FINAL
Preliminary Assessment Report
Hilo Army Aviation Support Facility #2, Hawai‘i, Hawai‘i

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

September 2020

Prepared for:

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

UNCLASSIFIED

Table of Contents

Figures

Tables

Appendices

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
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CSM	conceptual site model
DLNR	Hawai‘i Department of Land and Natural Resources
DoD	Department of Defense
EDR™	Environmental Data Resources, Inc.™
FTA	fire training area
HA	Health Advisory
HIARNG	Hawai‘i Army National Guard
KMR	Keaukaha Military Reservation
MGD	million gallons per day
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
USFWS	United States Fish and Wildlife Services
VSI	visual site inspection

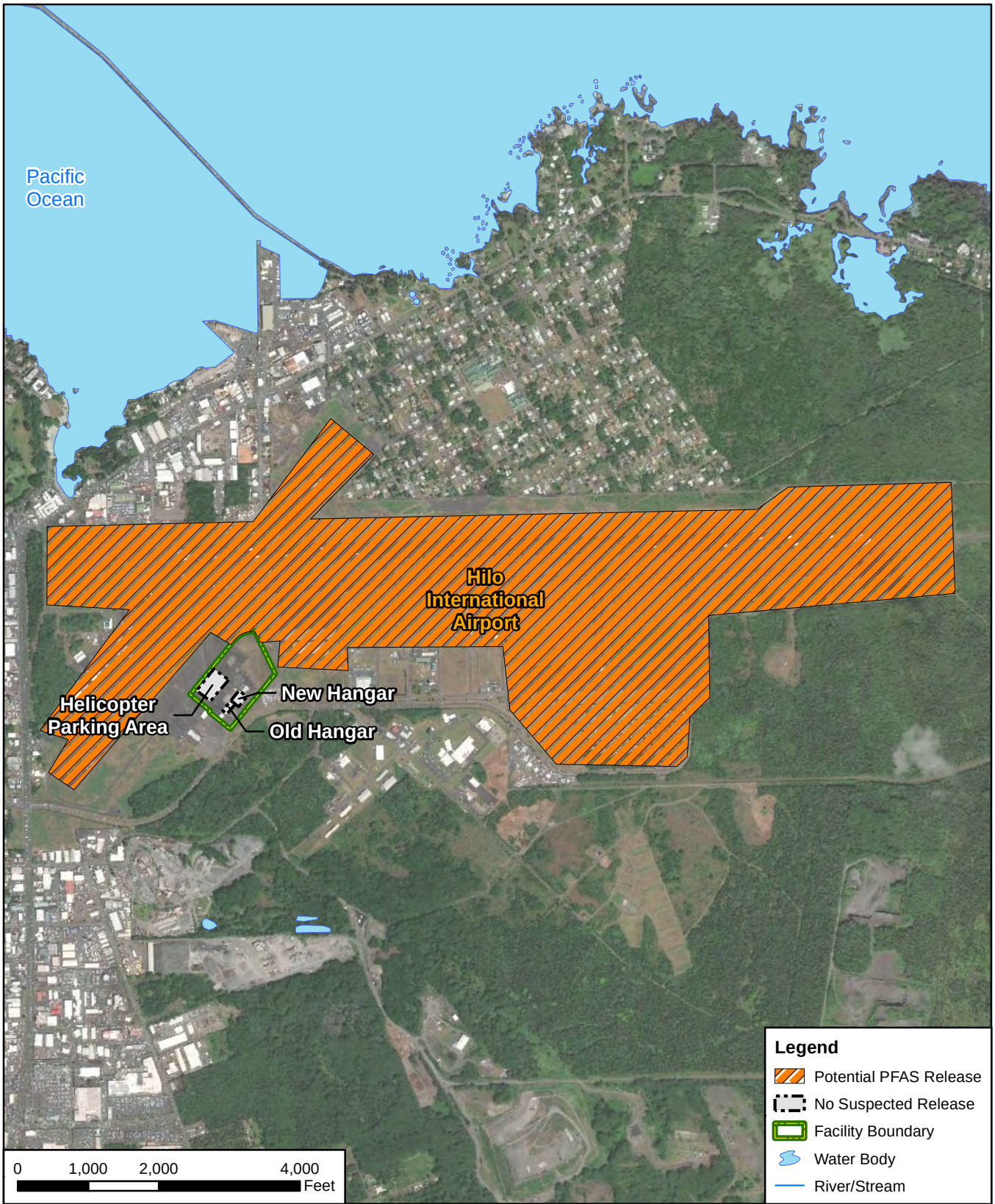
Executive Summary

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 Hilo Army Aviation Support Facility (AASF) #2 (also referred to as the "facility") in Hilo, Hawai'i, Hawai'i to assess potential PFAS release areas and exposure pathways to receptors. Occupation of the property by Hawai'i ARNG began in 1952. 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 29 April 2019 and completed visual site inspections at locations where PFAS-containing materials were suspected of being stored, used, or disposed;
- Interviewed current Hilo AASF #2 personnel, such as the Facility Manager, during the site visit.

No known or documented releases of PFAS to the environment were identified at the facility during the preparation of this PA report. Hilo International Airport was identified as an adjacent source of PFAS, because eight major air incidents have occurred at the airport. At one of the incidents in the early 1990s, Hilo AASF #2 personnel indicated that they assisted with the response using water and Halon extinguishers (non-aqueous film forming foam [AFFF]). The response actions, location, and extinguishing agents used (if any) are generally unknown for the other incidents (Hawaii.gov, 2020).

Based on the PA findings regarding the historical use, storage or disposal of aqueous film forming foam at the facility, there is no potential for exposure to PFAS contamination in soil, groundwater, surface water, and sediment (**Figure ES-1**). Based on the United States (US) Environmental Protection Agency (USEPA) Unregulated Contaminant Monitoring Rule 3 (UCMR3) data, it was indicated that no PFAS were detected in a public water system above the USEPA's lifetime 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.



