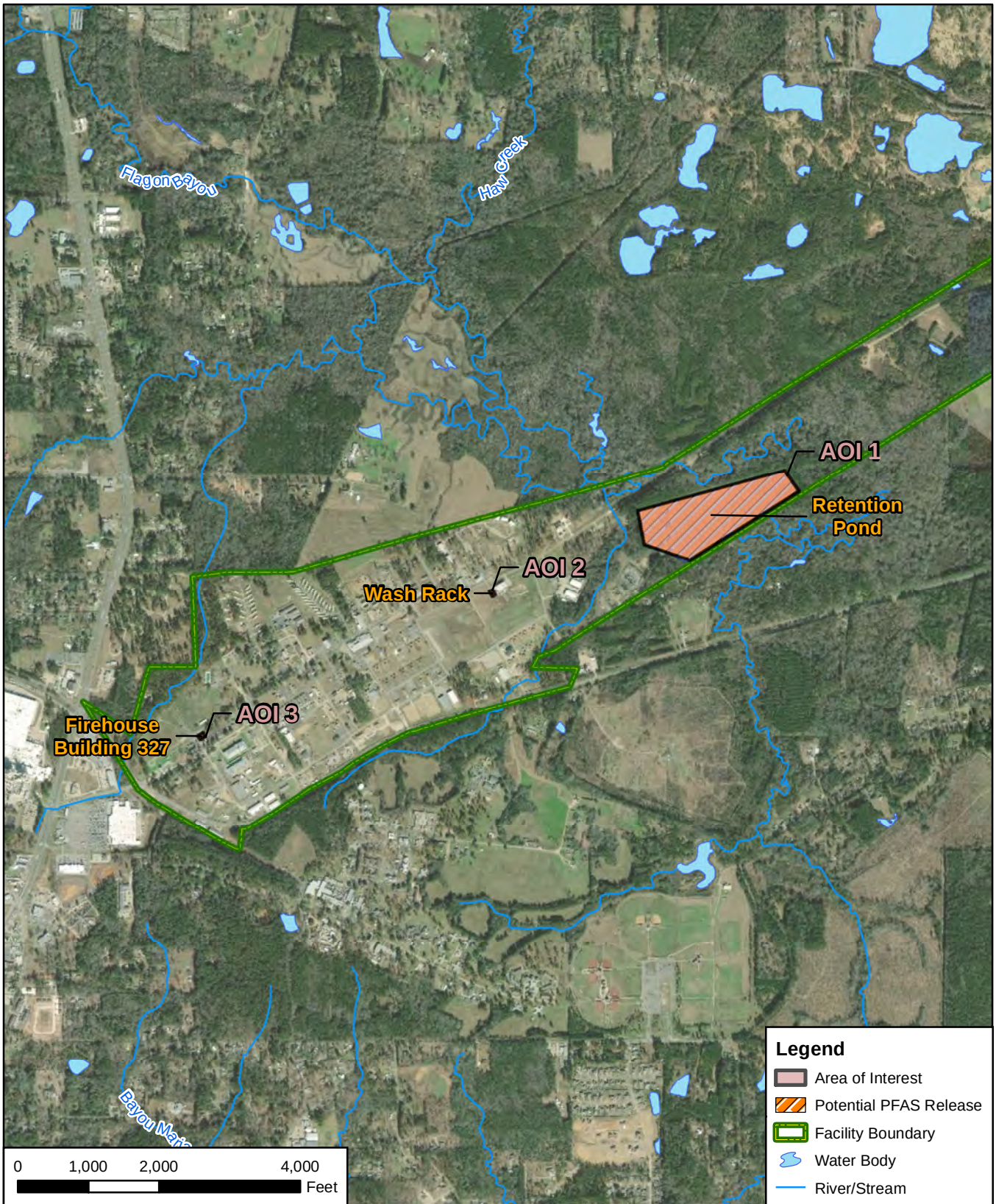
Three AOIs related to a potential PFAS release was identified at Camp Beauregard Cantonment Area during the PA. The AOIs are shown on **Figure ES-1** and described in **Table ES-1** below:

Table ES-1: AOIs at Camp Beauregard

Area of Interest	Name	Used by	Potential Release Date
AOI 1	Retention Pond	LAARNG	1990s – 2003
AOI 2	Wash Rack	LAARNG	Unknown
AOI 3	Firehouse Building 327	City of Pineville Fire Department	Mid 1990s - Current

Based on potential PFAS releases at three AOIs, there is potential for exposure to PFAS contamination in media at or near the facility. The preliminary CSM for the Camp Beauregard Cantonment Area, which presents the potential receptors and media impacted, is shown on **Figure ES-2**. ARNG will evaluate the need for an SI at Camp Beauregard Cantonment Area based on the potential receptors, the potential migration of PFAS contamination off the facility, and the availability of resources.

Based on the US Environmental Protection Agency (USEPA) Unregulated Contaminant Monitoring Rule 3 (UCMR3) data, no PFAS were detected in a public water system above the USEPA Health Advisory (HA) within 20 miles of the facility. The HA is 70 parts per trillion for PFOS and PFOA, individually or combined. 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.



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Camp Beauregard, LA			
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SCALE	1:24,000	CHK BY	MS	4/28/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	4/28/2020

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Summary of Findings

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Figure ES-1

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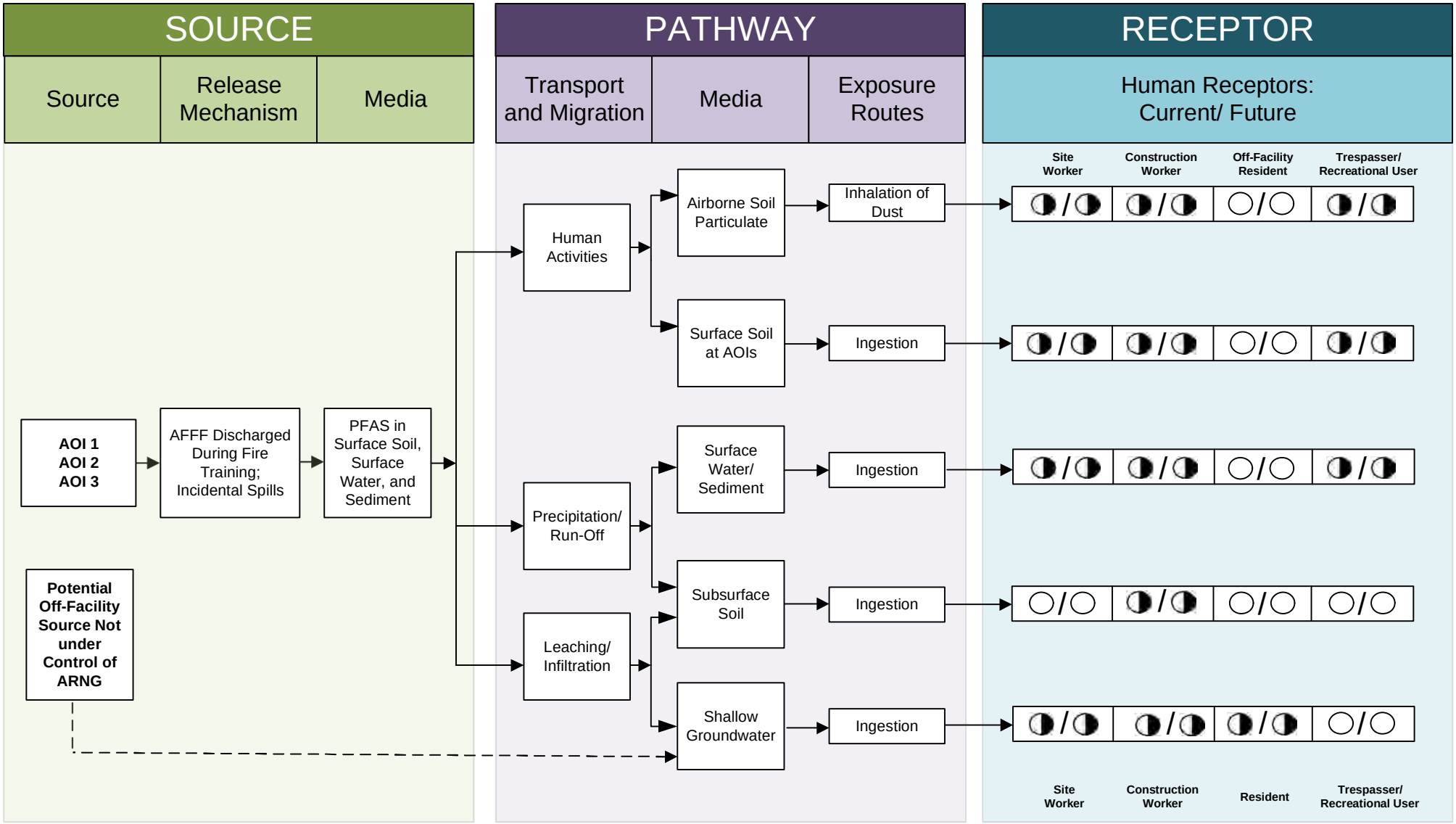


LEGEND

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

Notes:
1. The resident and recreational user receptors refer to an off-site resident and recreational user.
2. Dermal contact exposure pathway is incomplete for PFAS.

Figure ES-2
Preliminary Conceptual Site Model
Camp Beauregard Cantonment Area, LA

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 polyfluoroalkyl substances (PFAS), primarily in the form of aqueous film forming foam (AFFF) released as part of firefighting activities, although other PFAS sources 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. PFAS formulations contain highly diverse mixtures of compounds. Thus, the fate of PFAS compounds in the environment varies. The regulatory framework at both federal and state levels continues to evolve. The US Environmental Protection Agency (USEPA) issued Drinking Water Health Advisory (HA) for PFOA and PFOS in May 2016, but there are currently no promulgated national standards regulating PFAS in drinking water. The HA is 70 parts per trillion for PFOS and PFOA, individually or combined.

This report presents the findings of a PA for PFAS-containing materials at the Camp Beauregard Cantonment Area (also referred to as the “facility”), near Pineville, Louisiana, 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 [CFR] Part 300), and Army requirements and guidance.

This PA documents a known fire training area (FTA) as well as other locations where PFAS may have been released into the environment at the Cantonment Area. 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 site visit on 24 January 2019 and completed visual site inspections (VSIs) at locations where PFAS-containing materials were suspected of being stored or used;
- Interviewed current and former Louisiana ARNG (LAARNG) Camp Beauregard personnel during the site visit and LAARNG environmental managers and operations staff; and,
- Developed a preliminary conceptual site model (CSM) to outline the potential releases and pathways of PFAS for the Area(s) of Interest (AOIs) and the facility.

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 as follows:

- **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 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 potential or suspected PFAS releases at the facility, specifically in response to emergency situations
- **Section 5** – **Adjacent Sources:** describes sources of potential 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 for the AOIs and the facility
- **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

Camp Beauregard is located in north central Louisiana, northeast of Pineville and Alexandria **(Figure 1-1)**. Camp Beauregard is approximately 13,618 acres and is separated into two distinct non-contiguous areas, the Training Site (locally known as Range Central) (12,889 acres) and the Cantonment Area (729 acres) (LAARNG, 2007). The Cantonment Area and most of the Training Site are in the Rapides Parish, although a portion of the Training Site extends into Grant Parish. This PA focuses on the Cantonment Area where the former Camp Beauregard Army Aviation Support Facility (AASF) helicopter airfield was located before it was moved to Esler Field in 2000-2001. The Cantonment Area is bounded to the south and east by Esler Field Road (LA 116), by Monroe Highway (US Route 165) to the west, and by Flagon Bayou to the north.

Camp Beauregard was authorized by the War Department on 15 July 1917 for the training of troops for World War I, when it was determined that Camp Stafford was too small. After the war, the State of Louisiana acquired Camp Beauregard, and it became a training site for the National Guard. With the beginning of World War II in 1940, Camp Beauregard was federalized and used for the 1940 Louisiana Maneuvers and the Fifth Corps (LAARNG, 2007). Once World War II ended, Camp Beauregard came under control of the State of Louisiana for summer National Guard training. In 1973, Camp Beauregard was again used as an annual training facility (Malcolm Pirnie, Inc., 2003).

