

<b>Subject</b>	<b>Meeting Summary for Barnes Air National Guard Base (ANGB) Restoration Advisory Board (RAB) Training Meetings 1 and 2</b>		
<b>Prepared by</b>	Jacobs		
<b>Location</b>	WebEx Meeting	<b>Date/Time</b>	Training Meeting 1: 11 August 2021, 1500 Training Meeting 2: 17 August 2021, 1500

## RAB Members

Col David Halasikun, 104th Fighter Wing (FW) Vice Commander  
John Velis (Training Meeting 1)  
Kelly Pease (Training Meeting 2)  
Kristen Mello  
Kathleen Hillman  
Rachael Morin  
Eric Oulette  
Nabil Hannoush  
Chris Clark

## Additional Meeting Participants

John Richardson, 104th FW Environmental Manager (EM)  
Lt Col Chris Ruscio, 104 FW Staff Judge Advocate  
Tom Barzyk, BB&E  
Amy Brand, Jacobs  
Johannah Phelan, Jacobs  
Ada Vargas, Jacobs (Training Meeting 1)

## Introduction

Two training meetings were held for the Barnes ANGB RAB members. Training Meeting 1 was held on 11 August 2021 to discuss the RAB process and the details for forming and operating a RAB. Training Meeting 2 was held on 17 August 2021 to provide an overview of the Comprehensive Environmental Response, Compensation, and Liability (CERCLA) process for environmental investigation and remediation and present the status of the Environmental Restoration Program (ERP) at Barnes ANGB.

Copies of the presentations are attached.

## Training Meeting 1: 11 August 2021, 1500

- The training session began at 1500 with RAB facilitator Amy Brand, Jacobs, providing a brief welcome and an overview of the logistics for the virtual meetings. She then turned the meeting over to Col Halasikun, Base Vice Commander, who made opening comments.
- Col Halasikun welcomed everyone, stated he was glad to be kicking off the RAB, and expressed his appreciation for the RAB members dedicating their time to the RAB. He and the 104th FW want to help restore the water in the area and achieve results that will be beneficial to the community.
- Col Halasikun introduced the team from the 104th FW: Chris Riga, Chief of Staff; Lt Col Chris Ruscio, Staff Judge Advocate; John Richardson, EM; and an unnamed person from base public affairs.
- RAB members introduced themselves next:
  - Kathleen Hillman has lived near the Base for many years.
  - Eric Oulette is the executive director of the Chamber of Commerce.
  - Nabil Hannoush is a local business owner.
  - John Velis is a state senator representing the area.
  - Kristen Mello is the director and founder of Westfield Residents Advocating For Themselves (WRAFT).
  - Rachael Morin works at Barnes ANGB and is participating in the RAB as a community member.
  - Chris Clark is an environmental scientist and member of WRAFT.
  - Kelly Pease, a state representative and community member of the RAB, was not available for Training Meeting 1.

# Meeting Minutes

Meeting Summary for Barnes Air National  
Guard Base (ANGB) Restoration Advisory  
Board (RAB) Training Meetings 1 and 2

5. Amy Brand presented the slide presentation (attached) and stressed the importance of the RAB members acting as liaisons between the community and the 104th FW. She encouraged RAB members to share information with the community and bring community concerns back to the RAB meetings.
6. Two co-chairs will lead the RAB. Col Halasikun, who is the Base Vice Commander, will be the co-chair for the 104th FW. The community RAB members will elect a community co-chair.
7. The training meetings are not open to the public. There are two planned training meetings. *Update: A third meeting is planned to spend additional time on the presentation provided during Training Meeting 2 and to discuss the RAB operating procedures.*
8. The RAB will likely meet twice a year. A site tour for the RAB members may be scheduled outside of planned meetings. Meetings may occur more frequently or there may be a long lag time between meetings depending on the availability of new information and project funding.
9. The meetings will not have a court reporter to generate a transcript. Meeting minutes will be a summary of the main points of discussion, decisions made, and action items.
10. Kathleen Hillman asked where the Community Involvement Plan (CIP) results are located. The CIP and publicly available documents are located in the Administrative Record (<https://www.afcec.af.mil/News/Administrative-Record/>). Kristen Mello indicated she posted the CIP on the WRAFT Google Drive.
11. Chris Clark asked how long a typical RAB meeting takes. RAB meetings are usually 2 hours to allow time for a presentation, questions, and discussion.
12. Chris Clark asked how ANG's engagement can be ensured if RAB meetings are virtual. Col Halasikun indicated that the 104th FW's preference is to meet in person, that the ANG is committed to this process, and that it is impossible for the ANG not to be engaged. He also assured the RAB that there is not a "power holder" and that all RAB members, including the ANG, are on equal footing.
13. The team discussed members' using their cameras during virtual meetings and will test this format going forward. Issues with connectivity may occur when cameras are used.
14. Chris Clark asked if the 104th FW would make a commitment regarding response time if the RAB requests information. Col Halasikun indicated that if the requested information is publicly available, it will be provided within 24 hours.
15. The RAB agreed that Training Meeting 2 would be on Tuesday, 17 August 2021 at 1500, with a focus on the CERCLA process and an overview of the ERP at Barnes ANGB.