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Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	6/1/2020

Summary of Findings

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Figure ES-1

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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) (a suite of related chemicals), 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 these 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 lifetime 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 findings of a PA for PFAS at Hilo Army Aviation Support Facility (AASF) #2 (also referred to as the "facility") in Hilo, Hawai'i, Hawai'i 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 the locations where PFAS may have been released into the environment at Hilo 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 site visit on 29 April 2019 and completed visual site inspections (VSIs) at locations where PFAS-containing materials were suspected of being stored, used, or disposed;
- Interviewed current Hilo AASF #2 personnel, such as the Facility Manager, during the site visit.

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 potential PFAS releases at the facility identified during the site visit.
- **Section 4** – **Emergency Response Areas:** describes areas of potential PFAS release 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 potential PFAS transport and receptors at the facility.
- **Section 7** – **Conclusions:** summarizes the data findings and presents the conclusions and uncertainties 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

Hilo AASF #2 is an 8-acre parcel located on Lyman Field northwest of Keaukaha Military Reservation (KMR) and south of Hilo Bay. The facility is surrounded by Hilo International Airport on three sides, with a forested area to the south (**Figure 1-1**).

The Hawai'i ARNG (HIARNG) acquired the property in 1952 as part of an Executive Order. Hilo AASF #2 provides training and maintenance for one aviation unit that supports the HIARNG. The facility consists of office areas, hangars, and an aircraft parking area. In order to support an aviation team, AASF #2 was renovated and expanded. The expansion included the construction of a new, larger hangar adjacent to the older hangar (Department of Defense [DoD], 2015; **Appendix A**).

1.5 Facility Environmental Setting

Hilo AASF #2 is located on the eastern flanks of the Mauna Kea and Mauna Loa volcanoes, where the topography gently slopes down from the mountains to the ocean due to the repeated outpouring of highly fluid lavas from fissures along rift zones. Hilo AASF #2 is approximately 2 miles from the Pacific Ocean, in a relatively flat, low-lying area composed of gently rolling terrain. Hilo's elevation is only 38 feet above mean sea level (amsl) (Hawaiian Island Chamber of Commerce, 2003).

1.5.1 Geology

Located at the southwestern end of the Hawaiian Archipelago, the Island of Hawai‘i is the youngest of the Hawaiian Islands. Hualālai, Mauna Loa, and Kīlauea are the only active volcanoes on the island of Hawai‘i. Typically, these volcanoes are made up of thousands of individual basalt flows, which are occasionally separated by tuff or pyroclastic debris (Inter Island Environmental Services, Inc., 1997).

Hilo AASF #2 lies on basaltic lava flows representative of the Mauna Loa volcanic series. These lava flows are known as the Kau Volcanics, which range in age from recent to late Pleistocene. Underlying the Kau Volcanics are the Pahala Ash, the Kahuku Basalt, and the Nīnole Volcanics, all of which erupted from Mauna Loa (Inter Island Environmental Services, Inc., 1997). The basalt flows are generally thinly bedded pahoehoe near the summit that transition to a‘a as the lava becomes more viscous downslope.

1.5.2 Hydrogeology

The basalt flows underlying Hilo AASF #2 are highly permeable, making extensive aquifers (Inter Island Environmental Services, Inc., 1997). Hilo AASF#2 sits above the Northeast Mauna Loa aquifer sector on the boundary of two different aquifer systems, the Hilo system and the Kea‘au system (**Figure 1-2**). The Hilo system, in the northwest portion of the Mauna Loa aquifer sector, has a sustainable yield of approximately 347 million gallons per day (MGD). The Kea‘au system, in the southeast portion of the Mauna Loa aquifer sector, has a sustainable yield of approximately 393 MGD (Mitchell et al., 2005)). The Mauna Loa aquifer sector is used as a potable water source because groundwater occurs as a basal lens of freshwater sitting atop intruding saltwater (Inter Island Environmental Services, Inc., 1997). Although the exact groundwater flow direction is unknown, it is assumed to mimic topography and flow north-northeast toward the ocean (**Figure 1-2**).

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 Geographic Information System databases, wells were researched to a 4-mile radius of the facility. Prior to the 1950s, there were two wells (Well 1 and Well 2) that were used as Hilo AASF #2’s water supply. Well 1 was located on HIARNG property and drilled to a depth of 76 feet below ground surface (bgs). Well 2 was located on DLNR land and drilled to a depth of 87 feet bgs. Water levels in the wells were measured at 4 and 5 feet amsl, respectively. Both wells were decommissioned in the 1950s, and drinking water for Hilo AASF #2 is currently supplied from groundwater resources located in Pana‘ewa, approximately 3 miles southwest (upgradient) of Hilo AASF #2.

Based on the USEPA’s Unregulated Contaminant Monitoring Rule 3 (UCMR3) data, it was indicated that no PFAS were detected in a public water system above the USEPA HA within a 20-mile radius 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.

1.5.3 Hydrology

Despite the large amount of rainfall in Hilo, there are no perennial streams and no well-defined drainages in the immediate vicinity of Hilo AASF #2 due to the porous nature of the underlying basalt flows (Inter Island Environmental Services, Inc., 1997). Although there are no surface water bodies on Hilo AASF #2, there are several close to the facility. Lokoaka Pond is approximately 1.5 miles north of the facility and is considered a freshwater wetland that is susceptible to seasonal flooding. Lokoaka Pond is adjacent to Kionakapahu Pond, a freshwater wetland that is

permanently flooded (US Fish and Wildlife Services [USFWS], 2019). Both wetlands are partially fed by groundwater and partially by rainwater.