1.5 Facility Environmental Setting

Camp Beauregard is in the Upper West Gulf Coastal Plain physiographic region (USACE, 2014). The Cantonment Area topography ranges from around 100 to 160 feet above mean sea level (US Geological Survey [USGS], 2003; USGS, 2015) and is bisected by Flagon Bayou, which flows southeast across the Cantonment Area.

1.5.1 Geology

In general, the geology of central Louisiana is composed of marine sediments deposited by changing sea levels, and fluvial sediments deposited by the meandering Mississippi River system. These sediments dip less than 5 degrees toward the south-southeast, and their composition ranges from clays to sands (US Army Environmental Hygiene Agency [USAEHA], 1994).

The geology of Camp Beauregard includes Quaternary surficial deposits overlying Oligocene to Miocene deposits. The surficial geology consists of the Bentley and Williana formations, which have two facies: a clayey and a sandy to gravelly facies (USAEHA, 1994). The Oligocene to Miocene deposits at Camp Beauregard consists of two formations, from oldest to youngest: the Catahoula Formation and the Fleming Formation, which comprises the Lena, Carnahan Bayou, Dough Hills, and Williamson Creek members. The Catahoula Formation contains thick beds of sand (fresh water bearing beds range from 10 to 230 feet thick) and thin layers of clay (US Army Center for Health Promotion and Preventive Medicine [USACHPPM], 2004). The Miocene-aged Fleming Formation is characterized by consolidated clays with discontinuous silts and sands (USAEHA, 1994).

At the Cantonment Area, the clayey facies of the Bentley and Williana formations are present in thicknesses ranging from 30 to over 100 feet. The clayey facies are underlain by the Williamson Creek, which is only present in the southernmost portion of the Cantonment Area, Dough Hills, Carnahan Bayou, and Lena members of the Flemings Formation and the Catahoula Formation. The geology at the Training Site differs slightly than that found at the Cantonment Area. The Williamson Creek and Dough Hills members of the Flemings Formation are absent at the Training Site. The Williamson Creek member terminates at the southern part of the Cantonment Area, and the Dough Hills member terminates just north/northeast of the Cantonment Area and is therefore not present at the Training Site. Second, the sandy to gravelly facies of the Bentley and Williana formations predominates in the Training Site (USAEHA, 1994). The geology of Camp Beauregard Cantonment Area is shown on **Figure 1-2**.

1.5.2 Soil

Soils at Camp Beauregard consist mostly of Quaternary-aged fine sandy loams and clay loams with marine or alluvial origins (USDA, 1980). Soils present at the Cantonment Area include Acadia silt loam, Cahaba fine sandy loam, Gore very fine sandy loams, Guyton complex, Kolin silt loam, Lucy loamy fine sand, Malbis fine sandy loam, Rexor-Nugent complex, and the Ruston fine sandy loam. The silty loams tend to have relatively low permeability, whereas the sandy loam has higher permeability. The pH of these soils range from 3.8-5.8 (US Department of Agriculture [USDA], 2019).

1.5.3 Hydrogeology

The hydrogeology at Camp Beauregard is characterized as a multi-layered system composed of four aquifers: the Bentley and Williana, Williamson Creek, Carnahan Bayou, and Catahoula aquifers. The Jasper aquifer system comprises the Williamson Creek and Carnahan Bayou aquifers in Rapides Parish.

Freshwater from the Bentley and Williana aquifer is sourced in the minor sandy lenses in the clayey facies (USAEHA, 1994). Some geotechnical reports and Parish-wide aquifer studies do not identify this aquifer, which suggests it is not a major source of freshwater in Rapides Parish. Additionally, some sources incorrectly call this aquifer the Red River aquifer (USACHPPM, 2004), which terminates at the Red River south-southwest of the facility.

The Williamson Creek aquifer is situated in the Williamson Creek member of the Fleming Formation and is therefore only present in the southern portion of the Cantonment Area. The aquifer sits within well-sorted, fine- to medium-grained sand interbedded with clay. Average thickness of the sand beds is approximately 50 feet. The base of the aquifer ranges from 0 feet below National Geodetic Vertical Datum of 1929 (NGVD 29) in northwestern Rapides Parish to 2,500 feet below NGVD 29 in the south (Griffith, 2009; Tomaszewski, 2009). Potentiometric-surface maps for the Williamson Creek aquifer show groundwater at the Cantonment Area flowing southwest towards the Red River, directly between the cities of Alexandria and Pineville (Tomaszewski, 2009). Approximately 270 wells were screened in the Williamson Creek aquifer; 193 of these wells are domestic, and 44 are public supply wells (Griffith, 2009). The confining unit between the Williamson Creek and Carnahan Bayou aquifers is the Dough Hills member of the Fleming Formation.

The Carnahan Bayou aquifer is the major aquifer at Camp Beauregard and is located within the Carnahan Bayou member, which is composed of well-sorted, fine- to medium-grained sand interbedded with clay, which are interpreted to have deltaic and marine origins. The sand beds have an average thickness of approximately 38 feet. The base of the aquifer ranges from 0 feet below NGVD 29 in northwestern Rapides Parish to 4,000 feet below NGVD 29 in the south (Griffith, 2009; Tomaszewski, 2009). Potentiometric-surface maps for the Carnahan Bayou aquifer show groundwater at the Cantonment area flowing southwest towards the Red River, directly between the cities of Alexandria and Pineville (Tomaszewski, 2009). Approximately 210 wells are screened in the Carnahan Bayou aquifer. Of these wells, 122 are domestic, and 71 are public supply wells (Griffith, 2009).

The Lena member of the Fleming Formation is the confining unit between the Carnahan Bayou aquifer and the underlying Catahoula Aquifer; however, at Camp Beauregard, the Catahoula aquifer contains saltwater (USACHPPM, 2004).

Water to the facility and surrounding area is supplied by the Water Works District No. 3 of Rapides Parish. The District distributes water sourced from seven groundwater wells (40 percent), with two supply wells (No. 2 and No. 7) located within the Camp Beauregard Cantonment Area (**Figure 1-2**). The remaining 60 percent of the District's water is sourced from a surface water intake on Big Creek in Grant Parish, approximately 8 miles north of the facility (French, 2020). Several other wells were identified within a 1-mile radius of the Camp Beauregard Cantonment area. The EDR™ report (**Appendix A**) identified 48 well records; however, several wells have multiple records (e.g., one well may have a record for installation and a record for abandonment). Using additional online resources, such as state and local GIS databases, wells were researched to a 4-mile radius of the facility. Well depths ranged from 15 to 1180 feet below ground surface (bgs). Several wells were noted as owned by the Louisiana National Guard (LNG), Camp Beauregard, and the USGS; furthermore, 17 records noted plugged/abandoned or destroyed wells (including several LNG wells). Eight wells were reported as monitoring wells installed to total depths ranging from 15 to 80 feet bgs. Water levels listed for two monitoring wells (E17 and E18 owned by the Louisiana Air National Guard and located immediately north of the facility) were reported as shallow as 3 feet bgs.

Based on the USEPA Unregulated Contaminant Monitoring Rule 3 (UCMR3) data, it was indicated that no PFAS were detected in a public water system above the HA within 20 miles of the facility. The HA is 70 parts per trillion for PFOS and PFOA, individually or combined. 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.

1.5.4 Hydrology

Camp Beauregard is situated in the watershed of Catahoula Lake, where surface water consists of intermittent streams, open water bodies, and wetlands (LAARNG, 2007, USACE, 2014). The Cantonment Area is in the Upper and Lower Flagon Bayou watersheds (**Figure 1-3**). The Flagon Bayou flows southeast from northwest Rapides Parish through the Cantonment Area and, eventually, northeast into Catahoula Lake. Local drainage features include a retention pond in the northeastern portion of the Cantonment area, which overflows into Flagon Bayou.

1.5.5 Climate

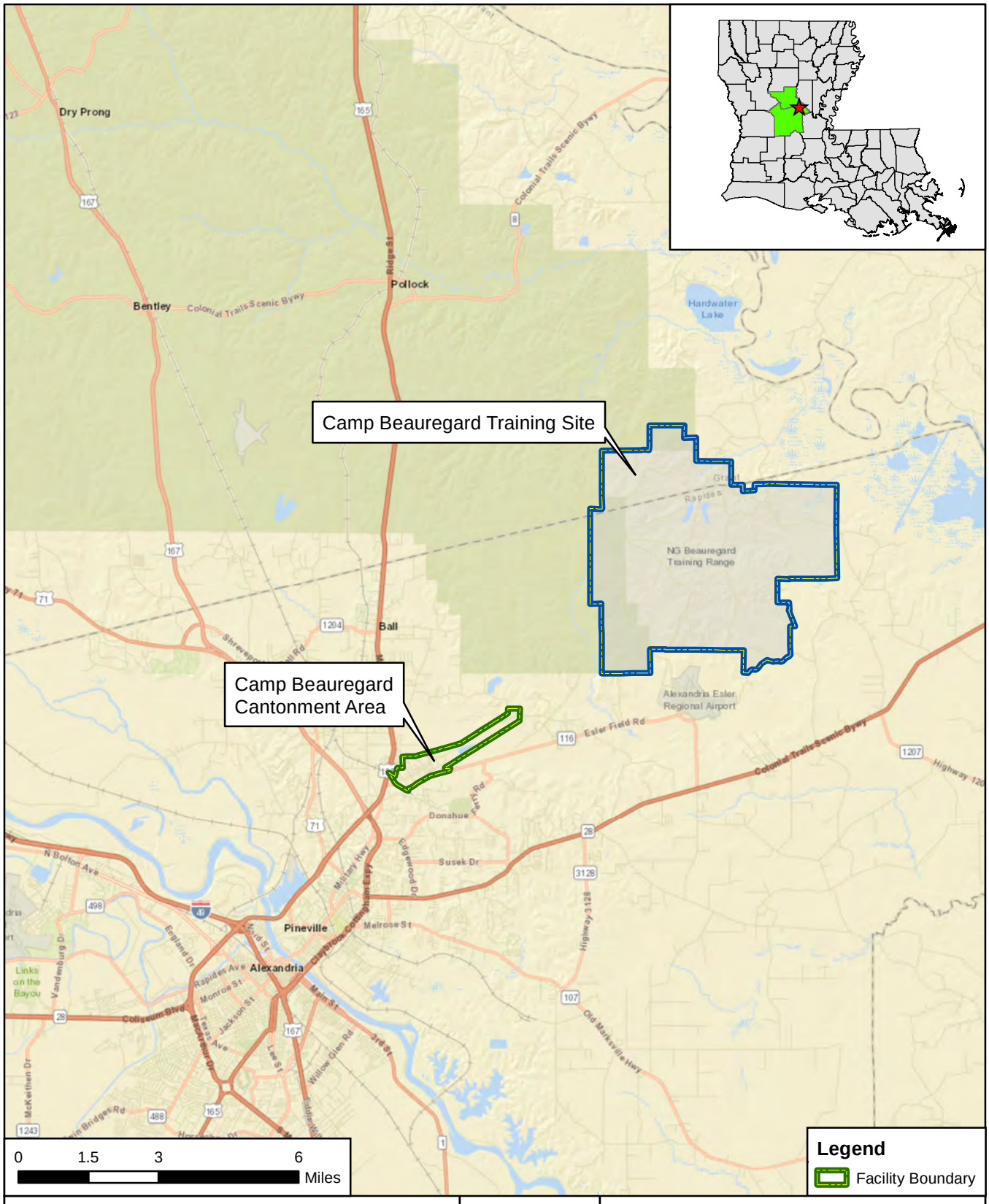
Camp Beauregard has a sub-tropical climate influenced by its proximity to the Gulf of Mexico (LAARNG, 2007). The average temperature at the facility is 65.85 degrees Fahrenheit (°F). Seasonally, temperatures vary from a summer average monthly high of 94 °F to a winter average monthly low of 37 °F. Average precipitation in Pineville is 57.48 inches (National Oceanic and Atmospheric Administration [NOAA], 2019). The mean annual relative humidity is 74 percent (LAARNG, 2007). The mean annual evaporation rate in central Louisiana is 45 inches (NOAA, 1982). Thunderstorm activity is most common during hurricane season (1 June–31 October), when tropical storms and hurricanes regularly develop in the Gulf of Mexico. The tropical disturbances cause high winds and excessive rainfall (LAARNG, 2007).

