FINAL
Preliminary Assessment Report
Rochester Army Aviation Support Facility #2,
Rochester, New York

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
AASF	Army Aviation Support Facility
AECOM	AECOM Technical Services, Inc.
AFFF	aqueous film forming foam
amsl	above mean sea level
AOI	area of interest
ARNG	Army National Guard
AST	aboveground storage tank
bgs	below ground surface
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
gal	gallon(s)
HA	Health Advisory
NOAA	National Oceanic and Atmospheric Administration
NYARNG	New York Army National Guard
NYSDEC	New York State Department of Environmental Conservation
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
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 New York ARNG (NYARNG) Rochester Army Aviation Support Facility (AASF) #2 (also referred to as the "facility") in Rochester, New York to assess potential PFAS release areas and exposure pathways to receptors. Rochester AASF #2 was established in 1991 and is adjacent to the southern end of the Greater Rochester International Airport. The Rochester AASF #2 facility contains two 30,875-square feet hangars and a small helipad used for training, maintenance, and unit administration. The performance of this PA included the following tasks:

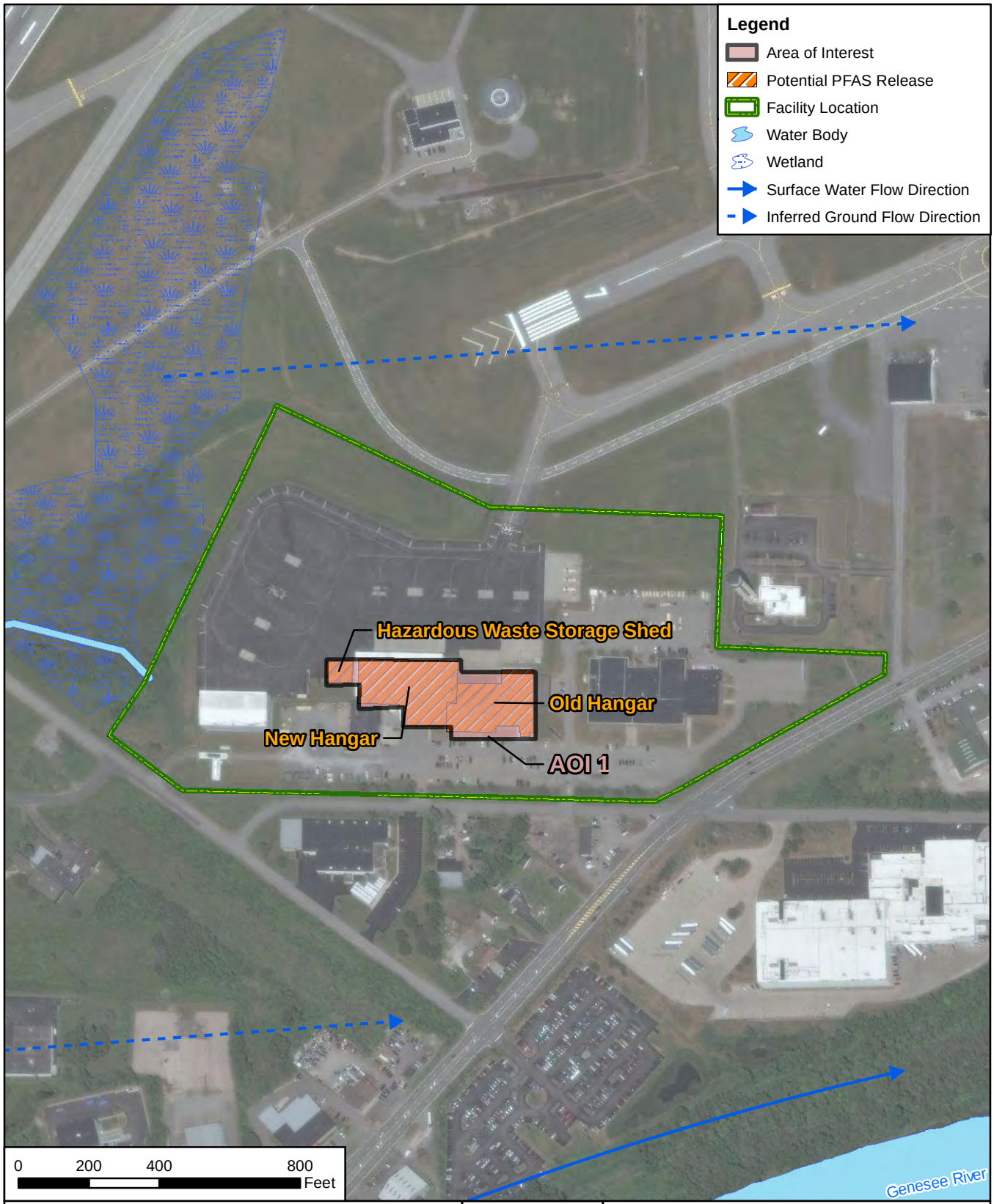
- Reviewed available administrative record documents and Environmental Data Resources, Inc. (EDR)^{TM} report packages to obtain information relevant to potential PFAS releases, such as: drinking water well locations, historical aerial photographs, Sanborn maps, and environmental compliance actions in the area surrounding the facility;
- Conducted a site visit on 11 October 2018 and completed visual site inspections at locations where PFAS-containing materials were suspected of being stored, used, or disposed;
- Interviewed current and former NYARNG Rochester AASF #2 personnel during the site visit;
- Identified Area(s) of Interest (AOIs) and developed a preliminary conceptual site model (CSM) to summarize potential source-pathway-receptor linkages of potential PFAS in soil, groundwater, surface water and sediment for each AOI.

One AOI related to potential PFAS releases was identified at Rochester AASF #2 during the PA. The AOI is shown on **Figure ES-1** and described in the **Table ES-1** below.

Table ES-1: AOI at Rochester AASF #2

Area of Interest	Name	Used by	Potential Release Dates
AOI 1	Old Hangar/ New Hangar/ Hazardous Waste Storage Shed	NYARNG	A 2007 malfunction of AFFF storage tanks in the Old Hangar occurred. Storage of AFFF still occurs at the New Hangar and the Hazardous Waste Storage Shed.

Based on potential PFAS releases at this AOI, there is potential for exposure to PFAS contamination in media at or near the facility. The preliminary CSM for Rochester AASF #2, which presents the potential receptors and media impacted, is shown on **Figure ES-2**. 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 lifetime Health Advisory (HA) within 20 miles of the facility (USEPA, 2017). 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 Rochester AASF, NY			
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SCALE	1:4,800	CHK BY	MB	4/21/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	4/21/2020

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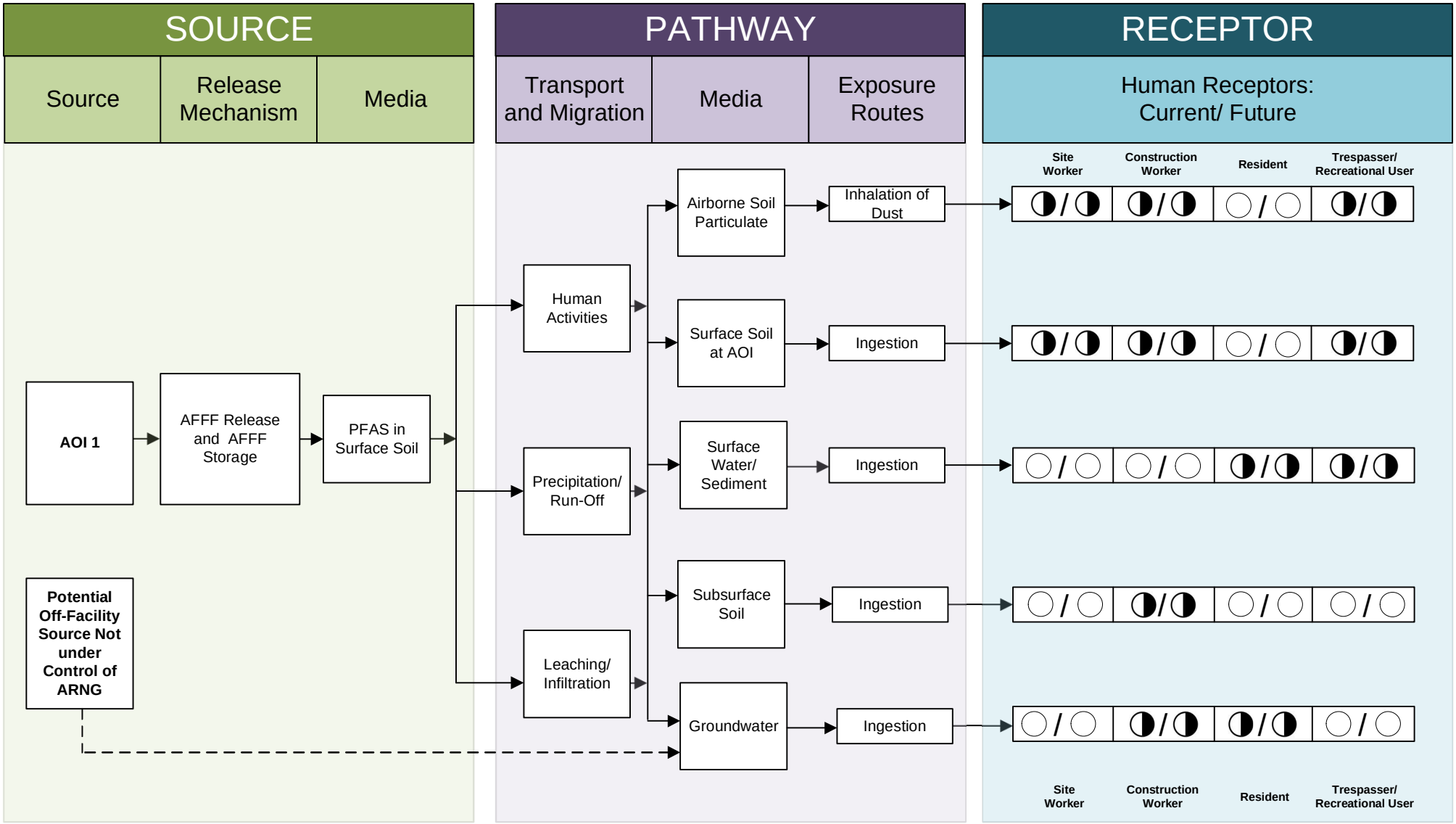
Summary of Findings

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure ES-1



LEGEND

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

Notes:
1. The resident receptors refer to an off-site resident.
2. Dermal contact exposure pathway is incomplete for PFAS.
3. Human consumption of fish potentially affected by PFAS from the downgradient river is possible.