In addition to Lokoaka Pond and Kionakapahu Pond, three unnamed estuarine wetlands are located inland along the coastline from Hilo Bay to Leleiwi Point approximately 1.6 to 2.5 miles northeast of the facility (USFWS, 2019). There are also eight lava anchialine ponds, located along the coast between Keokea Point and Leleiwi Point and between Leleiwi Point and Papa‘i Bay, downgradient of the facility (**Figure 1-3**). The anchialine ponds vary from brackish to saline, are fed by groundwater, are connected to the ocean by lava tubes, and are affected by tidal variations (Mitchell et al., 2005).

1.5.4 Climate

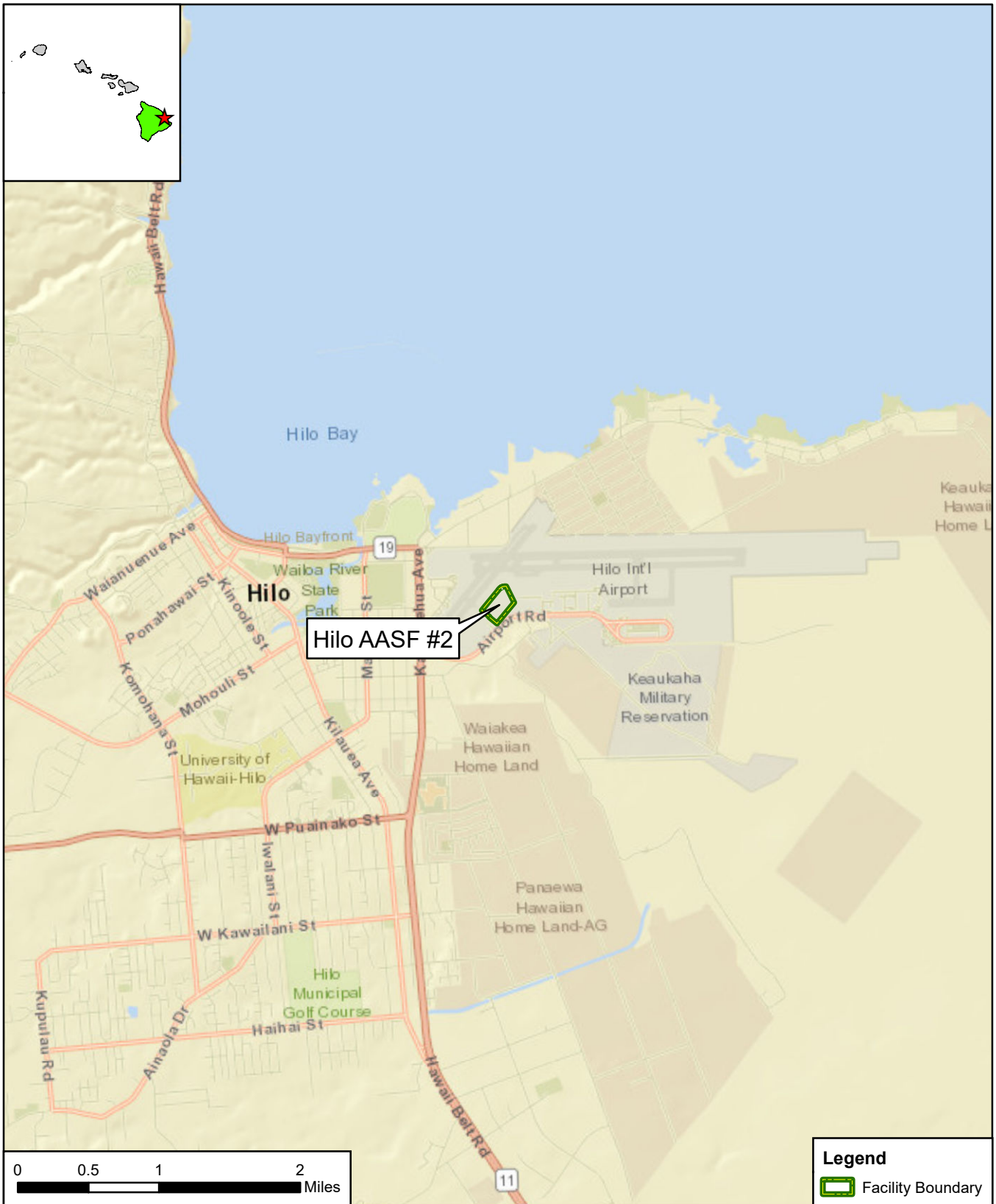
Hilo AASF #2 is located in Hilo, on the eastern side of the Island of Hawai‘i. The average annual precipitation at Hilo AASF #2 is 126.7 inches, and the precipitation is well-distributed throughout the year. The temperatures are mild and have little variation throughout the year. The average annual low is 66.8 degrees Fahrenheit (^{o}F) and the average annual high is 80.9 ^{o}F. On average, the highest temperatures occur in August and September, while January and February tend to be the coolest months (National Oceanic and Atmospheric Administration, 2018).

1.5.5 Current and Future Land Use

Current Hilo AASF #2 operations include training and maintenance command for the aviation unit, which support the HIARNG. The facility shares tarmac space with the neighboring Hilo International Airport to the north.

A forested area demarcates the southern boundary of the facility and lies between the facility, KMR, and an industrial area. The nearest residential homes are located approximately 0.5 miles northeast and 1 mile west from the Hilo AASF #2.

Reasonably anticipated future land use is not expected to change from the current land use described above.