1.5.6 Current and Future Land Use

Camp Beauregard is primarily used for training LAARNG members but is also used for the following (LAARNG, 2007):

- Military training for various reserve and active units;
- Training center for Special Operations Group of the United States Federal Marshall Service;
- Training for the Louisiana Youth Challenge Program;
- Branch headquarters for the Louisiana Office of Emergency Preparedness; and
- Recreational opportunities.

Adjacent land uses include residential, commercial/industrial, and institutional. Reasonably anticipated future land uses are not expected to change from the current land uses. Access to the facility is restricted and controlled by fencing and gates.



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Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	1/28/2020

Facility Location

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 1-1

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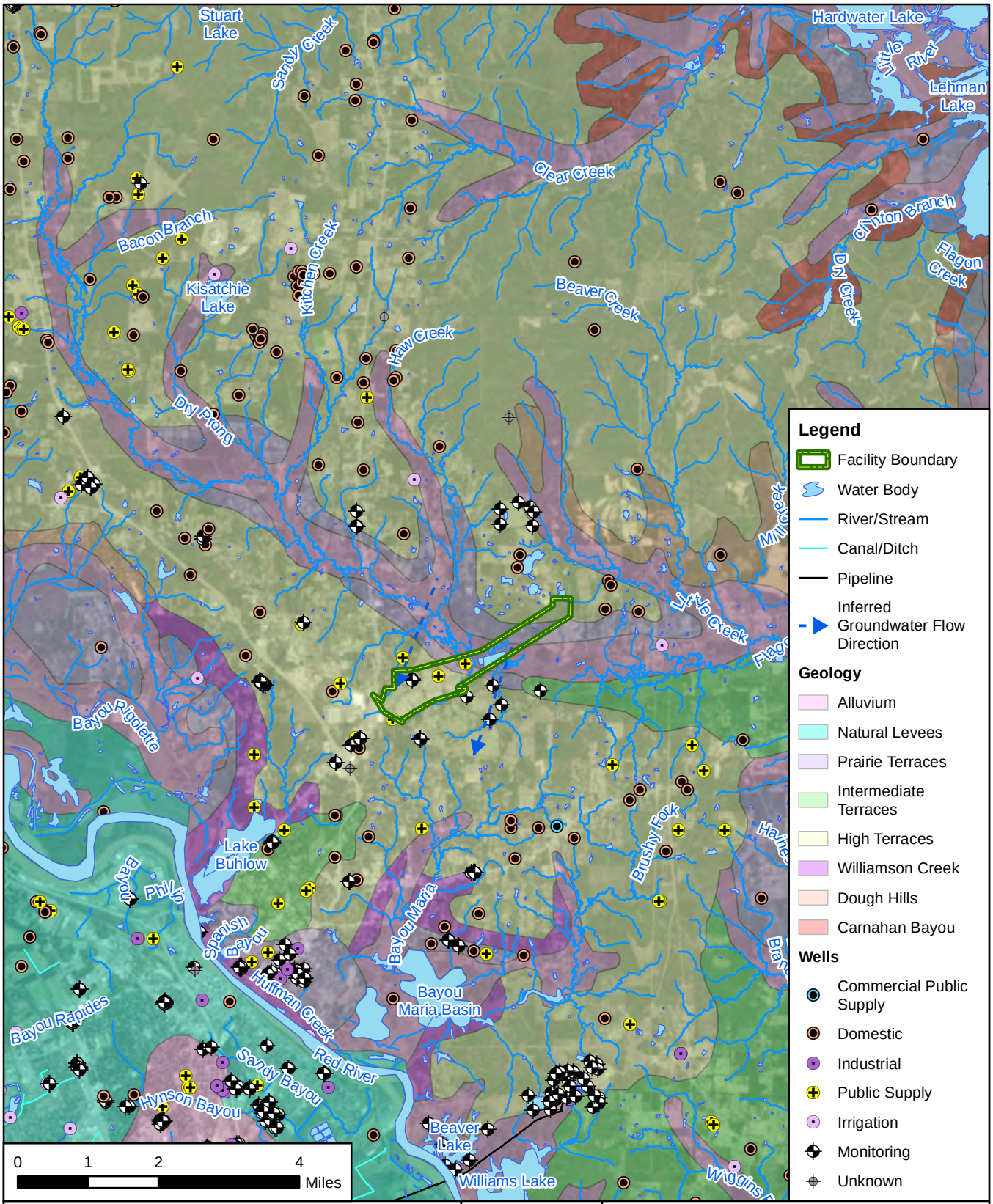

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Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	3/25/2020

Groundwater Features

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Figure 1-2

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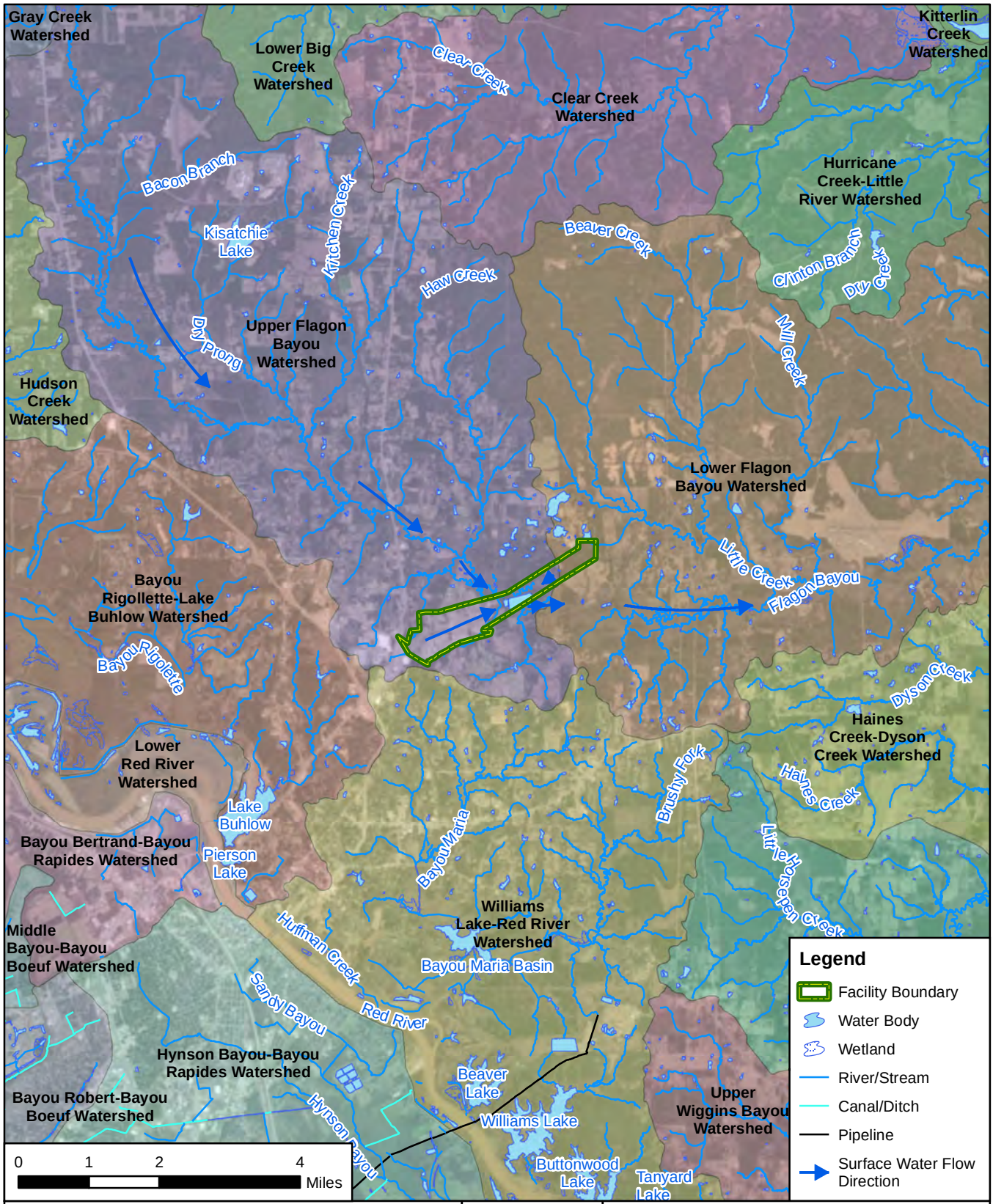

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Surface Water Features

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Figure 1-3

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2. Fire Training Areas

One FTA was identified within the current facility during the PA interviews (**Appendix B**). This FTA is described below and shown in **Figure 2-1**.

2.1 Wash Rack

LAARNG personnel believe the Wash Rack was constructed sometime after the AASF was moved to Esler Field in 2000-2001. AFFF was possibly discharged at the Wash Rack near Building 1338 during fire training activities. The Wash Rack is located on a concrete surface with a drain to an oil/water separator (OWS). The OWS drained to the retention pond until 2003, when it was closed (**Section 3.1**). Since 2003, wastewater from the Wash Rack is conveyed to and treated by the wastewater treatment plant adjacent to Pinecrest School. Photos of the concrete surface and drains leading to the OWS can be seen in **Appendix C**. There are no documented instances of AFFF usage. The approximate coordinates of the Wash Rack are 31°22’32.8”N; 92°23’23.4”W.

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Camp Beauregard, LA			
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Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	4/28/2020

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Fire Training Areas

AECOM
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Figure 2-1

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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**. Based on interviews conducted with facility personnel, with knowledge of the facility spanning from 1986 to current, two non-FTAs were identified during the PA where AFFF was stored or possibly released. Descriptions of the non-FTAs are presented below and, the non-FTAs are shown on **Figure 3-1**.

3.1 Retention Pond

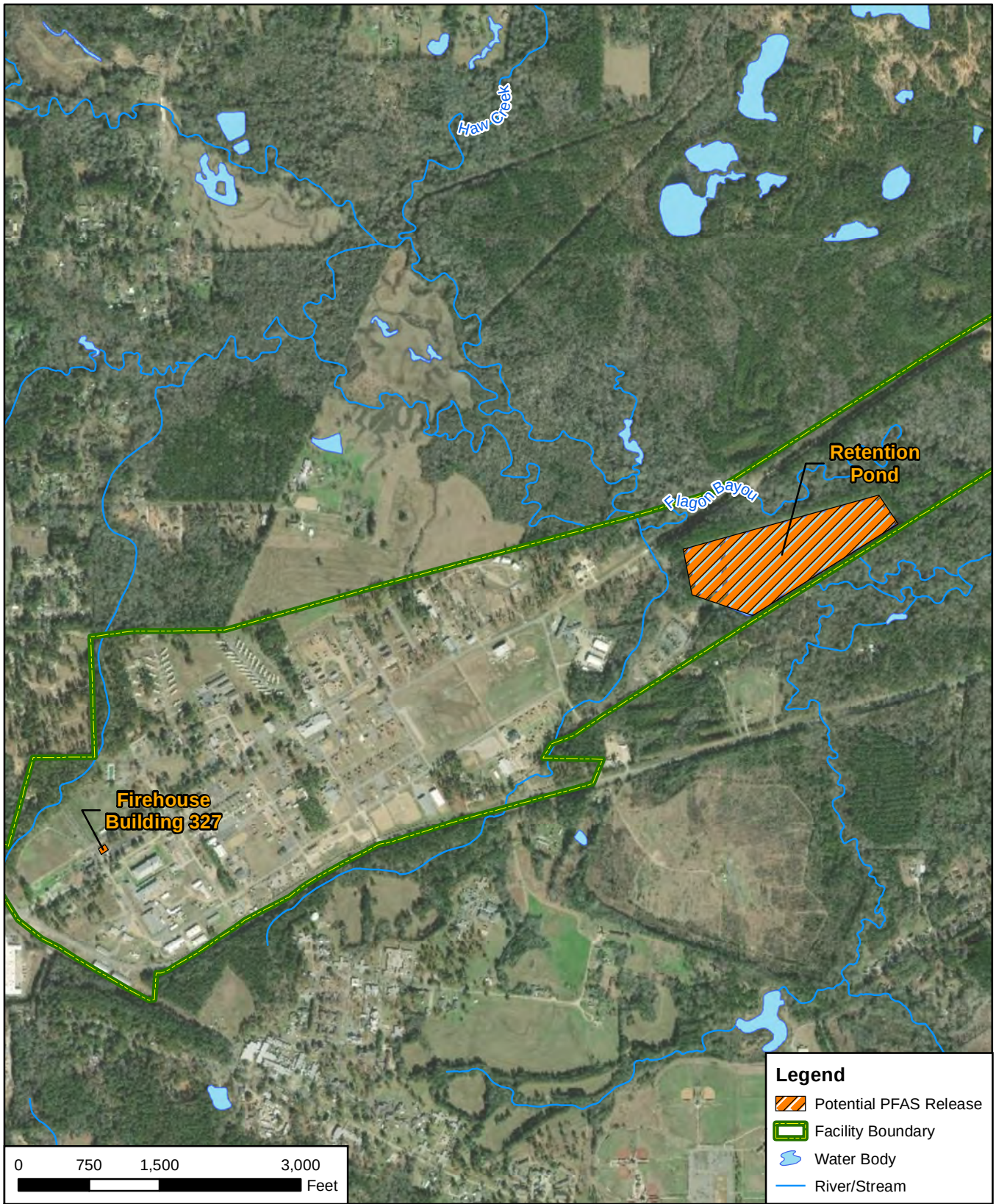
The Retention Pond is a former 33-acre large oxidation pond located on the eastern side of the Cantonment Area. In 2003, it was closed and converted into a natural wetlands area. Prior to 2003, AFFF potentially released at the Wash Rack would have been rinsed and drained into OWS, which flowed to the Retention Pond. The approximate coordinates of the Retention Pond are 31°22'45.2"N; 92°22'46.1"W.