Figure ES-2
Preliminary Conceptual Site Model
Rochester AASF #2

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 facilities that used per- and poly-fluoroalkyl 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 a drinking water lifetime Health Advisory (HA) for PFOA and PFOS in May 2016, but there are currently no promulgated national standards regulating PFAS in drinking water (USEPA, 2016a; USEPA, 2016b). The HA is 70 parts per trillion (ppt) for PFOS and PFOA, individually or combined.

This report presents findings of a PA for PFAS-containing materials at the New York ARNG (NYARNG) Rochester Army Aviation Support Facility (AASF) #2 (also referred to as the "facility") in Rochester, New York, in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA; USEPA, 1980), as amended, the National Oil and Hazardous Substances Pollution Contingency Plan (40 Code of Federal Regulations [CFR] Part 300; USEPA, 1994), and Army requirements and guidance.

This PA Report documents the known locations where PFAS may have been released into the environment at Rochester AASF #2. 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 11 October 2018 and completed visual site inspections (VSIs) at locations where PFAS-containing materials were suspected of being stored, used, or disposed;
- Interviewed current and former NYARNG Rochester AASF #2 personnel during the site visit, including the Chief Fire Supervisor, Regional Supervisor, and the Superintendent and;

- Identified Area(s) of Interest (AOIs) and developed a preliminary conceptual site model (CSM) to summarize potential source-pathway-receptor linkages of potential PFAS in soil, groundwater, surface water, and sediment for each AOI.

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 fire training areas (FTAs) at the facility identified during the site visit.
- **Section 3** – **Non-Fire Training Areas:** describes other locations of PFAS releases at the facility identified during the site visit.
- **Section 4** – **Emergency Response Areas:** describes areas of 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 each AOI 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

Rochester AASF #2 is located in Monroe County, western New York, in the city of Rochester. Since the facility's establishment in 1991, it has been located on the Greater Rochester International Airport and is leased to the National Guard for land use of the facility. The facility is approximately 4 miles southwest from the Rochester city center and 0.75 miles south of the airport terminal. Interstate 390 borders airport property directly to the northeast.

Prior to 1991, the property was undeveloped. A small airplane hangar was built in 1991, which the NYARNG began operating shortly after. In 2008, a second hangar connected to the original hangar was constructed, with each hangar covering roughly 32,600 square feet. A separate detached storage building was also constructed (**Figure 1-1**). The second hangar is located on the western side of the hangar constructed in 1991. The Rochester AASF #2 hangars are located 0.70 miles northeast from the end of the southern runway.

The property that is now the Greater Rochester International Airport was used for aviation purposes in the early 20th century. The first development occurred in 1927 with the construction of a hangar and aviation field, formerly known as Britton Field. By 1948, the Monroe County took possession of the property and began making improvements on the existing runways, building a

new runway and building a terminal complex. The Greater Rochester International Airport now covers 1,136 acres and has three runways.

1.5 Facility Environmental Setting

Monroe County is a predominately suburban area largely consisting of plateaus in the Lake Ontario Lowlands of western New York. The terrain of the facility is consistent with the majority of Monroe County. Monroe County has a total of 1,367 square miles, 52 percent of which are water (US Census Bureau, 2010). Rochester AASF #2 is located less than 5 miles south from the city of Rochester. Approximately 500 feet to the east of the facility is the Genesee River. Several industries are less than 1 mile to the south, west, and southwest of the facility. Westgate community plaza is 2 miles to the west of the facility.

1.5.1 Geology

Rochester AASF #2 is located west of the Genesee River, within the northwestern geological region of the Ontario Lowlands (United States Geological Survey [USGS], 1988), which is a segment of the Erie and Ontario lowlands physiographic province. This region forms part of the plains that border the Great Lakes. The Ontario lowlands are an area of generally subdued topography shaped over multiple periods of extensive glacial advancement and recession (deglaciation).

Deglaciation is responsible for thick deposits of fluvial sand, gravel, and lacustrine clay, silt, and fine sand found throughout the region. As a result, glacially-derived landforms are present near the Rochester AASF #2, including eskers, kettles, and massive deposits of sand and gravel, known as kame, laid down at the periphery of ice sheets during glacial drainage (Isachsen et al., 2000). The Rochester AASF #2 lies at the southwestern edge of the Rochester Kame-Moraine, which is a part of the Brighton-division of the Pinnacle Hills; a system of three different kame-moraine divisions that create sporadic and unusual topographic highs for Rochester and the surrounding 4 miles (Fairchild, 1896). The “Pinnacle”, where these divisions intersect, rises approximately 740 feet above mean sea level (amsl), compared to the Rochester average mean sea level of 475 feet.

The majority of both the surface and underlying material of Rochester AASF #2 are Pleistocene age unconsolidated glacial deposits, recent floodplain deposits, and lacustrine delta. These sediments consist of silts and clays underlain by fine sands and gravels of variable thicknesses ranging between 20 to nearly 300 feet (USGS, 1982). A previous subsurface investigation by the US Department of Agriculture Soil Conservation Service, who perform the National Cooperative Soil Survey, indicated that the majority of the upper 10 feet of the Rochester AASF #2 facility subsurface material are various types of till plain (ground moraines) and silt loam. This silt loam consists of low permeability, somewhat-poorly to poorly drained, fine grained silts and clays with very slow infiltration rates. These soil layers can also impede the downward movement of water, suggesting there is high runoff from the Rochester AASF #2 facility to the Genesee River to the southeast.

Underneath the silt loam and fine-grained sands and gravel is limestone and Precambrian crystalline bedrock. Many of the drinking water wells in the Genesee River basin come from bedrock; however, they do not yield as much as unconsolidated sediments (USGS, 1988).

1.5.2 Hydrogeology

Based on review of USEPA’s map of Sole Source Aquifers, Rochester AASF #2 is not located over a sole source aquifer (USEPA, 2020). Based on review of the New York State Department of Environmental Conservation’s (NYSDEC’s) Map of Principal and Primary Aquifers in New York

State, the Rochester AASF #2 facility cantonment area is not located over a principal or primary aquifer (NYSDEC, 2020). The principal preglacial buried-valley aquifer system underlies the Irondequoit and Genesee River Valleys (USGS, 1982). This unconsolidated aquifer spans the entire Rochester AASF #2 facility, with precipitation and runoff being the sole source of recharge (USGS, 1988).

The glacio-lacustrine silt and very fine sand, as well as kame deposits, create unique hydrogeological conditions; the unconsolidated glacial deposits of thick, permeable sand and gravel underlie flood plains and terraces of the less permeable silt loam. These deposits can cause different zones of infiltration, or scenarios where there is a high water table and low-drainage potential, making the prediction of local groundwater flow direction challenging (USGS, 1982). The unconsolidated deposits yield the largest supply to wells in Monroe County, with yields as much as 10 million gallons (gal) per day across the entire aquifer (USGS, 1985). Recharge by infiltration and precipitation occurs just south of and on the Rochester AASF #2, as the more permeable material sits on the surface in these locations.

Groundwater flow direction in the cantonment area is generally from west to east, towards the Genesee River (**Figure 1-2**), which flows into Lake Ontario. An EDR™ Report conducted a well search for a 1-mile radius surrounding the facility (**Appendix A**). Using additional online resources, such as state and local GIS databases, wells were researched to a 4-mile radius of the facility. Data from the USGS National Water Information System Mapper indicated there are no active USGS monitoring wells and 418 inactive monitoring wells within a 4-mile radius of the facility (USGS, 2020). Well data from New York State indicate there are six potable water wells within a 4-mile radius of the facility, one to the northwest (upgradient), one to the southwest (side gradient), and four to the southeast beyond the Genessee River (New York State, 2016). Information regarding well screen depths was not available, but the total well depths of the six wells range between 53 and 400 feet below ground surface (bgs).

There are several bedrock wells located side-gradient within 1.5 miles to the south-southeast and to the northwest of Rochester AASF #2 (**Figure 1-2**). The average depth to groundwater in the Rochester area is between 16 and 37 feet bgs, with average well depths of 28 to 101 feet, and yield anywhere from 8 to 287 gal per minute.

Based on the USEPA Unregulated Contaminant Monitoring Rule 3 (UCMR3) data, no PFAS were detected in a public water system above the HA within 20 miles of the facility (USEPA, 2017). PFAS analyses performed in 2016 had method detection limits that were higher than currently achievable. The HA is 70 ppt for PFOS and PFOA, individually or combined. Thus, it is possible that low concentrations of PFAS were not detected during the UCMR3 but might be detected if analyzed today. The facility receives water from the Monroe County Water Authority. The majority of drinking water supplied within Monroe County and the city of Rochester comes from Lake Ontario and Hemlock Lake, though there are 4,500 privately-owned drinking water wells within the county. Hemlock Lake is located approximately 25 miles south of Rochester AASF #2. Lake Ontario is located approximately 12 miles north of Rochester AASF #2.

1.5.3 Hydrology

Rochester AASF #2 is located in the Lower Genesee Watershed, which is a part of the 2,500 square miles Genesee River Watershed in the Great Lakes Basin. The Lower Genesee Watershed covers 1,100 square miles, drains over 8,000 square miles of streams, and covers Genesee, Livingston, Monroe, Ontario, and Wyoming Counties. Little Black Creek, Red Creek, Allen Creek, Black Creek, and Town of Gates-Genesee River Watersheds are all a part of the Lower Genesee Watershed (**Figure 1-3**). The main channel of the Genesee River is located approximately 0.35 miles southeast of Rochester AASF #2's eastern and southern boundaries. Surface water resources at Rochester AASF #2 include natural streams, rivers, and open water

features. All surface runoff from the Rochester AASF #2 area eventually drains into the Genesee River.

Approximately 0.75 miles north-northeast across from Interstate 390 is the Erie Canal. The Genesee River converges with the Erie Canal under Interstate 390 before continuing on to Lake Ontario. On the western side of the Rochester AASF #2 is Little Black Creek (**Figure 1-2**), which runs south and connects to a drainage ditch below the southern runway (Runway 4) and travels east along Paul Road 252 before converging into the Genesee River. Another drainage ditch at the end of Runway 10 travels south and connects to Little Black Creek. Black Creek is 0.5 miles south of the facility, which is less than 300 feet away from Little Black Creek near Paul Road 252, where it also converges into the Genesee River.