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Base Map: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI,		PM	RG	8/7/2020

Facility Location

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Figure 1-1

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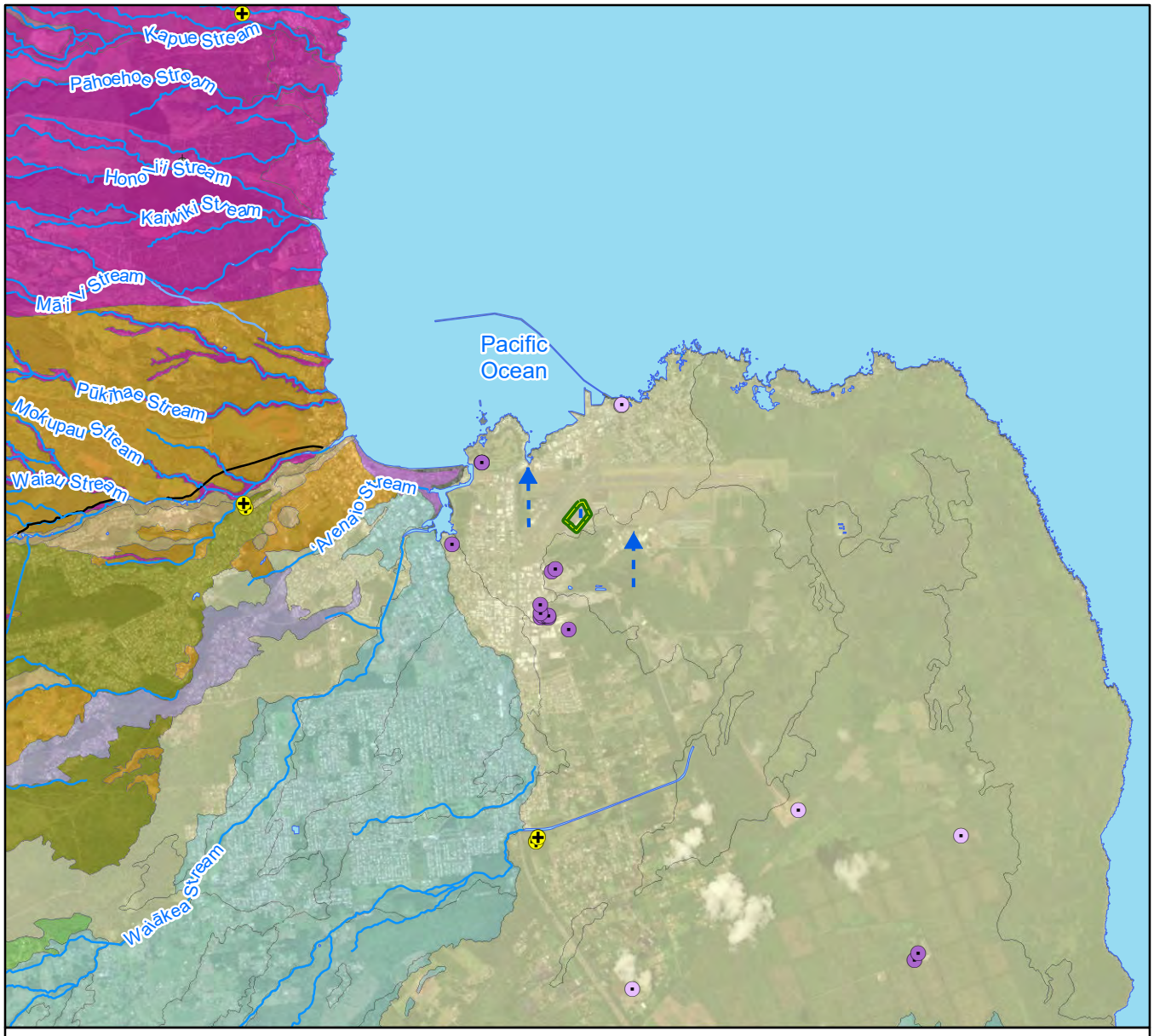

Legend

- Facility Boundary
- Water Body
- River/Stream
- Canal/Ditch
- Pipeline
- Inferred Groundwater Flow Direction

Geology

- Alluvium
- Lava flows = occurred in AD 1843
- Kau Basalt; Lava Flows
- Kau Basalt = 1,500 – 3,000 yrs ago
- Kau Basalt = 3,000 – 5,000 yrs ago
- Kau Basalt; Lava Flows
- Kau Basalt = 11,000 – 30,000 yrs ago
- Tephra Deposits
- Laupahoehoe volcanics
- Hamakua volcanics

Wells

- Agricultural Well
- Industrial Well
- Municipal Water Supply Well
- Other/Unknown Well

0 0.75 1.5 3 Miles

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Preliminary Assessment for PFAS at Hilo AASF #2, HI				
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Groundwater Features