## Training Meeting 2: 17 August 2021, 1500

1. The training meeting began at 1500 with RAB facilitator Amy Brand, Jacobs, providing a brief welcome and an overview of the logistics for the virtual meetings. She then facilitated RAB business, including the election of the community co-chair and a review of the process for developing the RAB charter.
2. Eric Oulette and Kathleen Hillman volunteered for the community co-chair position. Each provided a few remarks on why they were interested and their qualifications. Amy Brand asked that RAB community members send their vote to her by email. She then turned the meeting over to John Richardson, 104th FW EM, to review the slide presentation on the CERCLA process and the ERP at Barnes ANGB. A copy of the presentation is attached.
3. A RAB member asked how is it determined to close a site? Col Halasikun indicated that MassDEP determines when a site has achieved the closure criteria.
4. Chris Clark asked if the remediation action of the hydrogen peroxide at Site 2 would be discussed? Col Halasikun indicated that previous remedial actions are closed with the exceptions of groundwater monitoring at Site 2, the bulk fuel facility. This RAB will focus on PFAS.

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5. The Westfield River is south and downgradient of the Base. There are PFAS impacts to groundwater, surface water, and sediment.
6. John Richardson discussed the locations of samples collected during the expanded site investigation (ESI). RAB members asked if the river was sampled and if sampling was conducted east of the Base. Samples were collected east of the Base. John Richardson will need to refer back to the ESI report to confirm whether samples were collected from the river.
7. In reference to the slide about the Massachusetts Maximum Contaminant Level (MMCL) for six per- and polyfluoroalkyl substances (PFAS) on slide 28, Kristen Mello stressed that the Barnes ANGB has a lease with the City of Westfield that states that the government is responsible for environmental cleanup to state or federal regulations, whichever is more stringent. She stressed the importance of being very clear and transparent with information that is provided to the community. Perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) are only two of hundreds of chemicals found in aqueous fire-fighting foam (AFFF).
8. The community RAB members expressed frustration that the presentation was rushed. They indicated that moving through the presentation so quickly made them feel like their concerns were not being taken seriously. They requested that there be a pause after each slide to answer questions before moving on to the next slide.
9. Col Halasikun indicated that the Base has been trying since 2016 to obtain funding to move forward with the remedial investigation (RI) at Barnes ANGB and wants to work with the community to find a path forward. He emphasized that the whole point of the RAB is for the ANG and the RAB community members to come together and reach consensus on how to move forward.
10. In reference to the Massachusetts Department of Environmental Protection's (MassDEP's) request to the Department of Defense (DoD) to accept the MMCL of 20 parts per trillion (ppt) for the sum of six PFAS compounds (slide 28), Kelly Pease asked about the status of the DoD response. ANG indicated that it is waiting for answer from the DoD.
11. A RAB member asked "how long this will all take." Col Halasikun acknowledged that moving through the CERCLA process takes a long time. The first steps have been completed and PFAS is known to be present. Additional investigation is required and will be completed through the RI process. Before investing millions of dollars on remediation, the source and extent need to be delineated, which is done during the RI. This process is going on at every DoD facility across the United States where AAFB has been used for decades. The U.S. Congress is funding the work and Barnes ANGB will move forward as soon as money is made available for the RI. It is dependent on Congressional votes and Congressional budgets. If the U.S. Environmental Protection Agency (EPA) establishes cleanup standards, then funding may be accelerated. If the RI is funded for Fiscal Year 2022, then it will likely be 1 to 2 years (2023–2024) before the RI results are available.
12. Once the RI begins, there will be more information to share and the opportunity to discuss options on remediation.
13. Chris Clark asked whether, in the spirit of collaboration, RAB community members will have the opportunity to present information as well. Col Halasikun responded with "yes" and emphasized that all RAB members are equal.
14. A RAB member asked about the location of the eight houses where private wells had concentrations of greater than the MMCL of 20 ppt. MassDEP has the street names where the homes are located and ANG will reach out to MassDEP to get the street names and share them with the RAB. *Update: The street names were emailed to the RAB on 18 August 2021.*
15. Nabil Hannoush suggested that the RAB hold another training meeting before the first public meeting. He offered to host the meeting at his restaurant. While some RAB members felt that meeting in person would help the board discuss issues more easily and become more cohesive as a group, other members expressed concern about the risk of meeting in person during the COVID-19 pandemic.