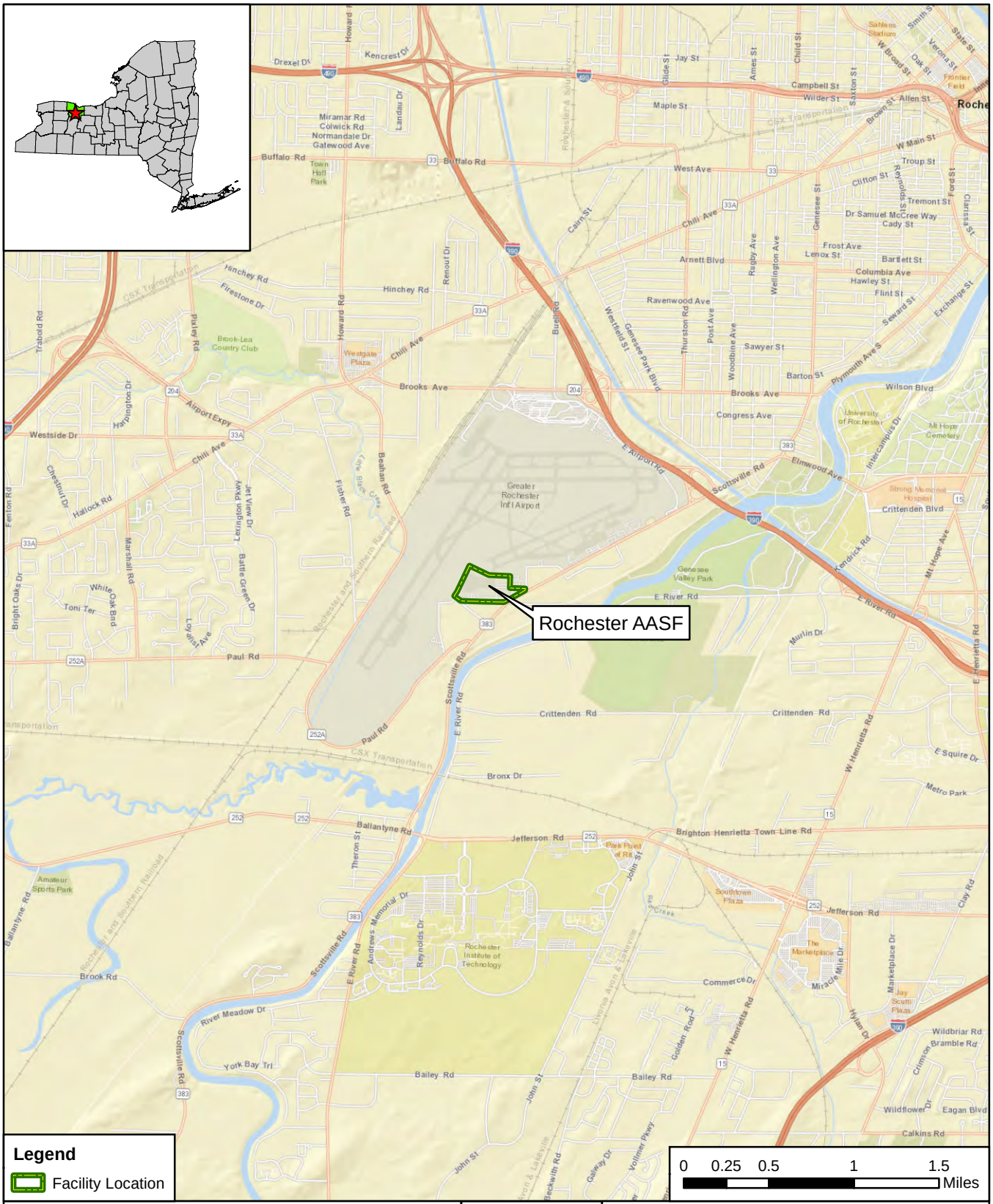
Both the Genesee River and Lake Ontario are popular for recreational use. Some recreational uses include boating, swimming, and fishing (City of Rochester, 2020).

1.5.4 Climate

The climate in the Rochester AASF #2 area and surrounding Greater Rochester International Airport is predominately continental, with an average annual temperature of 48.2 degrees Fahrenheit (°F). Seasonally, temperatures vary from an average summer high of 68.9°F, to average winter lows of 27°F (National Oceanic and Atmospheric Administration [NOAA], 2018). The total mean annual precipitation is 34.27 inches. February is the driest month, with 1.95 inches of precipitation, while August is the wettest month, with 3.47 inches of precipitation.

1.5.5 Current and Future Land Use

Rochester AASF #2 is a private facility with access only through a guarded security gate off Old Beahan Road. The property is a NYARNG installation that is used for training, maintenance, and unit administration. There are no current expansion plans for the facility and, in general, the future use of the facility is not expected to change.



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Base Map: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI,		PM	RG	2/5/2019

Facility Location

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 1-1

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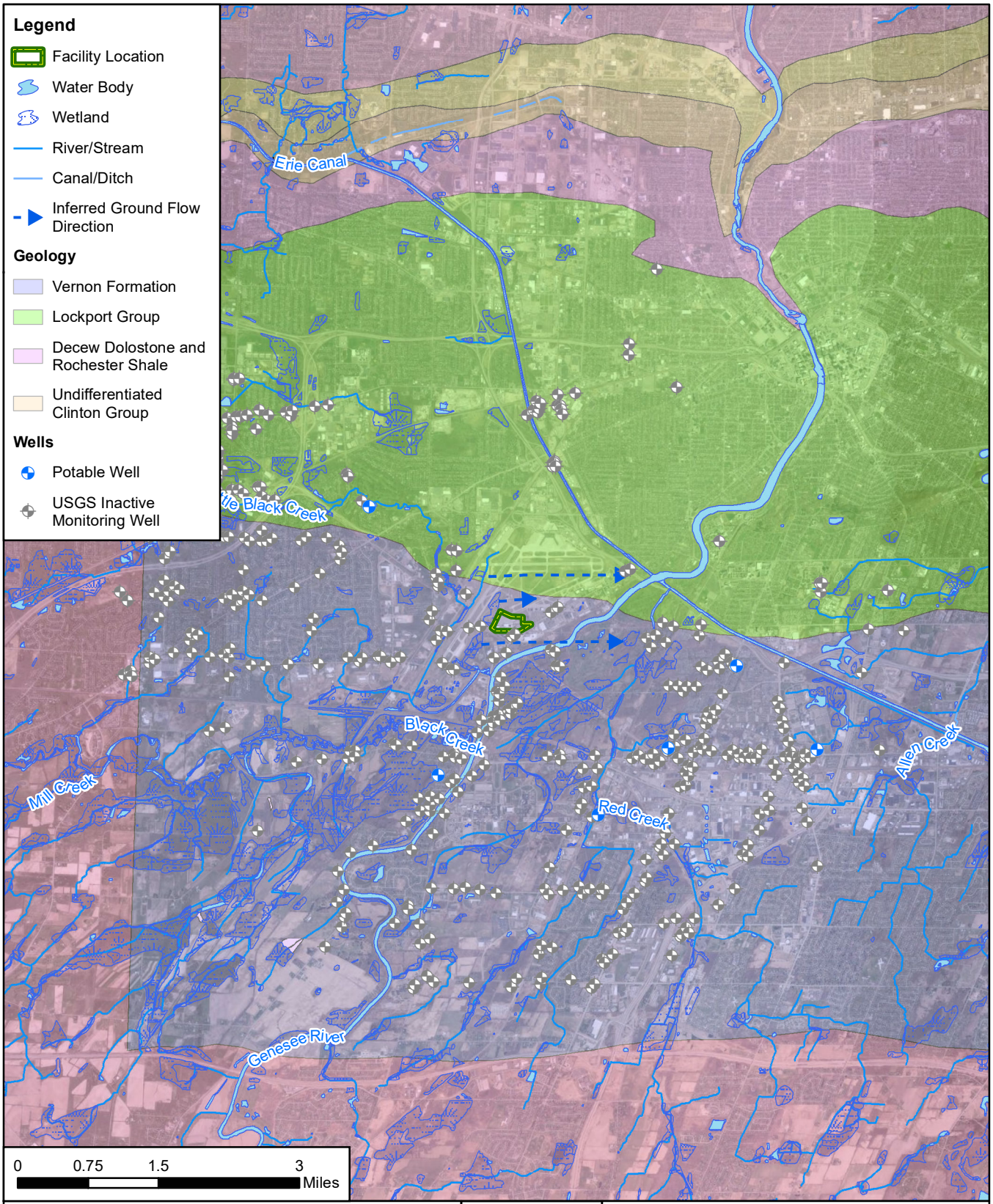

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Base Map: NYS Digital Ortho-imagery Program (NYSDOP), 2015		PM	RG	7/20/2020

Groundwater Features

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 1-2

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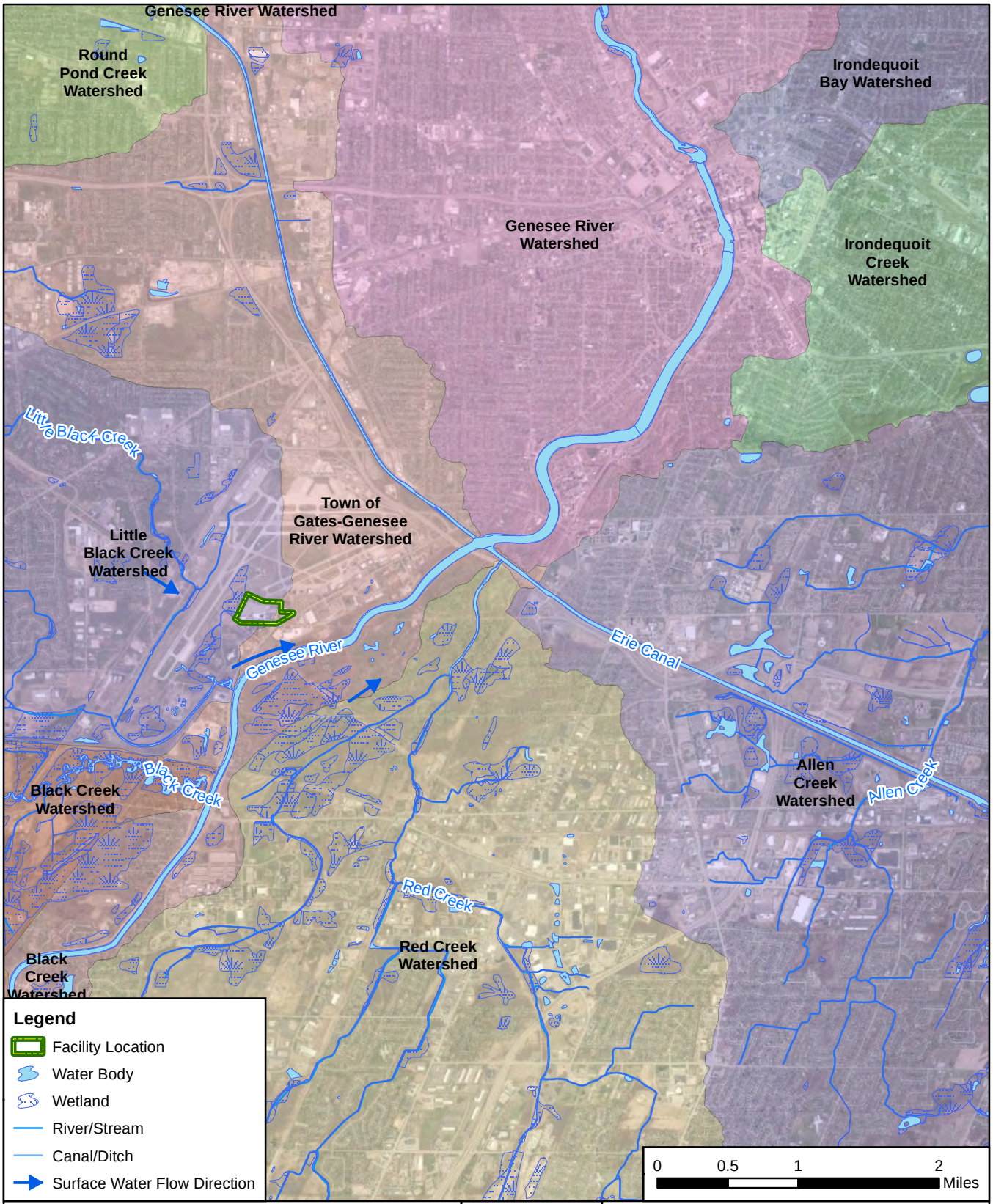