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Figure 1-2

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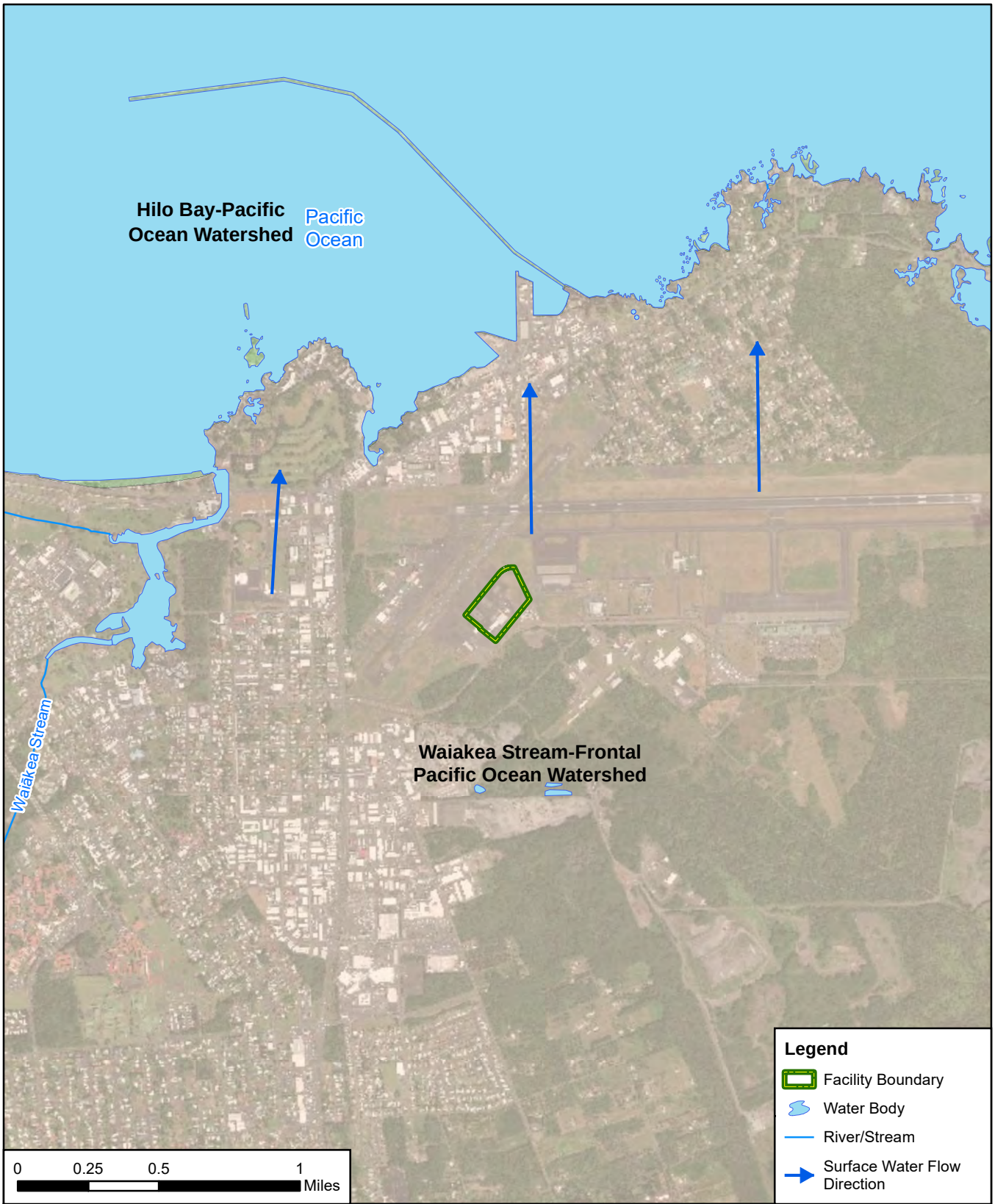

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Surface Water Features

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Figure 1-3

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2. Fire Training Areas

There are no FTAs located within Hilo AASF #2. There is a fire training building used by the municipal fire department on KMR. It was built in 2016 and is not considered to be a potential source of PFAS, as only water is used during training activities. Based on the interviewee's knowledge of facility history since the late 1980s, fire training did not occur at the Hilo AASF #2.

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 were identified during the PA. A description of each non-FTA is presented below, and the non-FTAs are shown on **Figure 3-1**. Photographs of each non-FTA appear in **Appendix C**.

3.1 Helicopter Parking Area

The helicopter parking area is located north of the two Hilo AASF #2 hangars. Adjacent to each of the helicopters is a Halon (non-AFFF) fire extinguisher. There are no AFFF fire extinguishers present within the parking area. According to the interviewee, the tarmac and parking area pavement was replaced in 2000. The helicopter parking area is not considered a suspected PFAS release area due to the lack of AFFF storage and use.

3.2 AASF Old Hangar

The Old Hangar was built in 1983 and is used as a maintenance hangar. The Old Hangar stores various maintenance-related chemicals but contains no AFFF according to the interview with the Hilo AASF #2 personnel and confirmed during the VSI. The fire suppression system within the building is a water sprinkler system. The Old Hangar is not considered a suspected PFAS release area due to the lack of AFFF storage and use.

3.3 AASF New Hangar

The New Hangar was built around 2000 for helicopter maintenance use. The New Hangar is located adjacent to the Old Hangar and stores maintenance-related chemicals and solvents but contains no AFFF according to interviews with the Hilo AASF #2 personnel and confirmed during the VSI. The fire suppression system is a water sprinkler system. A trench drain is located near the hangar door. According to the interviewee, the trench drain is used to prevent water from the outside getting into the hangar. The trench drain is connected to the storm water drain. The New Hangar is not considered a suspected PFAS release area due to the lack of AFFF storage and use.

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Non-Fire Training Areas

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Figure 3-1

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4. Emergency Response Areas

No instances of emergency responses were identified at Hilo AASF #2 during the PA based on interviews. The facility relies on the local fire department or the nearby federal fire department for emergency needs. There has been no need for response as to date of the PA interviews. Interviewees highlighted their history of zero incidents at the facility (**Appendix B.1**).