3.2 Firehouse Building 327

Firehouse Building 327 was opened around 1995-1996 and remains active with multiple firetrucks and response vehicles. The firehouse is operated by the City of Pineville Fire Department.

During the VSI, it was observed that the Firehouse Building 327 currently stores Chemguard© six percent AFFF in five 5-gallon containers near the emergency response vehicles. Firetrucks carried 5-gallon containers up until around 2017. Spray tests were performed with these vehicles; no foam was used on site but was used in training off-post. The interviewee had no recollection of any AFFF leaks. The geographic coordinates for the Firehouse Building 327 are 31°22'13.90"N; 92°24'10.89"W.

Interviewees also indicated that Tri-Max™ extinguishers were housed at Camp Beauregard in an unknown location until 2000, when they were transferred to Esler Field Army Aviation Support Facility (Esler Field). Any fire extinguishers at the Cantonment Area may have been discharged prior to 1990 but have not been used since. It is unclear where the Tri-Max™ extinguishers were located, but it is possible that they were stored at the Firehouse.



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Non-Fire Training Areas

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 3-1

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4. Emergency Response Areas

Based on interviews conducted with facility personnel, with knowledge of the facility spanning from 1986 to current, no emergency response action using AFFF occurred at the Cantonment Area of Camp Beauregard. No emergency response areas were identified within the current facility during the PA through interviews or EDR™ Reports.

5. Adjacent Sources

Five adjacent off-site sources of potential PFAS, not under control of LAARNG were identified during the PA through interviews and data review. These off-facility sources include: Station 1, 35 Purser St, Safety-Kleen Systems, Proctor and Gamble Manufacturing, and Esler Field. **Figure 5-1** displays the adjacent sources described in this section.

5.1 Station 1

Station 1 is located approximately 3.5 miles southwest of the Cantonment Area in the City of Pineville. The Pineville Fire Department stored 5-gallon buckets of AFFF at Station 1. No further information was available regarding the use or disposal of the AFFF. Station 1 is hydrogeologically downgradient of the Cantonment Area.

5.2 35 Purser St

35 Purser St is located approximately 2.75 miles southwest of the Cantonment Area at 909 College Dr, Pineville, LA. During fire training activities, the Pineville Fire Department discharged AFFF in unknown quantities at this location. 35 Purser St is hydrogeologically downgradient of the Cantonment Area.

5.3 Safety-Kleen Systems

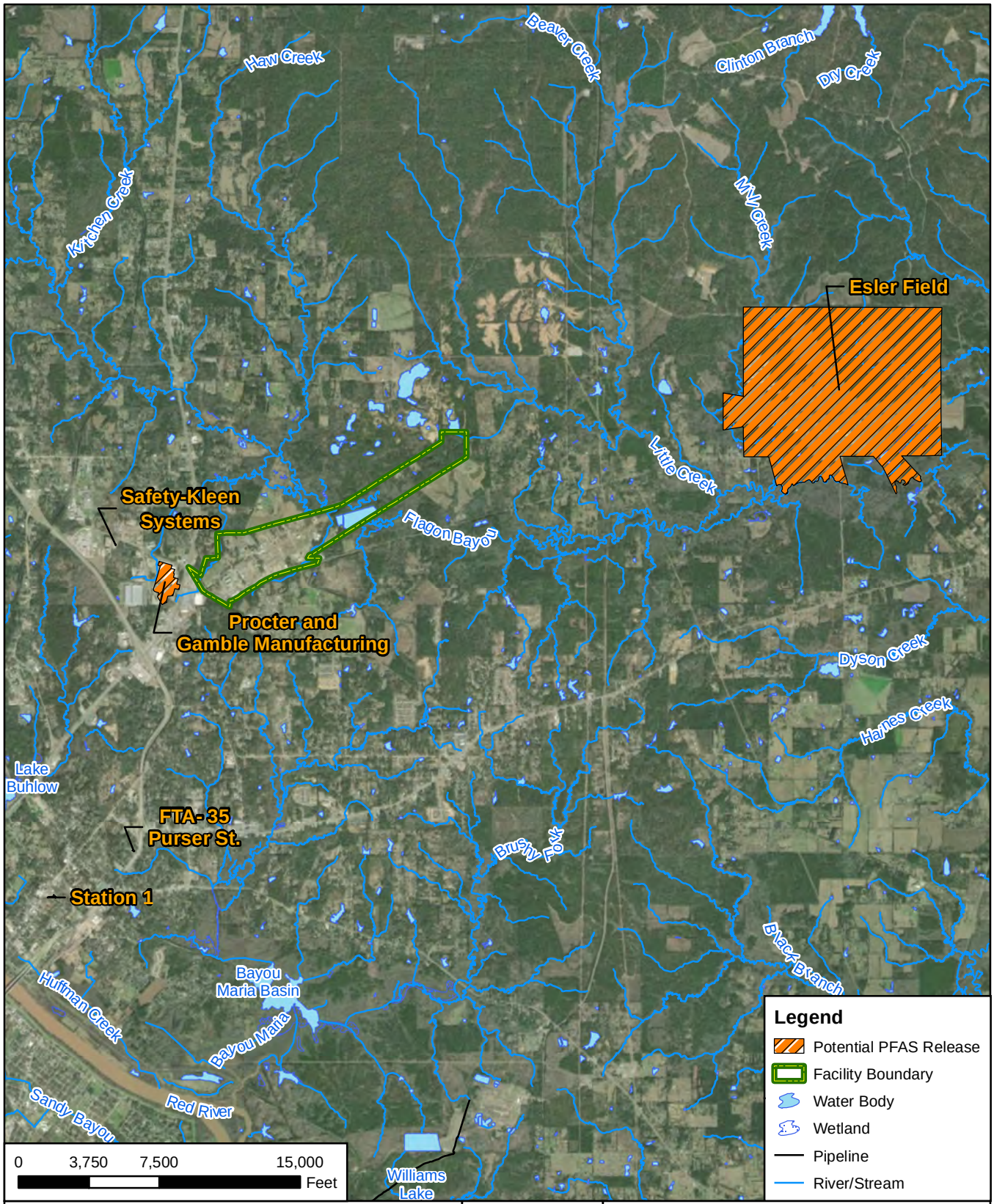
Safety-Kleen Systems is located a mile west of the Cantonment Area. Safety-Kleen Systems is a used oil refiner that provides aqueous and solvent washers, equipment, and services. No information was available regarding the use of PFAS.

5.4 Proctor and Gamble Manufacturing

Proctor and Gamble Manufacturing is located a quarter mile southwest of the Cantonment Area. PFOA has been used by Proctor and Gamble Manufacturing to manufacture polytetrafluoroethylene in some of their products. No additional information was provided on their use or disposal of PFAS-containing materials.

5.5 Esler Field

Esler Field is located approximately 3.5 miles northeast of the Cantonment Area and is directly adjacent to (and south of) the Training Site. Esler Field is currently undergoing PA to evaluate their storage and use of PFAS-containing materials.



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Camp Beauregard, LA			
REVISED	3/25/2020	GIS BY	SK	3/25/2020
SCALE	1:90,000	CHK BY	MS	3/25/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	3/25/2020

N

Adjacent Sources

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, three AOIs were identified at the Cantonment Area. Locations of the AOIs are shown on **Figure 6-1**. The following sections describe the CSM components necessary for a potentially complete exposure pathway: (1) source, (2) pathway, (3) receptor. If any of these elements are missing, the pathway is considered incomplete.

6.1 Pathways

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 are sparse and continue to be the subject of PFAS toxicological study (National Groundwater Association, 2018).

Known and potential AFFF releases identified at the Cantonment Area occurred on both surface soil and paved surfaces. Releases to the paved surfaces could have migrated a short distance onto the surrounding surface soil. Ground-disturbing activities in these surface soil as well as beneath the pavement may result in potential exposure to surface soils via ingestion and inhalation of dust particles. AFFF releases to the paved surfaces could have infiltrated the subsurface via cracks in the pavement or joints between areas that are paved with different materials. Ground-disturbing activities may result in potential exposure to subsurface soils and groundwater via ingestion.

PFAS are water soluble and can migrate readily from soil to groundwater via leaching. Drinking water at the Cantonment Area is sourced from two public supply wells within the facility boundary. Wells within approximately 2 miles downgradient of the facility include domestic and public supply wells and may result in potential exposure via ingestion of groundwater.

Storm water runoff at the facility drains to Flagon Bayou. When Flagon Bayou rarely floods, storm water may enter the retention pond. Flagon Bayou flows off the facility to the northeast, into Catahoula Lake, and may result in potential exposure via ingestion of surface water and sediment.

6.2 Receptors

Receptors at the Cantonment Area include site workers, construction workers, off-facility recreational users, and off-facility residents. These receptors, as they pertain to the facility, are described below:

- Site workers typically work at or use the site and may come into contact with the surface soils. Site workers may also come into contact with surface water in the retention areas.
- Construction workers are considered workers who represent a utility worker or other worker who would be exposed to surface and/or subsurface conditions through ground-disturbing activities.
- Trespassers typically identify a person who has infrequent access to the site.
- Off-facility recreational users could be exposed to sediment and surface water during recreational use.
- Off-facility residents identify receptors who occupy properties outside of the Cantonment Area. Off-facility residents may come into contact with groundwater using unregistered, private wells, domestic wells, or public supply wells.

The preliminary CSM for the Cantonment Area indicates which specific receptors could potentially be exposed to PFAS. The preliminary CSM for AOI 1 is shown on **Figure 6-2**. The preliminary CSM for AOIs 2 and 3 is shown on **Figure 6-3**.

6.3 AOI 1 Retention Pond

AOI 1 includes the Retention Pond which was converted to a natural wetlands area in 2003. Prior to 2003, any AFFF potentially discharged at the Wash Rack entered the OWS and would have been conveyed to the Retention Pond. Any upgradient AFFF releases would flow towards the Retention Pond.

Releases at AOI 1 occurred to surface water. Surface water within the Retention Pond interacts with surface sediment and can leach into the underlying subsurface soil. PFAS are water soluble and can migrate readily into the shallow groundwater. Groundwater infiltrating into Flagon Bayou flows off the facility boundary toward Catahoula Lake. Potential PFAS exposure pathways resulting from releases at AOI 1 are described in **Table 6-1**.

Table 6-1: Exposure Pathways at AOI 1

Pathway	Receptor
Surface Soil	Considered incomplete for all receptors via ingestion or inhalation of dust
Subsurface Soil	Considered a potentially complete pathway to construction workers via ingestion or inhalation of dust
Surface Water and Sediment	Considered a potentially complete pathway to site workers, construction workers, trespassers and off-facility recreational users via ingestion
Groundwater	Considered a potentially complete pathway to site workers, construction workers, and off-facility residents via ingestion

6.4 AOI 2 Wash Rack

AOI 2 encompasses the Wash Rack. LAARNG personnel indicated that AFFF was possibly discharged at the Wash Rack. AFFF discharged at this location would have been rinsed and drained into the OWS, which may flow towards the Retention Pond.