CLIENT	ARNG			
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Base Map: NYS Digital Ortho-imagery Program (NYSDOP), 2015		PM	RG	3/19/2020

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Surface Water Features

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 1-3

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2. Fire Training Areas

No FTAs were identified during the PA at Rochester AASF #2. According to an interview with Rochester AASF #2 personnel, any fire training that would have occurred would have been done with water on the flightline of the helipad. However, personnel stated that they never heard of any fire training, and there are no records to suggest otherwise. Furthermore, interviews with NYARNG staff, whose collective tenure span the length of Rochester AASF #2 history, state Rochester AASF #2 has never maintained an internal fire department and, therefore, never had need for an FTA.

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**. Three non-FTAs where AFFF could have been potentially stored and/or released were identified during the PA. Descriptions of the non-FTAs are presented below, and the locations of the non-FTAs are shown on **Figure 3-1**. Photographs of the non-FTAs are included in **Appendix C**.

3.1 Old Hangar

The Old Hangar is located in the southeastern portion of the Greater Rochester International Airport, at geographic coordinates 43°6'47.93"N and 77°40'20.82"W, and was built in 1991, in a roughly 32,600 square feet area; it is still active at the time of reporting. The Old Hangar has a boiler room on the eastern side (**Figure 3-1**) containing two 500-gal 3% AFFF storage tanks connected to a deluge system. This system was previously connected to an underground storage tank that was removed in 2007, at which point a 25,000-gal aboveground storage tank (AST) was installed. No AFFF release events were documented in connection with the underground storage tank removal. There are also three 36-gal 3% AFFF mobile storage tanks set up around the Old Hangar that are reported to have never had releases.

A 2018 September Record of Release (**Appendix A**) notes a release of AFFF and water that occurred on 20 June 2017. The bladders on the two 500-gal 3% AFFF storage tanks in the boiler room malfunctioned, causing a release in the boiler room that flowed into the Old Hangar. Interviews with Rochester AASF #2 staff said it is unclear as to how much AFFF was released from the tanks. Interviews and documented reports state the spill was contained by the deluge system, and AFFF went into the drains and was completely contained by the 25,000-gal AST. A retrofitting event occurred shortly after, during which, the 500-gal AFFF storage tanks were refilled with 3% AFFF. The 25,000-gal AST was later emptied and disposed of by a contractor without incident.

3.2 New Hangar

A New Hangar (**Appendix A**, **Figure 3-1**) was established in 2008. The New Hangar has a fire pump room containing one 300 gal 1.5% AFFF storage tank connected to a deluge system. This system is hooked to the same 25,000 gal AST as the Old Hangar. A storage room contains seven 5-gal buckets of 3% AFFF left over from the 2007 retrofitting event. Two 36-gal 3% AFFF mobile tanks are also set up around the New Hangar. Testing of the hangar deluge system occurs annually but bypasses the AFFF storage tanks, using only water to conduct the tests. There have been no documented reports of AFFF releases at the New Hangar since its installation in 2008; however, due to the storage of AFFF and presence of a deluge system within the New Hangar, this location is considered a potential PFAS release area.

3.3 Hazardous Waste Storage Shed

A Hazardous Waste Storage Shed is located roughly 300 feet to the west, adjacent to the New Hangar. One 55-gal drum of 3% AFFF was found inside the Hazardous Waste Storage Shed. This drum is a part of the extra material from the 2007 retrofitting event. There is no evidence to suggest any spills, leaks, or releases have occurred inside the storage shed; however, due to the storage of AFFF within the Hazardous Waste Storage Shed, this location is considered potential PFAS release area.

CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Rochester AASF, NY			
REVISED	3/19/2020	GIS BY	SK	3/19/2020
SCALE	1:4,800	CHK BY	MB	3/19/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	3/19/2020

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Non-Fire Training Areas

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Figure 3-1

4. Emergency Response Areas

No instances of emergency response were identified at Rochester AASF #2 during the PA. Rochester AASF #2 personnel stated that the Gates Fire District, the municipal fire department of the city of Rochester, responds onsite to all other major fire related incidents (**Section 5)**. During VSI interviews, Rochester AASF #2 personnel stated that they were not aware of any crashes that have occurred at Rochester AASF #2, and there are no documented reports to suggest otherwise.

5. Adjacent Sources

Four off-facility potential PFAS sources were identified adjacent to the Rochester AASF #2 during the PA interviews (**Appendix B**) and in the Environmental Data Resource, Inc. (EDR)™ Report (EDR™, 2018) (**Appendix A**). A description of each potential adjacent source is presented below, and the locations of potential adjacent sources are shown on **Figure 5-1**.

5.1 Greater Rochester International Airport

The first development at what is now the Greater Rochester International Airport occurred in 1927 with the construction of a hangar and aviation field, formerly known as Britton Field. Over the years, operations at the airport have included passenger flights, cadet flight school, and civilian pilot training. Monroe County took over airport property ownership in 1948. Operations within private hangars located at the Greater Rochester International Airport include aircraft maintenance, air cargo handling, ground service equipment maintenance, private aircraft rentals, and a flight school. The Rochester AASF #2 is located on the southeastern side of the airport property. Although information was not available during the PA interviews regarding AFFF usage or storage at the airport, there could have been potential use of AFFF in association with typical airport operations at the airport terminal, along the flightlines, or within the associated hangars. Additionally, as it is unknown whether there are fire suppression systems in any of the private hangars, or if AFFF has been used for training or as a fire suppressant at any time, these hangars have been included as potential adjacent sources at the airport. Therefore, the Greater Rochester International Airport is considered a potential adjacent off-facility source of PFAS.

5.2 Greater Rochester International Airport Fire Department

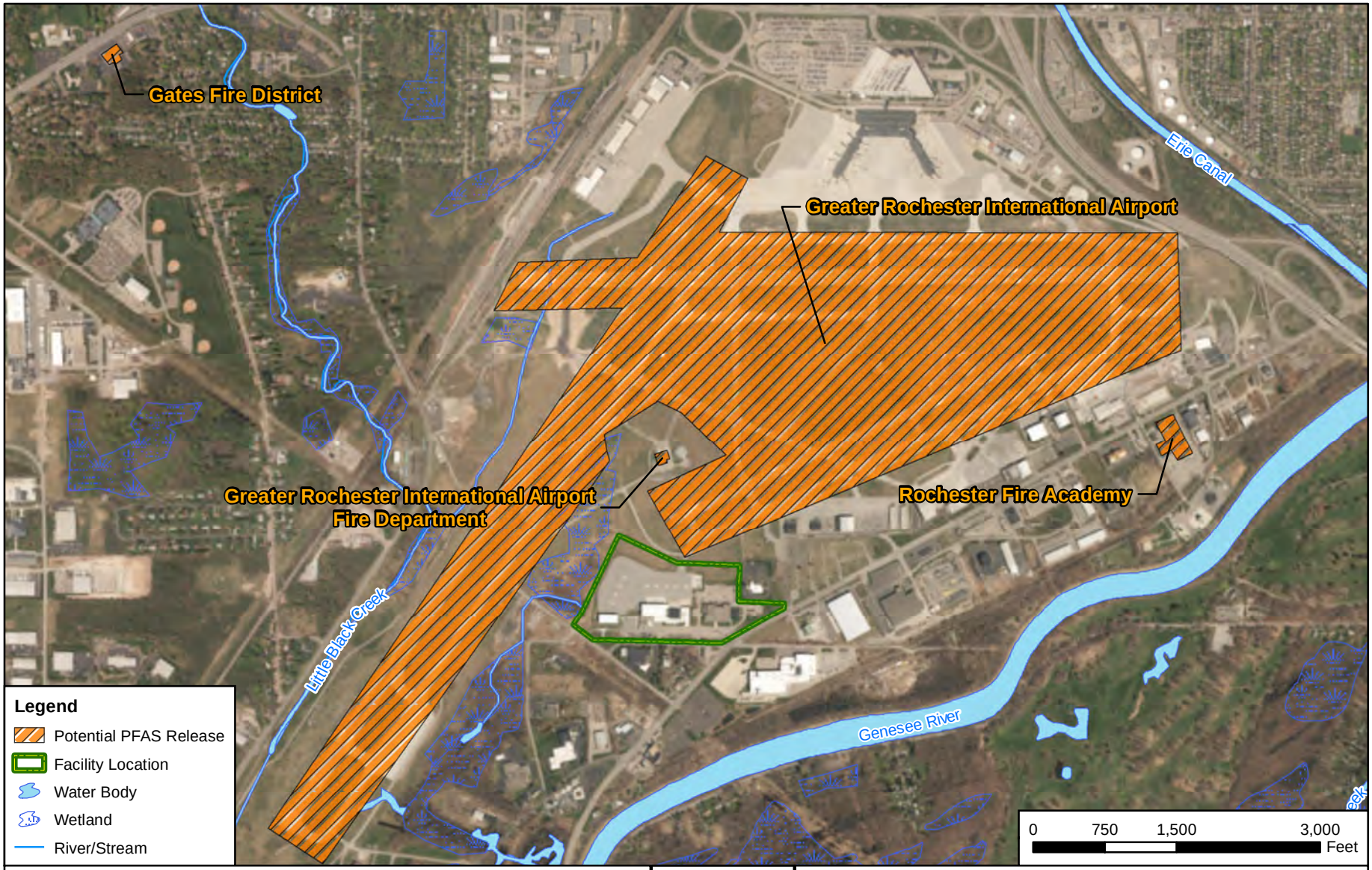
The Greater Rochester International Airport Fire Department is located less than 0.25 miles north of Rochester AASF #2. Although information was not available during the PA interviews regarding AFFF usage or storage, according to current Federal Aviation Administration regulations, since commercial aviation activities occur at this facility, AFFF is required to be stored and used for any potential firefighting activities and firefighting training. Therefore, the Greater Rochester International Airport Fire Department is considered a potential adjacent off-facility source of PFAS.