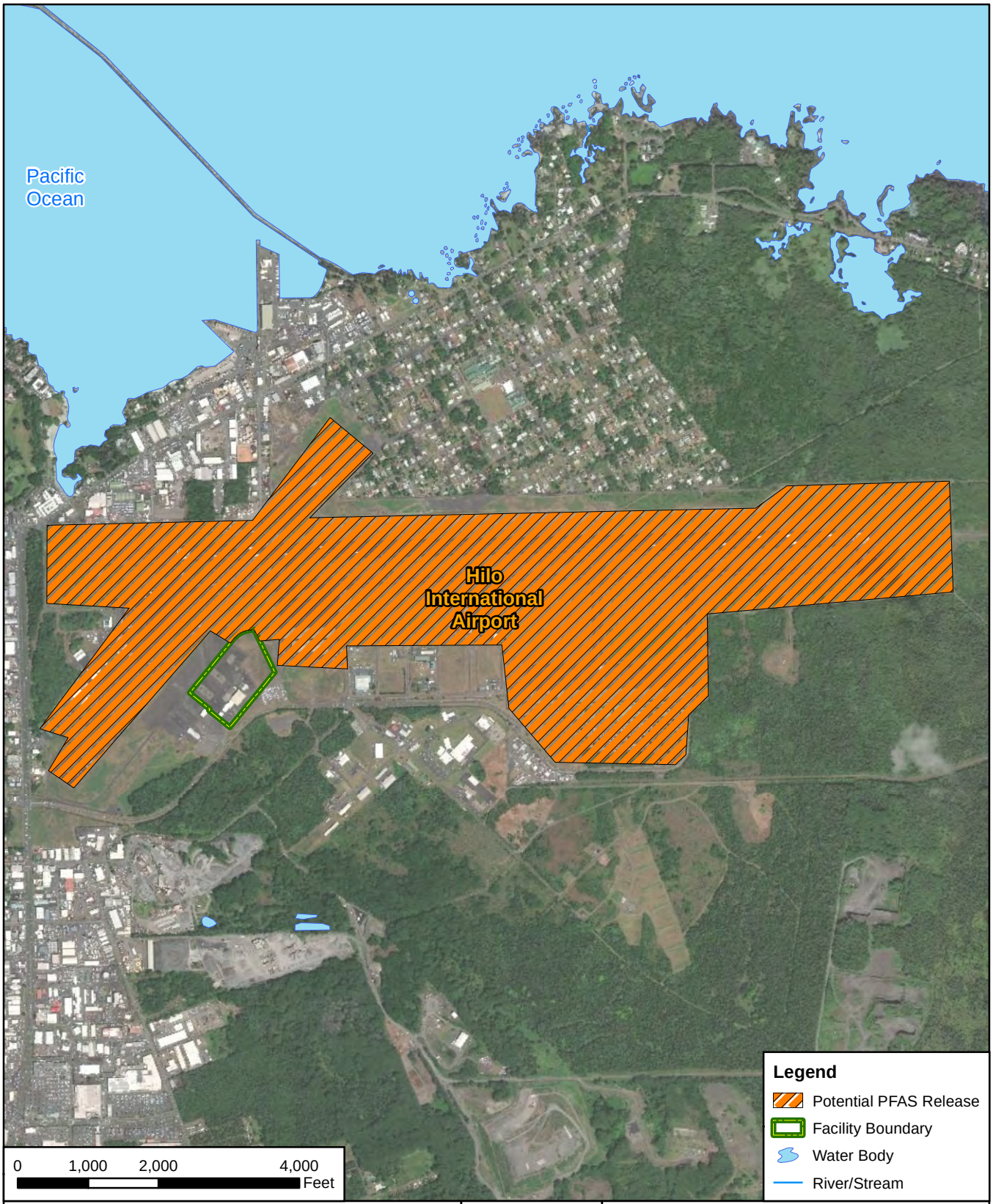
5. Adjacent Sources

One potential off-facility source of PFAS adjacent to Hilo AASF #2, not under the control of the HIARNG, was identified during the PA. A description of the adjacent source is presented below, and the adjacent source is shown on **Figure 5-1**.

5.1 Hilo International Airport

According to the interviewee, in the early 1990s, an emergency response was conducted on a private plane crash at the Hilo International Airport. During the response action, the personnel at the Hilo AASF #2 used water and a green fire extinguisher to put out the fire on the plane. The interviewee suggested that the extinguisher contained Halon (non-AFFF). Eight major air incidents, some of which have resulted in fire, have occurred at Hilo International Airport between 1957 and 2000 (Hawaii.gov, 2020). The response actions, exact location of the incidents, and extinguishing agents used are unknown, but the airport's crash rescue team is the first responder.

Hilo International Airport personnel were not interviewed during the PA because they were unavailable at the time of the PA. Therefore, it is not known if AFFF is or were used or stored at the airport currently or historically. Because the presence of AFFF at the airport cannot be confirmed, and multiple major air incidents have occurred, Hilo International Airport has been identified as a potential off-facility PFAS source area. **Figure 5-1** shows the location of Hilo International Airport (as a potential PFAS source area) in relation to the Hilo AASF#2.



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Adjacent Source

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Figure 5-1

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6. Preliminary Conceptual Site Model

Based on the PA findings, no release areas were identified as areas of interest (AOIs); therefore, a preliminary conceptual site model (CSM) is not required for the facility. A CSM identifies three components necessary for potentially complete exposure pathways: (1) source, (2) pathway, and (3) receptor. If any of these elements are missing, the pathway is considered incomplete. Based on the findings of this PA, there are no PFAS sources at Hilo AASF #2; thus, there is no complete exposure pathway to potential receptors from ARNG use of the facility.

7. Conclusions

This report presents a summary of available information gathered during the PA on PFAS-related activities at Hilo AASF #2. The PA findings are based on the information presented in **Appendix A** and **Appendix B**.

7.1 Findings

No known or documented releases of PFAS to the environment were identified during PA activities at the Hilo AASF #2 facility. In addition, no AFFF is known to have ever been stored or disposed of at the facility, either historically or at the time of the PA. Therefore, there is no potential for exposure to PFAS contamination in soil, and groundwater from onsite sources. **Figure 7-1** presents a summary of the PA findings.

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

The conclusions of this PA are predominantly based on the information (or lack thereof) provided during interviews with personnel who had direct knowledge of PFAS use at the facility. 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. Comprehensive information on all industrial practices that may potentially be sources of PFAS is incomplete. Therefore, this PA may not identify all potential PFAS sources.