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16. One community member shared that they had their blood tested during the Agency for Toxic Substances and Disease Registry (ATSDR) study and knows the PFAS levels in their blood. In 2018, this member had pneumonia multiple times, leading to having half of their lung removed. Because of their compromised immune system, this community member cannot meet in person and requested that if everyone cannot gather in person, then the RAB should not meet in person.
17. The group discussed different meeting options, such as meeting in person with a virtual meeting option, but some members felt this approach did not provide fair and equal access for all members. Calling in to an in-person meeting is not the same as being there in person. The group agreed that they will find a way to meet during the COVID-19 pandemic that is inclusive of all members. The RAB will not meet in person unless all RAB members feel comfortable attending.
18. A community RAB member emphasized the importance of ANG representatives acknowledging the harmful effects of PFAS on the well-being of the community and recognizing the community's emotional response to the issue. The member asked that ANG representatives show respect especially for the feelings of community members personally affected. All RAB members need to respect each other so the RAB can move forward together. Everyone deserves a chance to be heard.
19. ANG agreed that the PFAS issue is emotional for the community, of which they are a part, and they want to find solutions and make decisions using logic and facts. Once the RAB understands the emotions at play, it will be important to focus on the facts. The community member who expressed concern thanked Col Halasikun and indicated they are looking forward to working through the facts.
20. RAB members agreed that having another virtual training meeting to review the draft charter would be beneficial. The draft RAB charter will be sent to members within 2 weeks. Members will have 2 weeks to review and submit comments, then the RAB will reconvene in mid-September to discuss and finalize the charter.
21. The RAB members discussed whether school or community meetings were being conducted in person. Kelly Pease indicated that the State House is holding virtual meetings but voting in person is an option. Other RABs are meeting using Zoom and these virtual meetings are open to the public. The team can explore other virtual platforms if WebEx does not work adequately. The group agreed that the Barnes ANGB RAB will continue to have virtual meetings until it is safe for all members to meet in person.

A follow-up email was sent on 18 August 2021 with the results of the co-chair voting, the street names per Item 13, and the meeting date options per Item 19. During the next training meeting, the RAB charter and operating procedures will be reviewed.

## Action Items

- Check on whether the river was sampled during the ESI (to be included in next presentation).
- Send draft operating procedures to RAB (due August 31).



# **Barnes Air National Guard (ANG) Base Restoration Advisory Board Chartering and Training Meeting**

The meeting will begin soon.  
All participants are on mute.