5.3 Gates Fire District

The closest local fire department, Gate Fire District, is located 1.5 miles northwest of Rochester AASF #2. As described in **Section 4**, this fire department would respond to any emergencies at Rochester AASF #2. Information was not available during the PA interviews regarding AFFF usage or storage at this location. Because the presence or absence of AFFF cannot be confirmed, the Gates Fire District is considered a potential adjacent off-facility source of PFAS.

5.4 Rochester Fire Academy

The Rochester Fire Academy is located approximately 1-mile east northeast of Rochester AASF #2. Since 1954, the Rochester Fire Academy has been owned and operated by the city of Rochester as a training facility used by the city's Fire and Police Departments. During the period of 1954 to 1980, various chemicals from local hazardous waste generators were burned and/or disposed of during training exercises. It is unknown whether or not AFFF were used at this facility. Because the presence or absence of AFFF cannot be confirmed, the Rochester Fire Academy is considered a potential adjacent off-facility source of PFAS.



CLIENT	ARNG			
PROJECT	Preliminary Assessment for PFAS at Rochester AASF, NY			
REVISED	4/30/2020	GIS BY	SK	4/30/2020
SCALE	1:18,000	CHK BY	MB	4/30/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community		PM	RG	4/30/2020

N

Adjacent Sources

AECOM

12420 Milestone Center Drive
Germantown, MD 20876

Figure 5-1

Q:\Projects\ENV\GEARS\GEO\MAES 2012 Unrestricted\Fort Meade\E. Data Management\GIS\MXDs\Chisholm_6th\March2017\ Fig_5-1_Rochester_AASF_Adjacent_Sources.mxd

6. Preliminary Conceptual Site Model

Based on the PA findings, one AOI was identified: AOI 1 Old Hangar/ New Hangar/ Hazardous Waste Storage Shed. AOIs were only identified at potential PFAS release locations on land licensed to the NYARNG; potential PFAS release locations outside lands licensed to the NYARNG are not considered AOIs. The AOI location is shown on **Figure 6-1**. The following sections describe the CSM components and the specific preliminary CSM developed for the 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.

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. The preliminary CSM for Rochester AASF #2 indicates which specific receptors could potentially be exposed to PFAS. The preliminary CSM for the AOI at Rochester AASF #2 is shown on **Figure 6-2**.

6.1 AOI 1: Old Hangar/ New Hangar/ Hazardous Waste Storage Shed

AOI 1 encompasses the AFFF release at the Old Hangar and the potential AFFF releases at the New Hangar and the Hazardous Waste Storage Shed. The area surrounding the AOI is predominantly paved with a few grassy areas between paved areas.

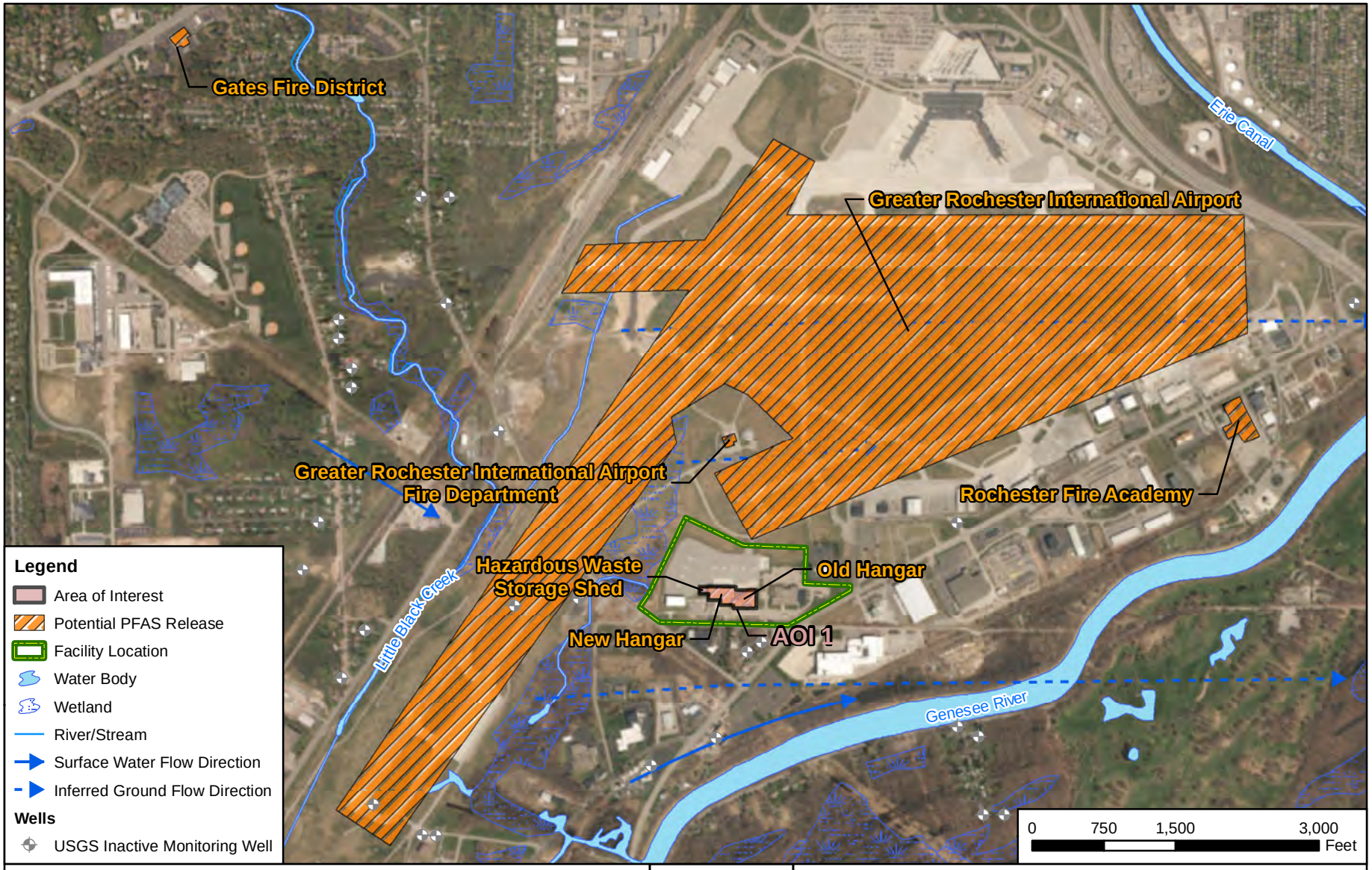
The known AFFF release at AOI 1 occurred within the confines of the Old Hangar building. The quantity of AFFF released is unknown, though interviews and documented reports state the spill flowed from the boiler room and into the Old Hangar, where the foam went into the drains and was completely contained by the AST. A retrofitting event occurred shortly after, during which, the tanks were refilled with 3% AFFF. The AST was later emptied and disposed of by a contractor without incident. Due to the storage of AFFF within the New Hangar and the Hazardous Waste Storage Shed, these locations are considered potential PFAS release locations. No known or documented release of AFFF has occurred within either location.

While known releases of AFFF occurred and were contained within the Old Hangar, it is possible that unknown or undocumented releases of AFFF occurred at AOI 1 on paved areas and grassy surfaces. AFFF releases could have occurred directly onto surface soil but may also have infiltrated subsurface soil via cracks in pavement or joints between areas that are paved with different materials. Therefore, ground-disturbing activities in these areas could result in site worker, construction worker, and trespasser exposure to potential PFAS contamination via inhalation of dust or ingestion of surface soil. Additionally, ground-disturbing activities to subsurface soil could result in construction worker exposure via ingestion. Therefore, the exposure pathways for inhalation of soil particles and ingestion of soil are considered potentially complete for these receptors.

Because potential PFAS releases to surface soil at AOI 1 could have occurred, PFAS may migrate from the surface soil to the groundwater via leaching. Groundwater at the facility generally flows in an eastern direction towards the Genesee River. The facility receives water from the Monroe County Water Authority, and there were no identified private drinking water wells located immediately downgradient of the facility (**Figure 1-2**) between the Rochester AASF #2 and the Genesee River, which likely represents a groundwater divide. However, due to the potential for unidentified residential wells downgradient of the facility and before Genessee River, the ingestion exposure pathway for groundwater is potentially complete for off-facility residents that are located downgradient of AOI 1. Six potable water wells were identified within 4 miles of the facility with

one to the east and two southeast of the facility (New York State, 2016). These wells are beyond the Genessee River and are not likely to be impacted by potential contaminants originating west of the river. Additionally, the anticipated depth to groundwater is shallow: between 16 and 37 feet bgs. Due to the shallow depth to groundwater, trenching activities could result in construction worker exposure via accidental ingestion, therefore this pathway is also considered potentially complete.

Although no surface water features flow through the AOI, the facility is within close proximity to the Genesee River, which flows into Lake Ontario, which is the largest water body supply for drinking water in the county; therefore, surface water and sediment exposure pathways are potentially complete for off-facility residents via ingestion. Additionally, both the Genesee River and Lake Ontario are popular for recreational use, including fishing, swimming, and boating. Therefore, the surface water and sediment exposure pathways are potentially complete for off-facility recreational users. Human consumption of fish potentially affected by PFAS from the river and lake is also possible. The preliminary CSM for AOI 1 is presented on **Figure 6-2**.