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

Inherent uncertainty is associated with information regarding potential releases at adjacent sources because direct knowledge regarding PFAS-related activities at the Hilo International Airport is not known. Interviews were not conducted with Hilo International Airport staff, and the site visit did not include visiting municipal airport assets and hangars because the focus of the assessment was to evaluate potential PFAS related activities and sources at HIARNG properties, not formally assess adjacent sources. AFFF storage or use is commonly associated with such municipal airport facilities.

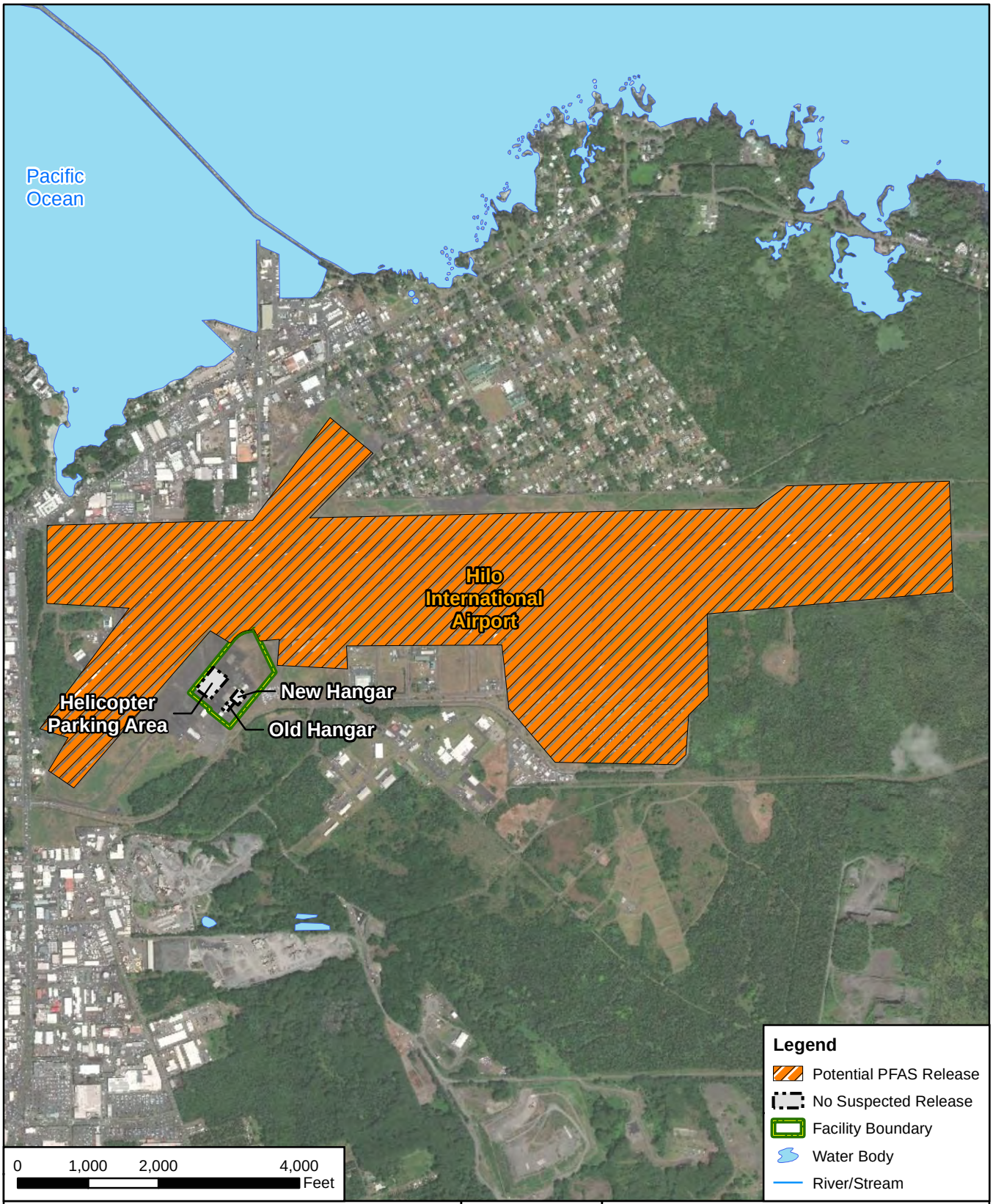
The following table (**Table 7-1**) summarizes the uncertainties associated with the PA:

Table 7-1: Summary of Uncertainties

Location	Source of Uncertainty
Old and New Hangars	During the interview process, a limited number of personnel were available to be interviewed. Additionally, their tenure at Hilo AASF #2 dates back to 1989. The use and storage of AFFF at the Hilo AASF #2 between 1969 and 1989 are unknown.
Hilo International Airport (Potential Adjacent Source)	The use and storage of AFFF at the Hilo International Airport are unknown. Eight major air incidents have occurred at the airport, but the response actions, location, and extinguishing agents used (if any) are unknown for each incident (Hawaii.gov, 2020). No interviews were conducted for the off-facility area.

7.3 Potential Future Actions

Based on the documented absence (1989 to present) of the use, storage or disposal of PFAS-containing materials at Hilo AASF #2, no AOIs were identified during the PA. No evidence was found to indicate that current or former ARNG activities contributed to PFAS contamination in soil, groundwater, surface water, or sediment at the facility or adjacent areas. Hilo AASF #2 will not move forward in the CERCLA process.