Releases of AFFF may have occurred on concrete and could have migrated off the concrete surface, thus resulting in PFAS contamination of the surface soil. AFFF may have also infiltrated subsurface soil via cracks in the pavement. PFAS are water soluble and can readily migrate from soil to groundwater. Overland flow would result in PFAS contamination in downgradient Retention Pond and Flagon Bayou. Flagon Bayou flows east, then northeast toward Catahoula Lake. Potential PFAS exposure pathways resulting from releases at AOI 1 are described in **Table 6-2**.

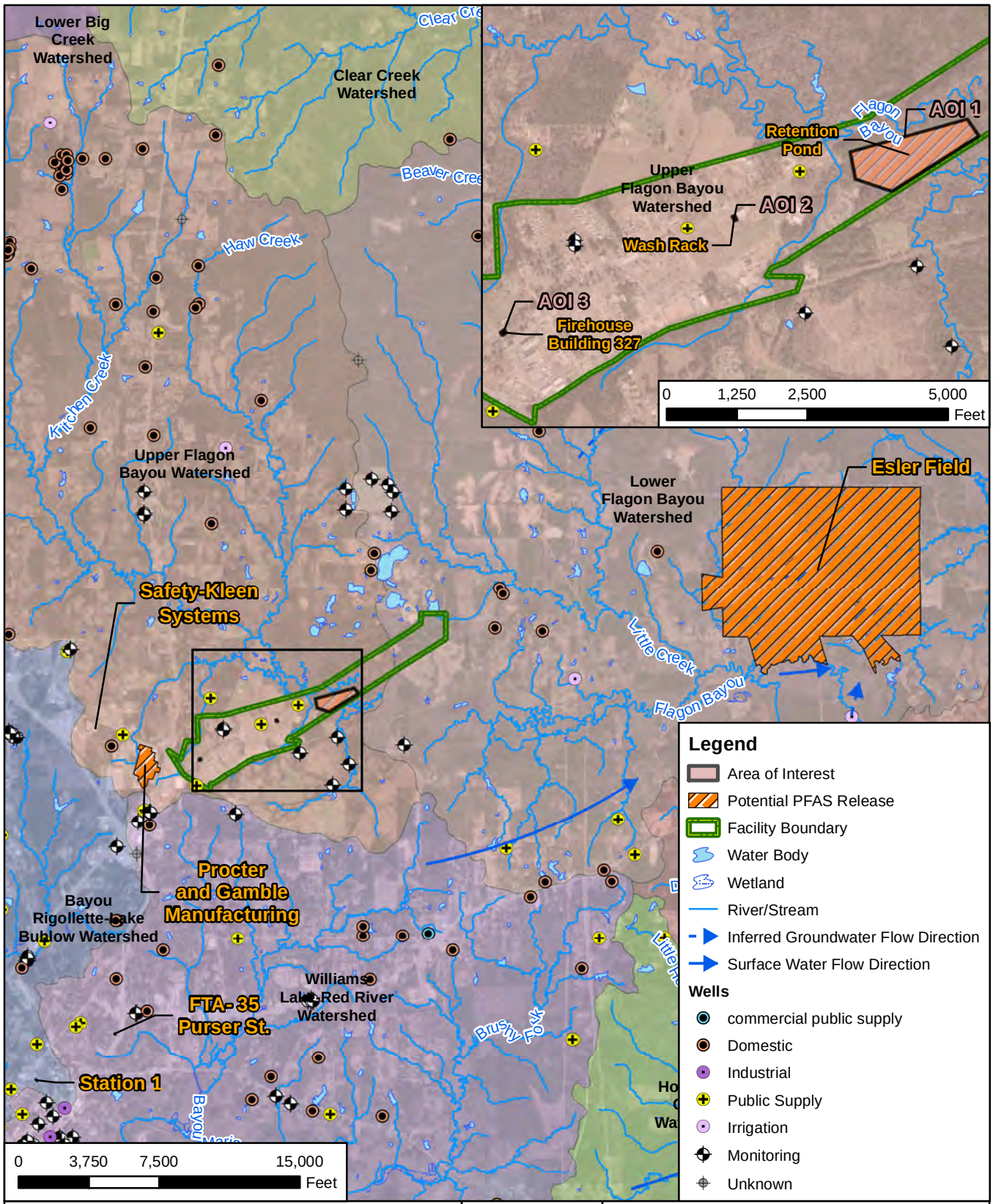
Table 6-2: Exposure Pathways at AOIs 2 and 3

Pathway	Receptor
Surface Soil	Considered a potentially complete pathway to site workers, construction workers, trespassers and off-facility recreational users via ingestion or inhalation of dust
Subsurface Soil	Considered a potentially complete pathway to construction workers via ingestion or inhalation of dust
Surface Water and Sediment	Considered a potentially complete pathway to site workers, construction workers, trespassers and off-facility recreational users via ingestion
Groundwater	Considered a potentially complete pathway to site workers, construction workers, and off-facility residents via ingestion

6.5 AOI 3 Firehouse Building 327

AOI 3 encompasses Firehouse Building 327. AFFF is currently stored in 5-gallon buckets within the Firehouse Building 327 near the emergency response vehicles. No known leaks have been reported. Fire extinguishers may have been discharged prior to 1990 but have not been used since. Additionally, firetrucks housed at Firehouse Building 327 carried 5-gallon containers of AFFF.

Any releases would have occurred on paved areas, where they could migrate to surface soil. AFFF may have also infiltrated subsurface soil via cracks in pavement or joints between areas that are paved with different materials. PFAS are water soluble and can migrate readily from soil to groundwater via leaching. Surface water would flow downgradient toward the Retention Pond and Flagon Bayou. Potential PFAS exposure pathways resulting from releases at AOI 3 are described in **Table 6-2** above.



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Camp Beauregard, LA			
REVISED	4/28/2020	GIS BY	SK	4/28/2020
SCALE	1:90,000	CHK BY	MS	4/28/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	4/28/2020

N

Areas of Interest

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 6-1

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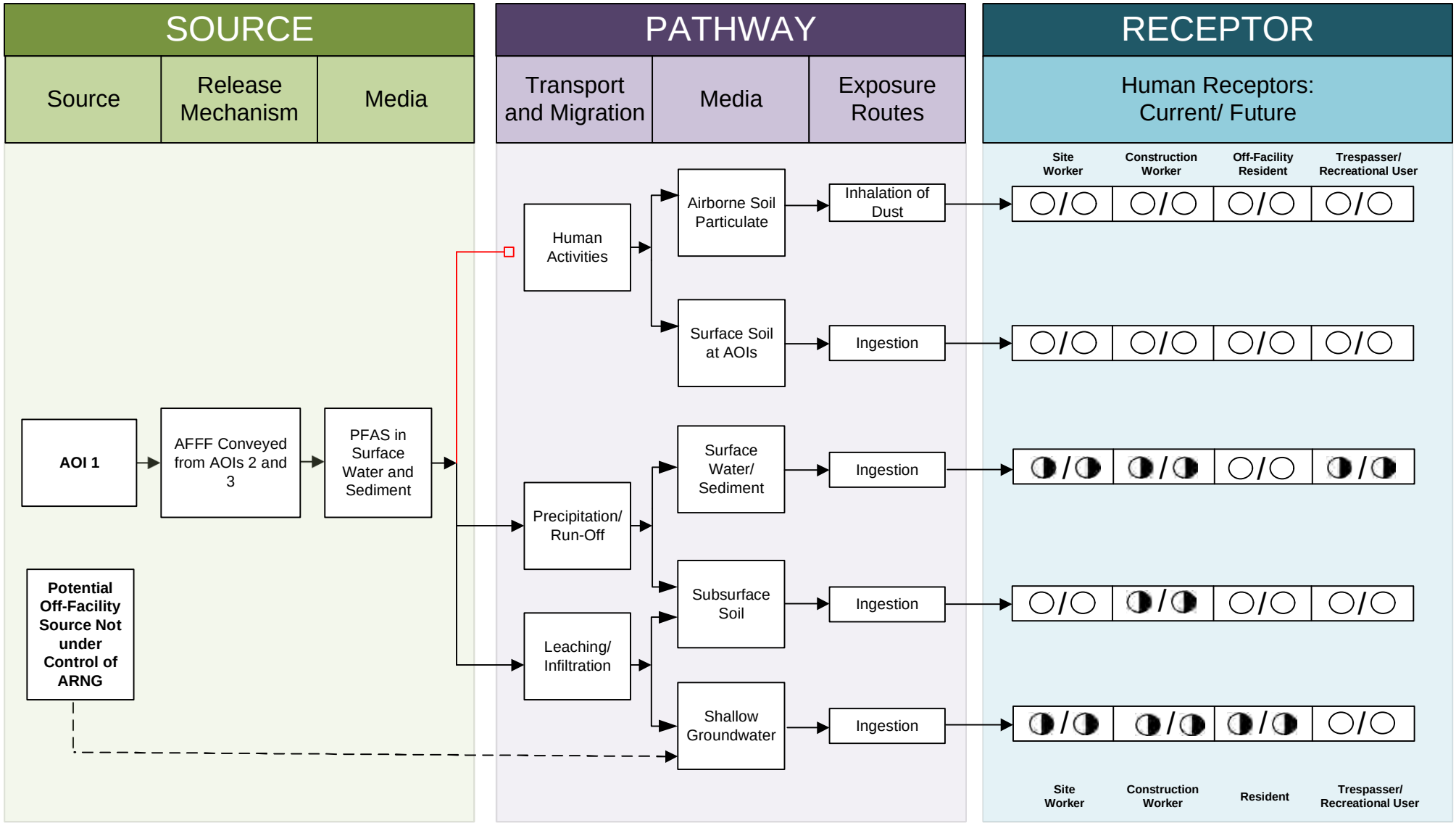
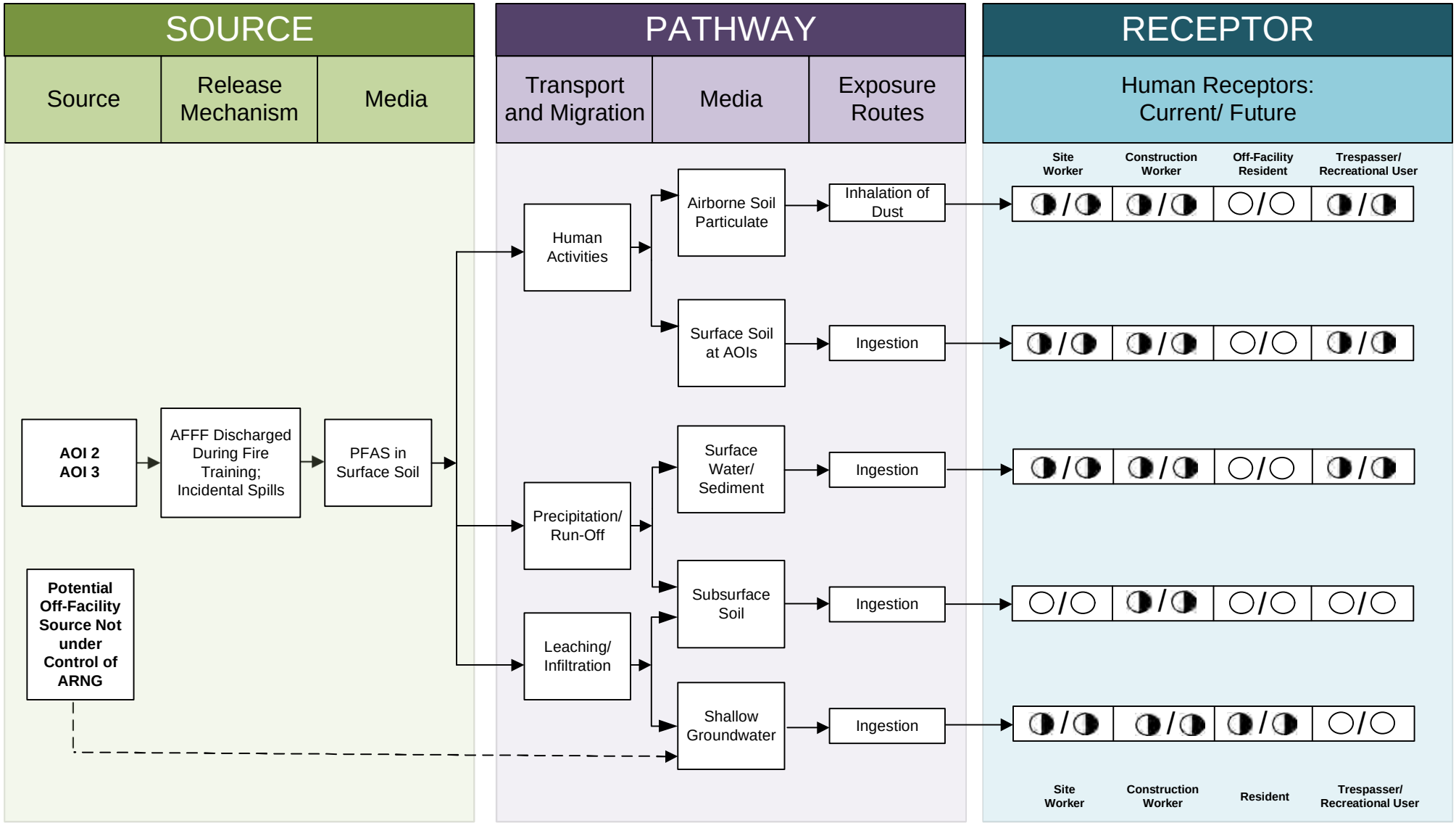


LEGEND

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

Notes:
1. The resident and recreational user receptors refer to an off-site resident and recreational user.
2. Dermal contact exposure pathway is incomplete for PFAS.