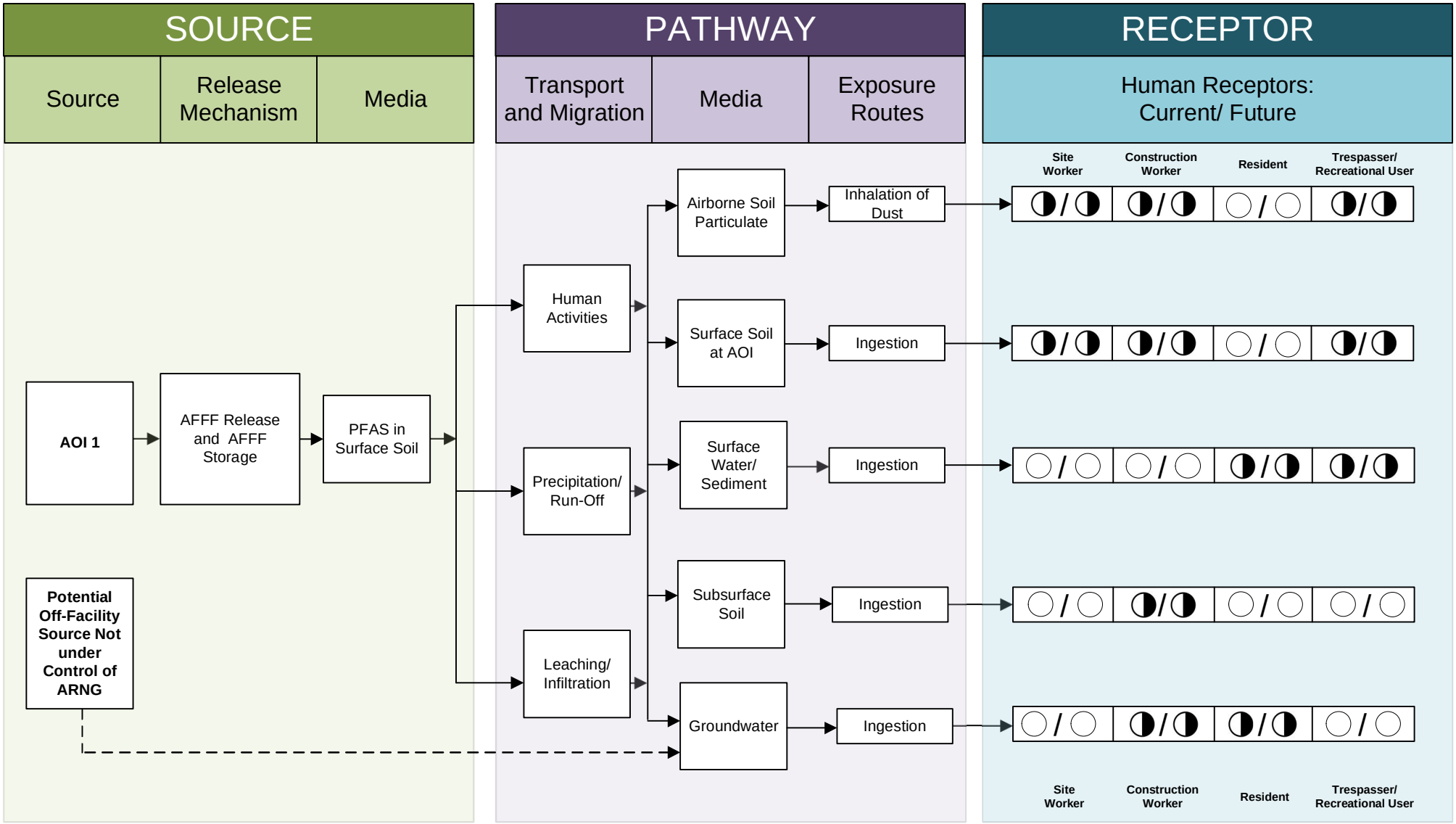
CLIENT	ARNG			
PROJECT	Preliminary Assessment for PFAS at Rochester AASF, NY			
REVISED	6/30/2020	GIS BY	SK	6/30/2020
SCALE	1:18,000	CHK BY	MB	6/30/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community		PM	RG	6/30/2020

Areas of Interest

AECOM 12420 Milestone Center Drive Germantown, MD 20876

Figure 6-1

Q:\Projects\ENV\GEARS\GEO\MAES 2012 Unrestricted\Fort Meade\E. Data Management\GIS\MXDs\Chisholm_6th\March2017\ Fig_6-1_Rochester_AASF_AOIs.mxd



LEGEND

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

Notes:
1. The resident receptors refer to an off-site resident.
2. Dermal contact exposure pathway is incomplete for PFAS.
3. Human consumption of fish potentially affected by PFAS from the downgradient river is possible.

Figure 6-2
Preliminary Conceptual Site Model
Rochester AASF #2

7. Conclusions

This report presents a summary of available information gathered during the PA on the use and storage of AFFF at Rochester AASF #2. The PA findings are based on the information presented in **Appendix A, B** and **C**.

7.1 Findings

One AOI related to PFAS releases were identified (**Table 7-1**) at Rochester AASF #2 based on PA data. **Figure 7-1** presents a summary of PA Findings.

Table 7-1: AOI at Rochester AASF #2

Area of Interest	Name	Used by	Potential Release Dates
AOI 1	Old Hangar, New Hangar, Hazardous Waste Storage Shed	NYARNG	A 2007 malfunction of AFFF storage tanks in the Old Hangar occurred. Storage of AFFF still occurs at the New Hangar and the Hazardous Waste Storage Shed.

Based on potential PFAS releases at this AOI, there is potential for exposure to PFAS contamination in media at or near the facility. The preliminary CSM for Rochester AASF #2, which presents the potential receptors and media impacted, is shown on **Figure 6-2**.

7.2 Uncertainty

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, other non-traditional activities, or on its disposition.

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. Many times, the provided information was vague or conflicted with other sources. 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 (early 1970s), and a reliance on personal recollection. Inaccuracies may arise in potential PFAS release/storage 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 from NYARNG facility 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

Location	Source of Uncertainty
AOI 1 – Old Hangar/ New Hangar/ Hazardous Waste Storage Shed	An unknown quantity of AFFF was released during the AFFF storage tank malfunction. It is unknown if any AFFF has been released from the New Hangar or the Hazardous Waste Storage Shed.
Greater Rochester International Airport Fire Department	The testing, if any, leakage, maintenance, or other use of AFFF that may or may not have occurred at this Adjacent Source is unknown.
Gates Fire District	The testing, if any, leakage, maintenance, or other use of AFFF that may or may not have occurred at this Adjacent Source is unknown.
Rochester Fire Academy	The testing, if any, leakage, maintenance, or other use of AFFF that may or may not have occurred at this Adjacent Source is unknown.
Greater Rochester International Airport	The testing, if any, leakage, maintenance, or other use of AFFF that may or may not have occurred at this Adjacent Source is unknown.

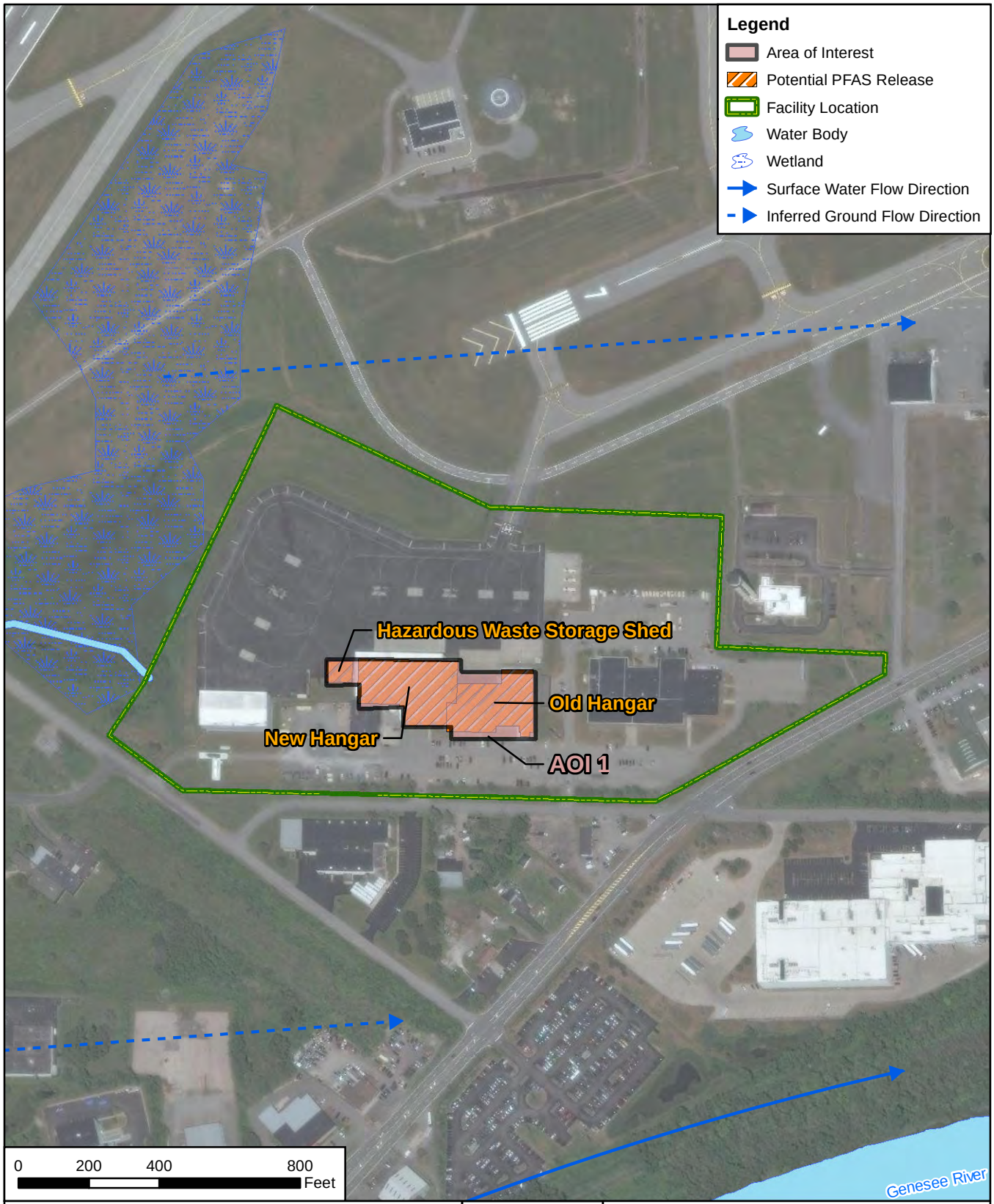
7.3 Potential Future Actions

Interviews and records (covering 1980s to present) indicate that current or former ARNG activities may have resulted in potential PFAS releases at one AOI identified during the PA. Based on the CSM developed for the AOI, there is potential for receptors to be exposed to PFAS contamination in soil and groundwater at the AOI and groundwater, surface water, and sediment downgradient of the AOI. **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.

The ARNG will evaluate the need for an SI at Rochester AASF #2 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	Rationale	Potential Future Action
AOI 1 – Old Hangar/ New Hangar/ Hazardous Waste Storage Shed	43° 6'48.01"N; 77°40'24.42"W	AFFF storage tank malfunction release of 3% AFFF. It is unknown if any AFFF has been released from the New Hangar or the Hazardous Waste Storage Shed.	Proceed to an SI, focus on soil and groundwater



CLIENT	ARNG			
NOTES	Preliminary Assessment for PFAS at Rochester AASF, NY			
REVISED	4/21/2020	GIS BY	SK	4/21/2020
SCALE	1:4,800	CHK BY	MB	4/21/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	4/21/2020

N

Summary of Findings

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 7-1

8. References

City of Rochester. 2020. *City of Rochester, NY: Waterways.* Accessed 20 March 2020 at https://www.cityofrochester.gov/categories/topics/waterways/

EDR™. 2018. *The EDR Radius Map™ Report with GeoCheck®; Aerial Photo Decade Package; and Certified Sanborn® Map Report; Rochester, 42 Patriot Way, Rochester, NY 14624*. November.