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Preliminary Assessment for PFAS at Hilo AASF #2, HI				
REVISED	6/1/2020	GIS BY	MS	6/1/2020
SCALE	1:24,000	CHK BY	CR	6/1/2020
Base Map: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,		PM	RG	6/1/2020

N

Summary of Findings

AECOM
12420 Milestone Center Drive
Germantown, MD 20876

Figure 7-1

C:\Users\stankevichm\OneDrive - AECOM Directory\ARNG_PFAS_GIS_60552172\MXDs\HI\Hilo_AASF2_Figures\Fig_7-1_Hillo_AASF2_Summary.mxd

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Appendix A
Data Resources

Data Resources will be provided separately on CD. Data Resources for Hilo AASF #2, Hawai'i include:

Hilo AASF #2 EDR™ Report

- 2019 EDR™ Aerial Photo Decade Package
- 2019 EDR™ Radius Map Report with GeoCheck
- 2019 Certified Sanborn Map Report

Hilo AASF #2 Underground Injection Control Line

- UIC Line for Pearl City

Hilo AASF #2 Environmental Reports

- 1996 Environmental Assessment of the Hawaii Army National Guard Limited Army Aviation Facility
- 2015 Integrated Cultural Resources Management Plan Update for Sites and Training Installations of Hawaii Army National Guard

Appendix B

Preliminary Assessment Documentation

Appendix B.1
Interview Records

PA Interview Questionnaire - Other

Facility: Hilo AASF #2
Interviewer: [redacted]
Date/Time: 29 April 2019, 0930

Interviewee: [redacted] 1989 - Present
Title: MECHANIC SUPERVISOR
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 — Aircraft Mechanic Supervisor

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

General support unit, maintained helicopters

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
91-92 used water + possibly Helon on private plane	Use
2000, dug up + redid the padding	Procurement
[redacted] put it out	Disposition
Private pilot/part-time guardsmen	Storage (Mixed)
Green fire extinguisher	Storage (Solution)
Had to redid ramps for C-5/C-17, + moorings for the blackhawks	Inventory, Off-Spec
Refueling + defueling done on pads	Containment
Hangar built in 1983 / Raid Hangar	SOP on Filling
[redacted] Hanger Built around 2000	Leaking Vehicles
Crash rescues is first response in-case of fire	Nozzle and Suppression System Testing
	Dining Facilities
	Vehicle Washing
	Ramp Washing
	Fuel Spill Washing and Fueling Stations
	Chrome Plating or Waterproofing

Appendix B.2
Visual Site Inspection Checklists

Visual Site Inspection Checklist

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

Recorded by:

ARNG Contact:

Date and Time: 04/29/2019; 0900

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

Source/Release Information

Site Name / Area Name / Unique ID: Hilo AASF #2

Site / Area Acreage: 33 acres

Historic Site Use (Brief Description):

Current Site Use (Brief Description): Aircraft maintenance + parking area

Physical barriers or access restrictions: Fence

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 Airport

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

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

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: Only HARDG personnel permitted

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:

Appendix B.3
Conceptual Site Model Information

Preliminary Assessment – Conceptual Site Model Information

Site Name: Hilo AASF#2, Hawai'i

Why has this location been identified as a site?

No Afff at the base, no known releases, 2 Hangars and helicopters stationed/located here

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

Hilo International Airport

Training Events

Have any training events with AFFF occurred at this site? No

If so, how often?

How much material was used? Is it documented?

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? North

Average rainfall? 125-150 inches

Any flooding during rainy season? No

Direct or indirect pathway to ditches? Yes

Direct or indirect pathway to larger bodies of water? Pacific Ocean / Yes

Does surface water pond any place on site? No

Any impoundment areas or retention ponds? No

Any NPDES location points near the site? NO

How does surface water drain on and around the flight line? Drains, flows to grassy areas

Preliminary Assessment – Conceptual Site Model Information

Groundwater:

Groundwater flow direction? North

Depth to groundwater? ~50ft

Uses (agricultural, drinking water, irrigation)? None

Any groundwater treatment systems? No

Any groundwater monitoring well locations near the site? No

Is groundwater used for drinking water? No

Are there drinking water supply wells on installation? No

Do they serve off-post populations? N/A

Are there off-post drinking water wells downgradient No

Waste Water Treatment Plant:

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

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

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?

No, only ~~municipal~~ fire @ L

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?

3. Other?

Identify Potential Receptors:

Site Worker X

Construction Worker X

Recreational User

Residential

Child

Preliminary Assessment – Conceptual Site Model Information

Ecological

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

Documentation

Ask for Engineering drawings (if applicable).

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

Appendix C
Photographic Log

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Hilo AASF #2	Hawai'i

Photograph No. 1

Description:

The new paved tarmac against the old.

Date Taken:

29 April 2019

Photograph No. 2

Description:

The helicopter parking area and the area where a private plane caught fire in the early 1990s.

Date Taken:

29 April 2019

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Hilo AASF #2	Hawai'i

Photograph No. 3

Description:

Halon fire extinguisher in Old Hangar.

Date Taken:

29 April 2019

Photograph No. 4

Description:

Fire extinguishers in helicopter parking area.

Date Taken:

29 April 2019

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Hilo AASF #2	Hawai'i

Photograph No. 5

Description:

Old hangar

Date Taken:

29 April 2019

Photograph No. 6

Description:

Air and water canisters in New Hangar.

Date Taken:

29 April 2019

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Hilo AASF #2	Hawai'i

Photograph No. 7

Description:

Drain located in New Hangar. Used to prevent water from coming into the hangar.

Date Taken:

29 April 2019

Photograph No. 8

Description:

New hangar.

Date Taken:

29 April 2019

APPENDIX C – Photographic Log

Army National Guard, Preliminary Assessment for PFAS	Hilo AASF #2	Hawai'i

Photograph No. 9

Description:

New Hangar (left) next to the Old Hangar (right)

Date Taken:

29 April 2019