Figure 6-2
Preliminary Conceptual Site Model
AOI 1 Retention Pond
Camp Beauregard Cantonment Area, LA



LEGEND

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

Notes:
1. The resident and recreational user receptors refer to an off-site resident and recreational user.
2. Dermal contact exposure pathway is incomplete for PFAS.

Figure 6-3
Preliminary Conceptual Site Model
AOI 2 Wash Rack and AOI 3 Firehouse Building 327
Camp Beauregard Cantonment Area, LA

7. Conclusions

This report presents a summary of available information gathered during the PA on the use and storage of AFFF and other PFAS-related activities at the Cantonment Area. The PA findings are based on the information presented in **Appendix A** and **Appendix B**.

7.1 Findings

Three AOIs related to potential PFAS releases were identified at Camp Beauregard Cantonment Area during the PA. A summary of the AOIs is shown in **Table 7-1**, and the location of the AOIs is shown on **Figure 7-1**.

Table 7-1: AOIs at Camp Beauregard

Area of Interest	Name	Used by	Potential Release Dates
AOI 1	Retention Pond	LAARNG	Mid 1990s - 2003
AOI 2	Wash Rack	LAARNG	Unknown
AOI 3	Firehouse Building 327	City of Pineville Fire Department	Mid 1990s - Current

Based on potential PFAS releases at these AOIs, there is potential for exposure to PFAS contamination in media at or near the facility. The preliminary CSMs for the AOIs, which present the potential receptors and media impacted, are shown on **Figures 6-2** and **6-3**.

7.2 Uncertainties

A number of 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, other non-traditional activities, or on its disposition.

The conclusions of this PA are predominantly based on the information provided during interviews with personnel who had direct knowledge of PFAS use at the facility. Sometimes the provided information was vague. 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 were 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, retired and 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 2 Wash Rack	It is unclear if AFFF was discharged at this location and the frequency at which this might have occurred.
AOI 3 Firehouse Building 327	Until 2017, fire trucks carried 5-gallon containers of AFFF. It is not known if these trucks were ever parked in another location other than the Firehouse for extended periods of time.
General	Tri-Max™ units were located at Camp Beauregard prior to being moved to Esler Field in 2000. It is unclear where these units were stored while onsite.

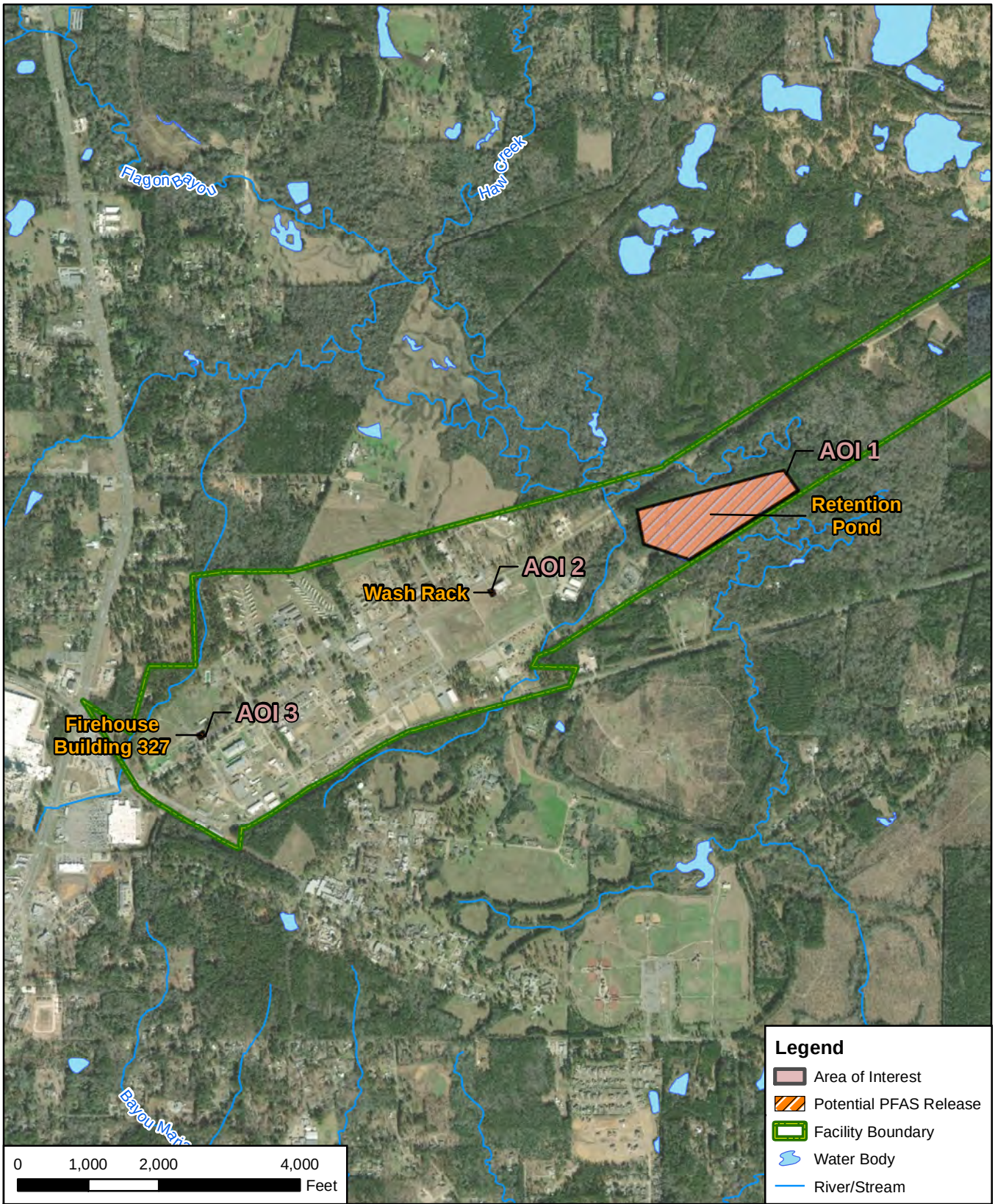
7.3 Potential Future Actions

Interviews and records (spanning from 1986 to current) indicate that current or former ARNG activities may have resulted in potential PFAS releases at three AOIs identified during the PA (**Table 7-1**). Based on the preliminary CSM developed for the Site, there is a potential for receptors to be exposed to PFAS contamination in soil, groundwater, surface water, and sediment at these AOIs. **Table 7-3** summarizes the rationale used to determine if the AOI should be considered for further investigation under the CERCLA process and undergo an SI.

ARNG will evaluate the need for an SI at Camp Beauregard Cantonment Area based on the potential receptors, the potential migration of PFAS contamination off the facility, and the availability of resources.

Table 7-3: PA Findings Summary

Area of Interest	AOI Location	Rational	Potential Future Action
AOI 1 Retention Pond	31°22'45.2"N; 92°22'46.1"W	AFFF discharge at AOI 2 may have been transported to the Retention Pond via OWS.	Proceed to an SI, focus on surface water, sediment, and groundwater.
AOI 2 Wash Rack	31°22'32.8"N; 92°23'23.4"W	AFFF may have been used in unknown quantities for fire training exercises.	Proceed to an SI, focus on soil and groundwater.
AOI 3 Firehouse Building 327	31°22'13.8"N; 92°24'10.9"W	AFFF was stored at this location and on firetrucks. No known onsite discharges are recorded.	Proceed to an SI, focus on soil and groundwater.



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Camp Beauregard, LA			
REVISED	4/28/2020	GIS BY	GC	4/28/2020
SCALE	1:24,000	CHK BY	MS	4/28/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	4/28/2020

N

Summary of Findings

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 7-1

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Appendix A
Data Resources

Data resources will be provided separately on CD. Data resources for Camp Beauregard include:

Camp Beauregard EDR™ Report

- 2019 EDR™ Aerial Photo Decade Package. Camp Beauregard, 490 3rd St, Pineville, LA 71360. April.
- 2019 EDR™ Radius Map Report with GeoCheck®. Camp Beauregard, 490 3rd St, Pineville, LA 71360. April.
- 2019 EDR™ Certified Sanborn® Map Report. Camp Beauregard, 490 3rd St, Pineville, LA 71360. April.
- 2019 EDR™ Summary Radius Map Report. Camp Beauregard, 490 3rd St, Pineville, LA 71360. April.

Previous Reports

- 1994 United States Army Environmental Hygiene Agency. *Site Assessment Survey No. 38-26-1333-94, Camp Beauregard, Louisiana Army National Guard*. 18–22 July.
- 2003 Malcolm Pirnie, Inc. *Closed, Transferring, and Transferred Range/Military Munitions Response Program Site Inventory Report, State of Louisiana*. May.
- 2004 United States Army Center for Health Promotion and Preventive Medicine, Army Operational Range Assessment Team*. Range Condition Assessment No. 38-EH-02RN-04, Louisiana Army National Guard, Major Training Area Camp Beauregard, Louisiana*. 16-19 March.
- 2007 Louisiana Army National Guard. *Final Integrated Natural Resources Management Plan*, Louisiana Army National Guard, Camp Beauregard, Louisiana, Fiscal Years 2006–2010. February.
- 2014 USACE. *Operational Range Assessment, Phase II Report, Camp Beauregard, Louisiana*. July.

Appendix B
Preliminary Assessment Documentation

Appendix B.1
Interview Records

PA Interview Questionnaire - Other

Facility: Eglin / Beauregard
Interviewer: [redacted]
Date/Time: 1/25/2017 0630

Interviewee [redacted] **Title:** X See below X **Phone Number:** **Email:**	Can your name/role be used in the PA Report? Y or N Can you recommend anyone we can interview? Y or N No

Roles or activities with the Facility/Years working at the Facility:

[redacted] Instructional Pilot/OPS Supervisor 1993 - 2009
204th Group Commander 2010-12 (retired)
Contract Instructional Pilot 2012 - current

PFAS Use: Identify accidental/intentional release locations, time frame of release, frequency of releases, storage container size (maintenance, fire training, firefighting, buildings with suppression systems (as builts), fueling stations, crash sites, pest management, recreational, dining facilities, metals plating, or waterproofing). How are materials ordered/purchased/disposed/shared with others?