Fairchild, H. L. 1896. *Kame Areas in Western New York South of Irondequoit and Sodus Bays.* Journal of Geology, Vol 4, pg 129-159.

Isachsen Y.W., Landing E., Lauber J.M., Rickard L.V., and Rochers W.B. 2000. *Geology of New York: A Simplified Account.* New York State Geological Survey.

New York State. 2016. *GIS Dataset Details: Water Wells.* Accessed 29 June 2020 at https://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1203. December.

NOAA. 2018. *1981-2010 Climate Normals for Rochester, NY US*. Accessed 27 November 2018 at http://www.ncdc.noaa.gov/cdo-web/datatools/normals.

NYSDEC. 2020. *Aquifers in New York State*. Accessed 20 April 2020 at https://www.dec.ny.gov/lands/36119.html.

US Census Bureau. 2010. *Census Summary File 2010*. Revised 2012.

USEPA. 1980. *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*.

USEPA. 1991. *Guidance for Performing Preliminary Assessments under CERCLA.* September.

USEPA. 1994. *National Oil and Hazardous Substances Pollution Contingency Plan (Final Rule)*. 40 CFR Part 300; 59 Federal Register 47384. September.

USEPA. 2016a. *Drinking Water Health Advisory for Perfluorooctanoic Acid (PFOA).* Office of Water (4304T). Health and Ecological Criteria Division, Washington, DC 20460. EPA Document Number: 822-R-16-005. May.

USEPA. 2016b. *Drinking Water Health Advisory for Perfluorooctane Sulfonate (PFOS).* Office of Water (4304T). Health and Ecological Criteria Division, Washington, DC 20460. EPA Document Number: 822-R-16-004. May.

USEPA. 2017. *UCMR 3 (2013-2015) Occurrence Data by State. Occurrence Data for the Unregulated Contaminant Monitoring Rule*. Accessed 9 July 2019 at https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule. January.

USEPA. 2020. Map of Sole Source Aquifer Locations. Interactive web map. Accessed 18 March 2020 at https://epa.maps.arcgis.com/apps/webappviewer/index.html.

USGS. 1982. *Geohydrology of the preglacial Genesee Valley in Monroe County, New York*. Open-File Report 82-552. Accessed 17 March 2020 at https://pubs.er.usgs.gov/publication/ofr82552.

USGS. 1985. *Geohydrology of the Irondequoit Creek Basin near Rochester, New York*. Water-Resources Investigations Report 84-4259. Accessed 17 March 2020 at https://pubs.er.usgs.gov/publication/wri844259.

USGS. 1988. *Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York*. Water-Resources Investigations Report 88-4122. Accessed 19 March 2020 at https://pubs.er.usgs.gov/publication/wri884122.

USGS. 2020. *National Water Information System: Mapper.* Accessed 30 June 2020 at https://maps.waterdata.usgs.gov/mapper/index.html.

Appendix A
Data Resources

Data resources will be provided separately on CD. Data resources for Rochester AASF #2 include:

Environmental Data Resources™, Inc. Documents

- 2018, Environmental Data Resources™, Inc. Aerial Images, Sanborn Map Report, and Radius Map Report for Rochester AASF #2

Hydrology Documents

- Rochester Hydrology ArcGIS Site Map

Appendix B
Preliminary Assessment Documentation

Appendix B.1
Interview Records

PA Interview Questionnaire - Environmental Manager

Facility: [redacted]
Interviewer: [redacted]
Date/Time: [redacted]

Title: _____ **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 _____

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

since built armory -> '91 on
① ② FMS

2. Where can I find previous facility ownership information?

- since '91, still airport proper license to use land for facility

3. What can you tell us about the history of PFAS including aqueous film forming foam (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
Fire Training Areas
Firefighting (Active Fire) 2007, malfunction capture tank building #2
Crash (None) alarm triggers 30 sec
Fire Suppression Systems (Hangers/Dining Facilities) diverter valve
Fire Protection at Fueling Stations AFFF,
Non-Technical/Recreational/ Pest Management
Metals Plating Facility
Waterproofing Uniforms (Laundry Facilities) bladder, then replaced mostly high corroded water
Other

4. Fill out CSM Information worksheet with the Environmental Manager.

5. 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 the AFFF/suppression system? Do you have "As Built" drawings for the buildings?

Non toxic high in building #1

* office

Testing - June 28th annually
bypass not AFF

PA Interview Questionnaire - Environmental Manager

Facility:_____
Interviewer:_____
Date/Time:_____

6. Are fire suppression systems currently charged with AFFF or have they been retrofitted for use of high expansion foam? If retrofitted, when was that done?

Fire suppression in boiler room

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

since '91.

8. 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)?

Ansul

9. 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?

POL Storage room
Shed out building — 55 gallon drum
4-5 gallon containers
3% from replacement

10. 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?

armory building 1 -> just sprinklers

PA Interview Questionnaire - Environmental Manager

Facility:_____
Interviewer:_____
Date/Time:_____

11. When a release of AFFF occurs during a fire training exercise, now and in the past, how is 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?

12. Can you recall specific times when city, county, and/or state personnel came on-post for training? If so, please state which state/county agency or military entity? Do you have any records, including photographs to share with us?

inspect buildings. gates fire department looking at storage, * no live burn training *

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

training w/ fire tanks guard discontinued ~2010, right on flightline
any other fire training w/ CO_2, again on the flightline

14. Did individual units come 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?

15. 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?

Copy report ✓

PA Interview Questionnaire - Environmental Manager

Facility:_____
Interviewer:_____
Date/Time:_____

16. 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?

any spills that was reportable
rainwater release records

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

bom gates + rescue team respond

18. Are there mutual aid/use agreements between county, city, and local fire department? Please list, even if informal. If formalized, may we have a copy of the agreement?

19. 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 treatment plants, and AFFF ponds)?

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

PA Interview Questionnaire - Environmental Manager

Facility:_____
Interviewer:_____
Date/Time:_____

21. Are there past studies you are aware of with environmental information on plants/animals/ groundwater/soil types, etc., such as Integrated Cultural Resources Management Plans or Integrated Natural Resources Management Plans?

22. What other records might be helpful to us (environmental compliance, investigation records, admin record) and where can we find them?

23. Do you have or did you have a chrome plating shop on base? What were/are the years of operation of that chrome plating shop?

1 spray boom, keep record of usage

24. Do you know whether the shop has/had a foam blanket mist suppression system or used a fume hood for emissions control? If foam blanket mist suppression was used, where was the foam stored, mixed, applied, etc.?

25. 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?

2x EPA inspections
2x DEC

3 on ECAT from guard bureau
1 annual state does internal

Appendix B.2
Visual Site Inspection Checklists

Visual Survey Inspection Log

Recorded by: [redacted]
ARNG Contact: *CW4* [redacted]
Date: ***10/11/2018***

Source/Release Information

Site Name / Area Name / Unique ID: Rochester AASF, Rochester NY
Site / Area Acreage: New Facility Hangar
Historic Site Use (Brief Description): AASF; hangar since 2008

Current Site Use (Brief Description): AASF

1. Was AFFF used (or spilled) at the site/area? **Y / N**
   1a. If yes, document how AFFF 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
   Rochester International Airport is located to the immediate north; Commercial buildings nearby
4. Is this site located at an airport/flightline? **Y / N**
   4a. If yes, provide a description of the airport/flightline tenants:
   ARNG, and Rochester International Airport

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:
   3% AFFF according to milspec
   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?
   Yes, drains are located in the hangar floor.

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:
   The Gennesee River is located approximately 1,000 ft to the south

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):
   A new facility hangar was installed in 2008.

Visual Survey Inspection Log

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:

Access is restricted to the airfield and the hangar.

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:

Additional Notes

Photographic Log

Photo ID/Name	Date & Location	Photograph Description

Visual Survey Inspection Log

Recorded by: [redacted]
ARNG Contact: *CW4* [redacted]
Date: ***10/11/2018***

Source/Release Information

Site Name / Area Name / Unique ID: Rochester AASF, Rochester NY
Site / Area Acreage: Old Facility Hangar
Historic Site Use (Brief Description): AASF; hangar since 1991

Current Site Use (Brief Description): AASF

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

1a. If yes, document how AFFF was used and usage time (e.g., fire fighting training 2001 to 2014):
A malfunction in the capture tank in this building in 2007 initited a release of AFFF

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
Rochester International Airport is located to the immediate north; Commercial buildings nearby

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

4a. If yes, provide a description of the airport/flightline tenants:
ARNG, and Rochester International Airport

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:
3% AFFF according to milspec

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?
Yes, drains are located in the hangar floor.

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:
The Gennesee River is located approximately 1,000 ft to the south

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):
A new facility hangar was installed in 2008.

Visual Survey Inspection Log

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:

Access is restricted to the airfield and the hangar.

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:

Additional Notes

Photographic Log

Photo ID/Name	Date & Location	Photograph Description

Appendix C
Photographic Log

APPENDIX C – Photographic Log

Rochester AASF #2 NYARNG, Preliminary Assessment for PFAS	Rochester Readiness Center	Rochester, New York

Photograph No. 1

Description:

Coiled fire extinguisher hose and tank located in the new hangar. 3 hoses total are located inside the hangar.

11 October 2018

Photograph No. 2

Description:

Front view of building containing hangar 1 and hangar 2 (new hangar). Photo facing North.

11 October 2018

APPENDIX C – Photographic Log

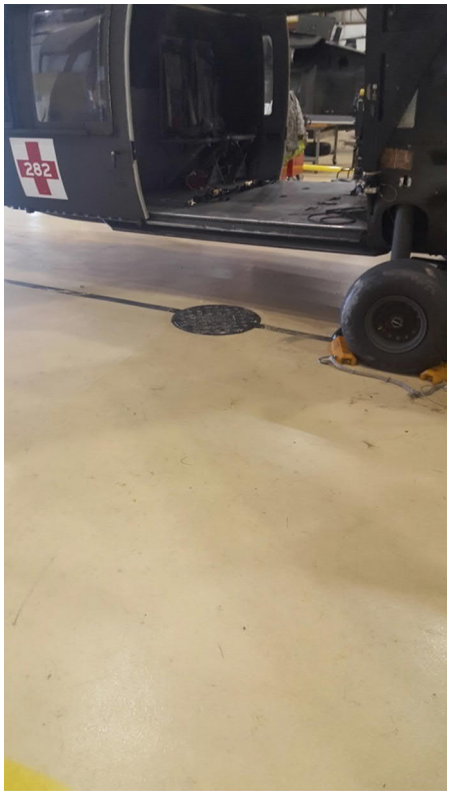
Rochester AASF #2 NYARNG, Preliminary Assessment for PFAS	Rochester Readiness Center	Rochester, New York

Photograph No. 3

Description:

Manhole drain in the middle of the old hangar.