Known Uses	
AFFF used in training on Ramp 1 @ wash rack Maybe @ Firestation Ramp by 6004 Bldg (Eglin)	Use
	Procurement
No Firefighting use recalled	Disposition
	Storage (Mixed)
One FTA on Ramp 1 North of Hangar 6001	Storage (Solution)
	Inventory, Off-Spec
Foam used in training Rinsed off Ramp 1 into drain @ wash rack	Containment
	SOP on Filling
	Leaking Vehicles
Recommended Retired Colonel [redacted] for add'l interviewee [redacted]	Nozzle and Suppression System Testing
	Dining Facilities
	Vehicle Washing
	Ramp Washing
	Fuel Spill Washing and Fueling Stations
	Chrome Plating or Waterproofing

PA Interview Questionnaire - Other

Facility: Esler/Beauregard
Interviewer: [redacted]
Date/Time: 1/29/2018 1000

Interviewee: * See Below *	Can your name/role be used in the PA Report? (Y) or N
Title:	Can you recommend anyone we can interview?
Phone Number:	Y or N
Email:	

Roles or activities with the Facility/Years working at the Facility:

[redacted] - Maintenance Supervisor [redacted]
Camp Beauregard 1956-1997 Esler 1997-present
[redacted] Maintenance Supervisor
[redacted] - Maintenance Supervisor [redacted]

PFAS Use: Identify accidental/intentional release locations, time frame of release, frequency of releases, storage container size (maintenance, fire training, firefighting, buildings with suppression systems (as builts), fueling stations, crash sites, pest management, recreational, dining facilities, metals plating, or waterproofing). How are materials ordered/purchased/disposed/shared with others?

	Known Uses
Trimax Extinguishers Camp Beauregard in 2000 then Brought to Esler Field	Use
	Procurement
Annual Training on North; South Ramps at Esler Field (South ramp built in 2005-06)	Disposition
	Storage (Mixed)
	Storage (Solution)
None used in active Firefighting	Inventory, Off-Spec
	Containment
Possibly used @ wash rack / MVC Rack (Near Bldg 1338)	SOP on Filling
	Leaking Vehicles
Stored in Bldgs 06067 / 0608 HazMat Storage Bldg	Nozzle and Suppression System Testing
Stored in Portable Bldg, then permanent Bldg South of Primary Hangar	Dining Facilities
	Vehicle Washing
	Ramp Washing
3% solution, no more than 3 "jugs" stored at one time (Chemguard)	Fuel Spill Washing and Fueling Stations
	Chrome Plating or Waterproofing

PA Interview Questionnaire - Other

Facility: _____
Interviewer: _____
Date/Time: _____

Currently have one "jug" w 3/4 full >5 years old

2 FTAs on Esler (North Ramp / South Ramp)

1 FTA on Beauregard (Wash Rack)

Volunteer Fire Dept (Holloway) trained w/them on North Ramp @ various times

The on-site Fire House active in early to mid 1990's when [redacted] (retired) Esler Field was Esler Regional Airport (civilian) Worked @ Esler Airport [redacted]

Holloway VFD responded to an electrical fire @ Bldg 6004 during 2005-06, but no AFFF used

Esler Field have informal agreement w/ Holloway Fire Dept.

PA Interview Questionnaire - Other

Facility: Esler Field
Interviewer:
Date/Time: 1/24/2019 @ 0945

Interviewee: [redacted] **Title:** Instructor Pilot **Phone Number:** [redacted] **Email:**	Can your name/role be used in the PA Report? Y or N Can you recommend anyone we can interview? Y or N

Roles or activities with the Facility/Years working at the Facility:

Safety officer when AFFF was first purchased mid 90's (96-97)
(TriMax)
1 fire extinguisher per 3 aircraft (HR 420 Fire Regulations)
Typically had 2 extinguishers on ramp
- 4-6 extinguishers out currently (North / South Ramps)
- Beauregard - Fairly No TriMax used ever (Halotron used)
No extinguishers fired @ Beauregard since ~1990
- Moved to Esler in 1996 TriMax was brought on some years

PFAS Use: Identify accidental/intentional release locations, time frame of release, frequency of releases, storage container size (maintenance, fire training, firefighting, buildings with suppression systems (as builts), fueling stations, crash sites, pest management, recreational, dining facilities, metals plating, or waterproofing). How are materials ordered/purchased/disposed/shared with others?

	Known Uses
- annually during drill weekend drained/expelled entire extinguisher (TriMax) on 3 times 96-07	Use
@ 6001 wash back on concrete in front of hangar then washed down drain (possible oil/water Separator)	Procurement
	Disposition
	Storage (Mixed)
	Storage (Solution)
- Never used for emergencies	Inventory, Off-Spec
	Containment
- Secondary Hangar 6002 & Primary 6001	SOP on Filling
	Leaking Vehicles
- May be stored currently in 06067/06068	Nozzle and Suppression System Testing
	Dining Facilities
	Vehicle Washing
	Ramp Washing
	Fuel Spill Washing and Fueling Stations
	Chrome Plating or Waterproofing

PA Interview Questionnaire - Other

Facility: _____
Interviewer: _____
Date/Time: _____

Jacksonville (March 7, 2002)
Craig Florida Fire Training facility
Army Airfield (ASF #1)
run for aviation using AFFF
3-day course
(2 for Firefighter, fired large volumes over paved
Maxwell Drive) National Guard Hosted / Paid for it

PA Interview Questionnaire – Fire Station

Facility: _____
Interviewer: _____
Date/Time: 1/24/2019 @ 0830

Interviewee: [redacted] **Title:** Training Officer **Phone Number:** [redacted] **Email:** [redacted]	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.
   2003 w/ Prineville Fire
   Training assist w/ Suppression
   Opened Station on-site in 1995-1996 (Bld 327) Asst Chief
   Previously located on Bursa St. (Temp moved during construction Bld 825)
   Station w Fire Chief [redacted] 1997
   [redacted] 1998

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.
   No Known use on Post or nearby vehicle
   5 yrs annual contracts up until 2 years ago on trucks
   Database records since 1999 have no use

   Maintenance (e.g., ramp washing)
   Fire Training Areas
   Firefighting (Active Fire)
   Crash
   Fire Suppression Systems (Hangers/Dining Facilities)
   Fire Protection at Fueling Stations
   Non-Technical/Recreational/ Pest Management

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?
   N/A

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

5. How is AFFF procured? Do you have an inventory/procurement system that tracks use?
   in 10 gallons on hand
   (stored @ Station 1)

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 & 6 % unknown Manufacturer (various)

   (Use Class A Foam currently)

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

   n/a

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?

   5-gallon buckets
   Stored @ Station 1
   909 College Drive
   Pineville, LA

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?

   when need on vehicles 5-gallons on vehicles
   use foam reduction system

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

    Engine 10, 20, Truck 3 & 4
    Truck 1
    on past (may/may not be on 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?

    Tested during training
    No foam tanks used
    No recollection of leaks, if leaked would be
    on compartment & wiped up

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? None on facility

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

N/A

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?

No use to recollection or database records
Training off post

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?

get copy from Chief Keesler
No training on post other than classroom

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 live fire training w/ AFFF
was on trucks while on post

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. Unknown prior to 1996-97

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

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

20. Was AFFF used for forest fires or fire management on-post/off-post? If so, please describe what happened and who was involved? No

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)?

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?

Training use
Prince 35 Pearson Street station (Former) Site Road
Alexandria Fire Training Facility – Industrial loop ?
(Alex Municipal complex)

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? Not disposed unless used during training exercises

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

No

[redacted]

From: [redacted]
Sent: Wednesday, January 15, 2020 1:27 PM
To:
Cc:
Subject: FW: Water Works District No. 3 of Rapides Parish_water sources

Hi [redacted],
Thanks for calling today on behalf of Mr. [redacted] and agreeing to research the total depths of the 2 supply wells at Esler (#8 and #9) and the 2 at Camp Beauregard Cantonement Area (# 2 and #7). I am copying [redacted] as he is working with me on the Preliminary Assessment reports we are preparing for both of these facilities. I believe you also mentioned that one of the Esler wells is being targeted for plug and abandonment due to ongoing water quality issues. Would that be #9? If you have any additional information about when that is planned, please advise.

I had also asked Mr. [redacted] about information regarding other wells WWD#3 uses for their water supply, specifically locations and depths, particularly if they are within 4 miles of Esler or Beauregard facilities.

Lastly we would also be grateful if you are in a position to share results of any future PFAS sampling of one or more of the wells you mentioned you may be conducting, so we can provide those results to our Army National Guard clients accordingly.
Best regards,
[redacted]
****
[redacted]

From: [redacted]
Sent: Friday, January 10, 2020 2:45 PM
To:
Subject: Water Works District No. 3 of Rapides Parish_water sources

Dear Mr. [redacted],

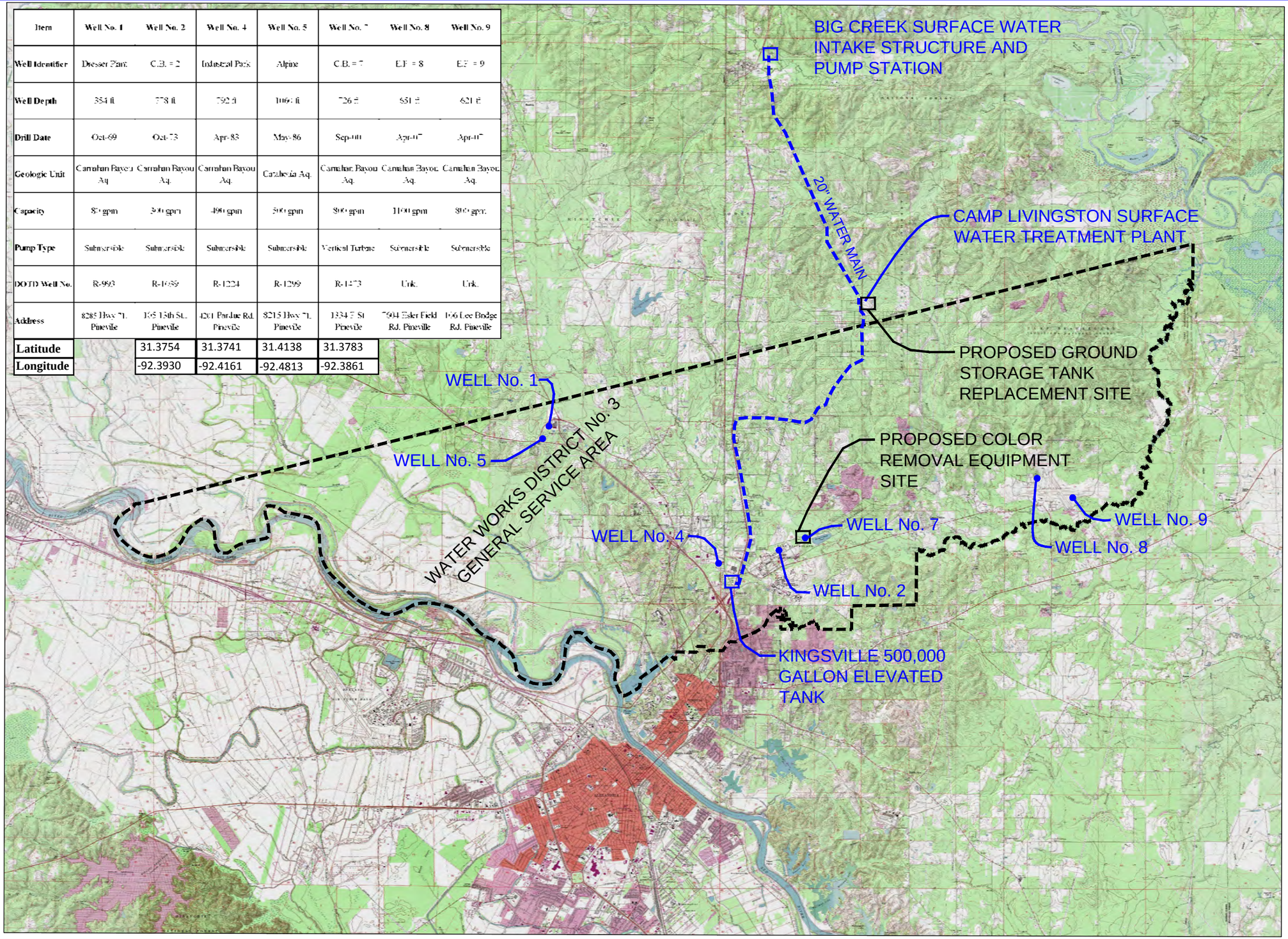
Thank you for taking time to speak with me today. As I mentioned, AECOM is working for the Army National Guard at Esler Field and Camp Beauregard. This confirms information you provided, specifically that your District obtains approximately 60% of its source water from surface water drawn from Big Creek in Grant Parish; 40% from groundwater including two wells at Camp Beauregard (#2 and #7) which require treatment to remove organic color. Two wells at Esler Field (#8 and #9) are offline due to methane which is cost prohibitive to treat. However, well #8 is used to supply Esler Field's maintenance facility's fire protection water storage tank.

I look forward to receiving any additional information you can provide about the depths of these wells; and, location/depth of other wells used by WWD#3, at your earliest convenience.

I was able to speak with Mr. [redacted] with the Buckeye Water District #50 regarding their wells, so I greatly appreciate you directing me to them.

Best regards,
[redacted]

Item	Well No. 1	Well No. 2	Well No. 4	Well No. 5	Well No. 7	Well No. 8	Well No. 9
Well Identifier	Dresser Plant	C.B. = 2	Industrial Park	Alpine	C.B. = 7	E.P. = 8	E.P. = 9
Well Depth	854 ft	778 ft	792 ft	1169 ft	726 ±	851 ±	621 ±
Drill Date	Oct-69	Oct-73	Apr-83	May-86	Sep-01	Apr-07	Apr-07
Geologic Unit	Carnahan Bayou Aq.	Carnahan Bayou Aq.	Carnahan Bayou Aq.	Catahoula Aq.	Carnahan Bayou Aq.	Carnahan Bayou Aq.	Carnahan Bayou Aq.
Capacity	850 gpm	300 gpm	400 gpm	500 gpm	800 gpm	1100 gpm	800 gpm
Pump Type	Submersible	Submersible	Submersible	Submersible	Vertical Turbine	Submersible	Submersible
DOTD Well No.	R-993	R-1959	R-1224	R-1299	R-1473	Unk.	Unk.
Address	8285 Hwy 71, Pineville	135 15th St., Pineville	4201 Purdue Rd. Pineville	8215 Hwy 71, Pineville	1334 F St Pineville	7504 Esler Field Rd. Pineville	166 Lee Bridge Rd. Pineville
Latitude	31.3754	31.3741	31.4138	31.3783			
Longitude	-92.3930	-92.4161	-92.4813	-92.3861			



PAN AMERICAN ENGINEERS, LLC.
P.O. BOX 89 / 1717 JACKSON STREET
ALEXANDRIA, LA. 71309

SURFACE & GROUND WATER MAP

EXHIBIT No. 3

DATE: SEPTEMBER 2014

Appendix B.2
Visual Site Inspection Checklists

Visual Site Inspection Checklist

Names(s) of people performing VSI: Beauregard Fire Station Bldg 327

Recorded by:

ARNG Contact:

Date and Time: 1/24/2019 @ 1300

Method of visit (walking, driving, adjacent):

Source/Release Information

Site Name / Area Name / Unique ID:

Site / Area Acreage:

Historic Site Use (Brief Description):

Current Site Use (Brief Description):

Physical barriers or access restrictions:

1. Was PFAS used (or spilled) at the site/area? Y / N

1a. If yes, document how PFAS was used and usage time (e.g., fire fighting training 2001 to 2014):

2. Has usage been documented? Y (N)

2a. If yes, keep a record (place electronic files on a disk):

3. What types of businesses are located near the site? **Industrial / Commercial / Plating / Waterproofing / Residential**

3a. Indicate what businesses are located near the site

N/A

4. Is this site located at an airport/flightline? Y (N)

4a. If yes, provide a description of the airport/flightline tenants:

Visual Survey Inspection Log

Other Significant Site Features:

1. Does the facility have a fire suppression system? Y / N

1a. If yes, indicate which type of AFFF has been used:

1b. If yes, describe maintenance schedule/leaks:

1c. If yes, how often is the AFFF replaced:

1d. If yes, does the facility have floor drains and where do they lead? Can we obtain an as built drawing?

Transport / Pathway Information

Migration Potential:

1. Does site/area drainage flow off installation? Y / N

1a. If so, note observation and location:

2. Is there channelized flow within the site/area? Y / N

2a. If so, please note observation and location:

3. Are monitoring or drinking water wells located near the site? Y / N

3a. If so, please note the location:

4. Are surface water intakes located near the site? Y / N

4a. If so, please note the location:

5. Can wind dispersion information be obtained? Y / N

5a. If so, please note and observe the location.

6. Does an adjacent non-ARNG PFAS source exist? Y / N

6a. If so, please note the source and location.

6b. Will off-site reconnaissance be conducted? Y / N

Visual Survey Inspection Log

Significant Topographical Features:

1. Has the infrastructure changed at the site/area? **Y / N**

1a. If so, please describe change (ex. Structures no longer exist):

2. Is the site/area vegetated? **Y / N**

2a. If not vegetated, briefly describe the site/area composition:

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:

Receptor Information

1. Is access to the site restricted? **Y / N**

1a. If so, please note to what extent:

2. Who can access the site? **Site Workers / Construction Workers / Trespassers / Residential / Recreational Users / Ecological**

2a. Circle all that apply, note any not covered above:

3. Are residential areas located near the site? **Y / N**

3a. If so, please note the location/distance:

4. Are any schools/day care centers located near the site? **Y / N**

4a. If so, please note the location/distance/type:

5. Are any wetlands located near the site? **Y / N**

5a. If so, please note the location/distance/type:

Visual Survey Inspection Log

Additional Notes

During site visit identified 5 containers of AFFF stored in fire station

Photographic Log

Photo ID/Name	Date & Location	Photograph Description

Visual Site Inspection Checklist

Names(s) of people performing VSI: [redacted]

Recorded by: [redacted]

ARNG Contact: [redacted]

Date and Time: 1/25/19

Method of visit (walking, driving, adjacent): walking, driving

Source/Release Information

Site Name / Area Name / Unique ID: Camp Beauregard Wash Rack/AVI Rack

Site / Area Acreage:

Historic Site Use (Brief Description): Wash Rack

Current Site Use (Brief Description): Wash Rack

Physical barriers or access restrictions: None immediately adjacent - Entire Camp Beauregard Fenced/gated

1. Was PFAS used (or spilled) at the site/area? **Y / N**

1a. If yes, document how PFAS was used and usage time (e.g., fire fighting training 2001 to 2014):

Unknown - possible

2. Has usage been documented? **Y / N**

2a. If yes, keep a record (place electronic files on a disk):

3. What types of businesses are located near the site? **Industrial / Commercial / Plating / Waterproofing / Residential**

3a. Indicate what businesses are located near the site

4. Is this site located at an airport/flightline? **Y / N**

4a. If yes, provide a description of the airport/flightline tenants:

Helicopter Pads

Visual Survey Inspection Log

Other Significant Site Features:

1. Does the facility have a fire suppression system? Y / N

1a. If yes, indicate which type of AFFF has been used:

1b. If yes, describe maintenance schedule/leaks:

1c. If yes, how often is the AFFF replaced:

1d. If yes, does the facility have floor drains and where do they lead? Can we obtain an as built drawing?

Transport / Pathway Information

Migration Potential:

1. Does site/area drainage flow off installation? Y / N

1a. If so, note observation and location:

2. Is there channelized flow within the site/area? Y / N

2a. If so, please note observation and location:

3. Are monitoring or drinking water wells located near the site? Y / N

3a. If so, please note the location:

Waterworks No. 3 wells # 2 + 7

4. Are surface water intakes located near the site? Y / N

4a. If so, please note the location:

5. Can wind dispersion information be obtained? Y / N

5a. If so, please note and observe the location.

6. Does an adjacent non-ARNG PFAS source exist? Y / N

6a. If so, please note the source and location.

6b. Will off-site reconnaissance be conducted? Y / N

Visual Survey Inspection Log

Significant Topographical Features:

1. Has the infrastructure changed at the site/area? Y / (N)

1a. If so, please describe change (ex. Structures no longer exist):

2 Is the site/area vegetated? (Y) / N

2a. If not vegetated, briefly describe the site/area composition: Except for immediate wash rock (concrete)

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:

Receptor Information

1. Is access to the site restricted? (Y) / N

1a. If so, please note to what extent: Fenced / gated

2. Who can access the site? **Site Workers / ~~Construction Workers~~ / Trespassers / Residential / Recreational Users / Ecological**

2a. Circle all that apply, note any not covered above:

3 Are residential areas located near the site? (Y) / N

3a. If so, please note the location/distance: South - Southeast - Single residences (~1,800 FT) Apartments (~2,500 FT)

4 Are any schools/day care centers located near the site? Y / (N)

4a. If so, please note the location/distance/type:

5 Are any wetlands located near the site? Y / (N)

5a. If so, please note the location/distance/type:

Appendix B.3
Conceptual Site Model Information

Preliminary Assessment – Conceptual Site Model Information

Site Name: Camp Beauregard, Cantonment Area, LAARNG

Why has this location been identified as a site? Fire training with AFFF conducted at wash rack, AFFF stored at the Firehouse Building 327.

Are there any other activities nearby that could also impact this location? Some commercial industries in the vicinity.

Training Events

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

If so, how often? unknown

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?

Surface Water:

Surface water flow direction? ENE to Flagon Bayou, then east, then north to Catahoula Lake

Average rainfall? 58 inches

Any flooding during rainy season? moderate

Direct or indirect pathway to ditches? Underground sewer line drains to pond

Direct or indirect pathway to larger bodies of water? Indirect. Flagon Bayou drains to Catahoula Lake

Does surface water pond any place on site? No

Any impoundment areas or retention ponds? Yes

Any NPDES location points near the site? Unknown

How does surface water drain on and around the flight line? Storm drains present at wash rack. Possible overland flow to surrounding grassy areas during storm events

Preliminary Assessment – Conceptual Site Model Information

Groundwater:

Groundwater flow direction? Unknown, presumed southwest toward Red River

Depth to groundwater? Shallow. Monitoring wells at the facility are reportedly 15-80 feet deep have groundwater as shallow as 3 feet below ground surface.

Uses (agricultural, drinking water, irrigation)? Public drinking water wells (deep) at the facility.

Any groundwater treatment systems? No

Any groundwater monitoring well locations near the site? Yes – see above

Is groundwater used for drinking water? Yes

Are there drinking water supply wells on installation? Two Water Works District#3 supply wells onsite

Do they serve off-post populations? Yes

Are there off-post drinking water wells downgradient? Yes

Waste Water Treatment Plant:

Has the installation ever had a WWTP, past or present? Unknown

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

Do we understand the fate of sludge waste?

Is surface water from potential contaminated sites treated?

Equipment Rinse Water

1. Is firefighting equipment washed? Where does the rinse water go? OWS conveys water to pond and/or sanitary 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? Training/nozzle testing with AFFF conducted at wash rack

3. Other?

Preliminary Assessment – Conceptual Site Model Information

Identify Potential Receptors:

Site Worker Yes

Construction Worker Yes

Recreational User Offsite

Residential Offsite

Child Offsite

Ecological Yes

Note what is located near by the site (e.g. daycare, schools, hospitals, churches, agricultural, livestock)?
residential, commercial/industrial and institutional uses near site

Documentation

Ask for Engineering drawings (if applicable).

Has there been a reconstruction or changes to the drainage system? When did that occur? Unknown

Appendix C
Photographic Log

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Camp Beauregard	Pineville, Louisiana

Photograph No. 1

Description:

Photo of Wash Rack/MVC Rack near Bldg 1338 with oil/water separator manholes in grassy area.

Date: 01/24/19

Photograph No. 2

Description:

Photo of Wash Rack/MVC Rack near Bldg 1338 with drain to oil/water separator in concrete area.

Date: 01/24/19

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Camp Beauregard	Pineville, Louisiana

Photograph No. 3

Description:

Photo of Wash Rack/MVC Rack near Bldg 1338 with oil/water separator manholes in grassy area.

Date: 01/24/19

Photograph No. 4

Description:

Photo of AFFF container in Fire Station (Bldg 327) at Camp Beauregard.

Date: 01/24/19

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Camp Beauregard	Pineville, Louisiana

Photograph No. 5

Description:

Photo of AFFF containers in Fire Station (Bldg 327) at Camp Beauregard.

Date: 01/24/19

Photograph No. 6

Description:

Photo of firefighting foam container in Fire Station (Bldg 327) at Camp Beauregard.

Date: 01/24/19

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Camp Beauregard	Pineville, Louisiana

Photograph No. 7

Description:

Photo of Waterworks No. 3 water well.

Date: 01/24/19

Photograph No. 8

Description:

Photo of Waterworks No. 3 water well.

Date: 01/24/19