11 October 2018

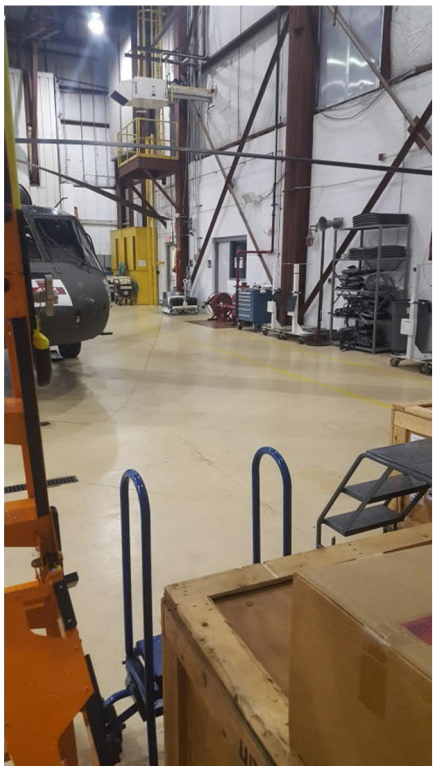


Photograph No. 4

Description:

Old hangar coil hose for AFFF.

11 October 2018



APPENDIX C – Photographic Log

Rochester AASF #2 NYARNG, Preliminary Assessment for PFAS	Rochester Readiness Center	Rochester, New York

Photograph No. 5

Description:

Paint booth.

11 October 2018

Photograph No. 6

Description:

Fire Department hookup.

11 October 2018

APPENDIX C – Photographic Log

Rochester AASF #2 NYARNG, Preliminary Assessment for PFAS	Rochester Readiness Center	Rochester, New York

Photograph No. 7

Description:

Ansul tanks inside boiler room. Utilized for old hangar only.

11 October 2018

Photograph No. 8

Description:

Ansul tanks inside boiler room. Utilized for old hangar only.

11 October 2018

APPENDIX C – Photographic Log

Rochester AASF #2 NYARNG, Preliminary Assessment for PFAS	Rochester Readiness Center	Rochester, New York

Photograph No. 9

Description:

Front of AASF facing West.

11 October 2018

Photograph No. 10

Description:

Front of AASF facing East.

11 October 2018

APPENDIX C – Photographic Log

Rochester AASF #2 NYARNG, Preliminary Assessment for PFAS	Rochester Readiness Center	Rochester, New York

Photograph No. 11

Description:

Holding tank for any waste produced by the new hangar's deluge system.

11 October 2018

Photograph No. 12

Description:

Inside pump room. Utilized for new hangar only.

11 October 2018

APPENDIX C – Photographic Log

Rochester AASF #2 NYARNG, Preliminary Assessment for PFAS	Rochester Readiness Center	Rochester, New York

Photograph No. 13

Description:

Inside pump room. Utilized for new hangar only. Chief points out the Ansul tanks.

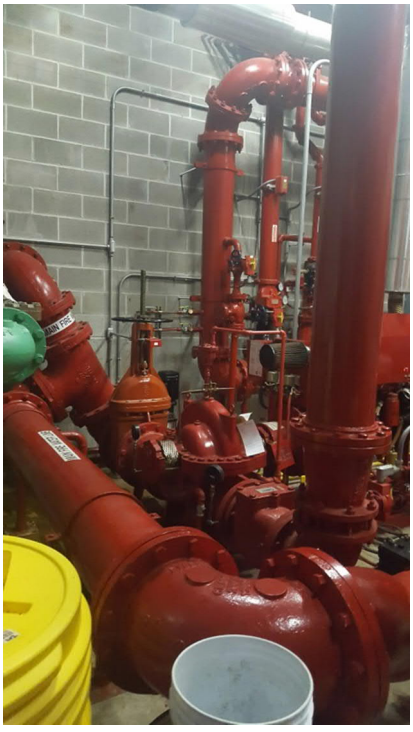
11 October 2018

Photograph No. 14

Description:

Inside pump room. Utilized for new hangar only.

11 October 2018



APPENDIX C – Photographic Log

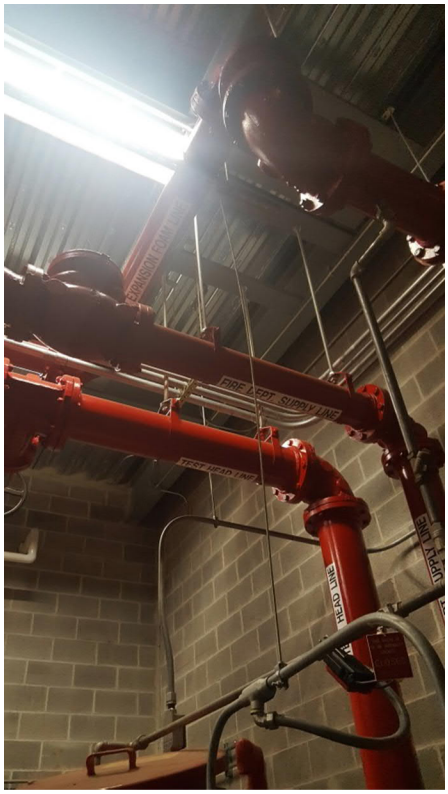
Rochester AASF #2 NYARNG, Preliminary Assessment for PFAS	Rochester Readiness Center	Rochester, New York

Photograph No. 15

Description:

Inside pump room. Utilized for new hangar only.

11 October 2018



Photograph No. 16

Description:

Coiled fire extinguisher hose and tank located in the new hangar. 3 hoses total are located inside the hangar.

11 October 2018

APPENDIX C – Photographic Log

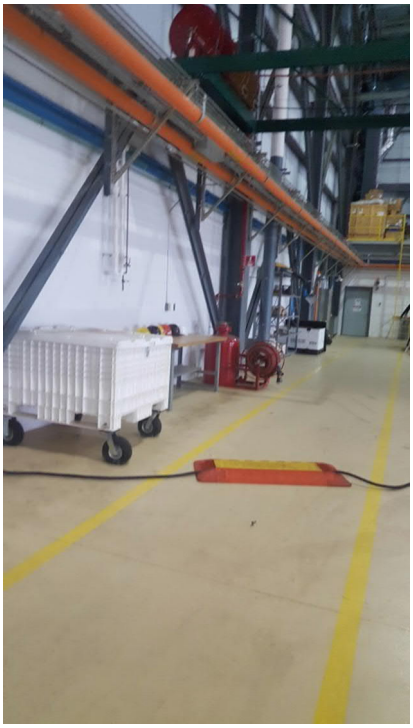
Rochester AASF #2 NYARNG, Preliminary Assessment for PFAS	Rochester Readiness Center	Rochester, New York

Photograph No. 17

Description:

Coiled fire extinguisher hose and tank located on the far west wall of the new hangar. 3 hoses total are located inside the hangar.

11 October 2018

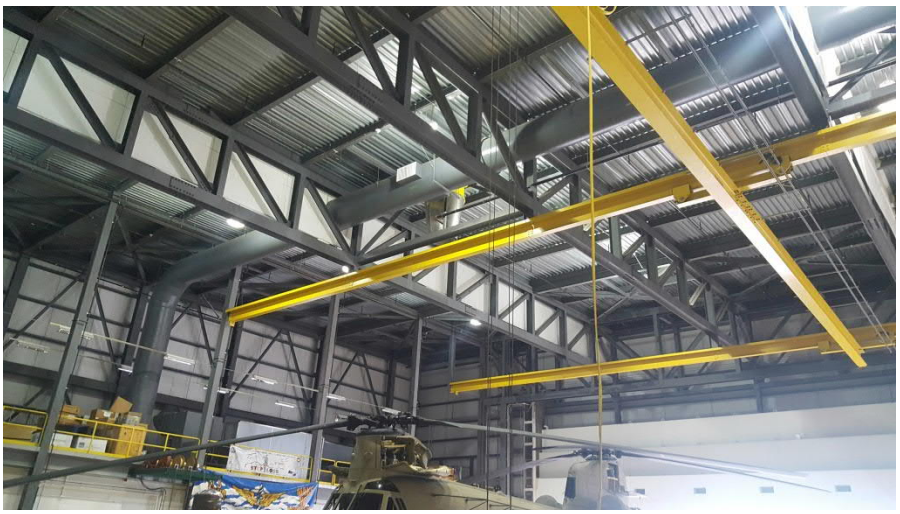


Photograph No. 18

Description:

Deluge system inside the new hangar. Waste gets directed to an outside holding tank.

11 October 2018



APPENDIX C – Photographic Log

Rochester AASF #2 NYARNG, Preliminary Assessment for PFAS	Rochester Readiness Center	Rochester, New York

Photograph No. 19

Description:

Front of new hangar, photo facing East.

11 October 2018

Photograph No. 20

Description:

Tarmac of NYARNG AASF, with Rochester Airport in the background. Photo facing North.

11 October 2018

APPENDIX C – Photographic Log

Rochester AASF #2 NYARNG, Preliminary Assessment for PFAS	Rochester Readiness Center	Rochester, New York

Photograph No. 21

Description

Hazardous waste sheds located west of the new hangar.

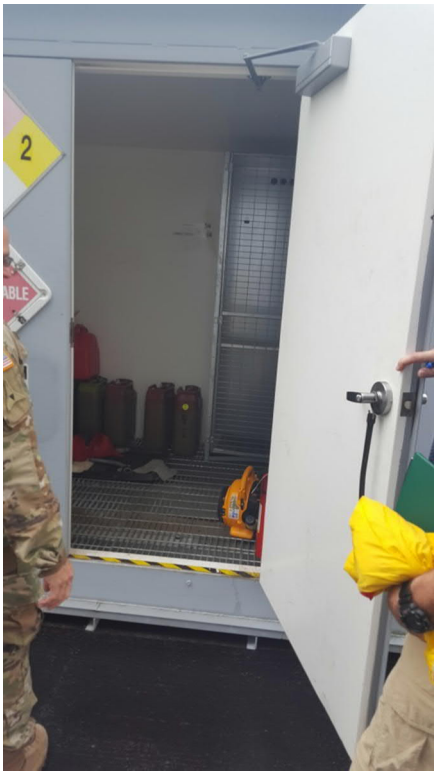
11 October 2018

Photograph No. 22

Description:

Hazardous waste sheds located west of the new hangar.

11 October 2018



APPENDIX C – Photographic Log

Rochester AASF #2 NYARNG, Preliminary Assessment for PFAS	Rochester Readiness Center	Rochester, New York

Photograph No. 23

Description:

5-gallon extra ansulite drums located inside storage closet on the west end of the new hangar.

11 October 2018