# **Barnes Air National Guard (ANG) Base Restoration Advisory Board Chartering and Training Meeting**



# Virtual Meeting Logistics

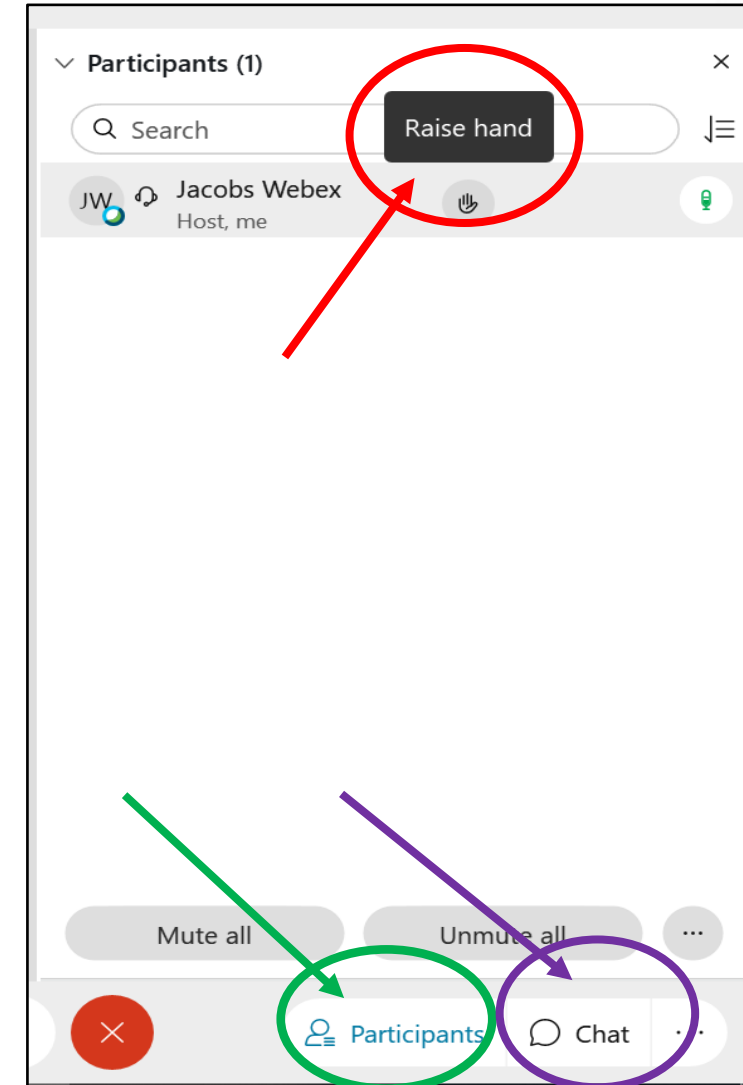
Amy Brand  
Jacobs  
RAB Facilitator



# Webex Basics – Computer Access Participants



- Video – Turn OFF – presentation will be on screen
- Participants – On the lower right, click on Participants to open panel
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- Raise hand to be called on to speak after the presentation
- Mute/Unmute (all muted to start)
  - Host will unmute individuals
- Trouble? Call or text 407-744-4273







# Webex Basics – Telephone Access Participants



- Follow along on emailed slide presentation
- Dial \*3 to raise hand to be called on to speak after the presentation
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# Agenda



- Welcome and Introductions
- Restoration Advisory Board (RAB) Orientation
- Barnes RAB Chartering
- Questions and Comments
- Future Meetings



# Welcome and Introductions



- Barnes ANG Base
- Massachusetts Department of Environmental Protection (MassDEP)
- ANG Contractors – Jacobs Representatives
- RAB Community Members



# Introducing RAB ANG Members



- Col David Halasikun
- Lt Col Chris Ruscio
- John Richardson

# HELLO

my name is

- Name
- Role at Barnes ANG Base
- Something you're grateful for



# Introducing RAB Community Members



- Kristen Mello
- Kathleen Hillman
- Eric Oulette
- Chris Clark
- Rachael Morin
- Nabil Hannoush
- Representative Kelly Pease
- Senator John Velis

# HELLO

my name is

- Name
- Why you are interested in the RAB
- Something you're grateful for



# What is a Restoration Advisory Board?



- A stakeholder group that meets on a regular basis to discuss **environmental restoration** at a specific property that is owned by the Department of Defense (DoD) where DoD oversees the environmental restoration process.

## Environmental Restoration:

- Investigation and cleanup of potential contamination caused by past use, storage, or disposal of hazardous materials
- Includes the military munitions response program

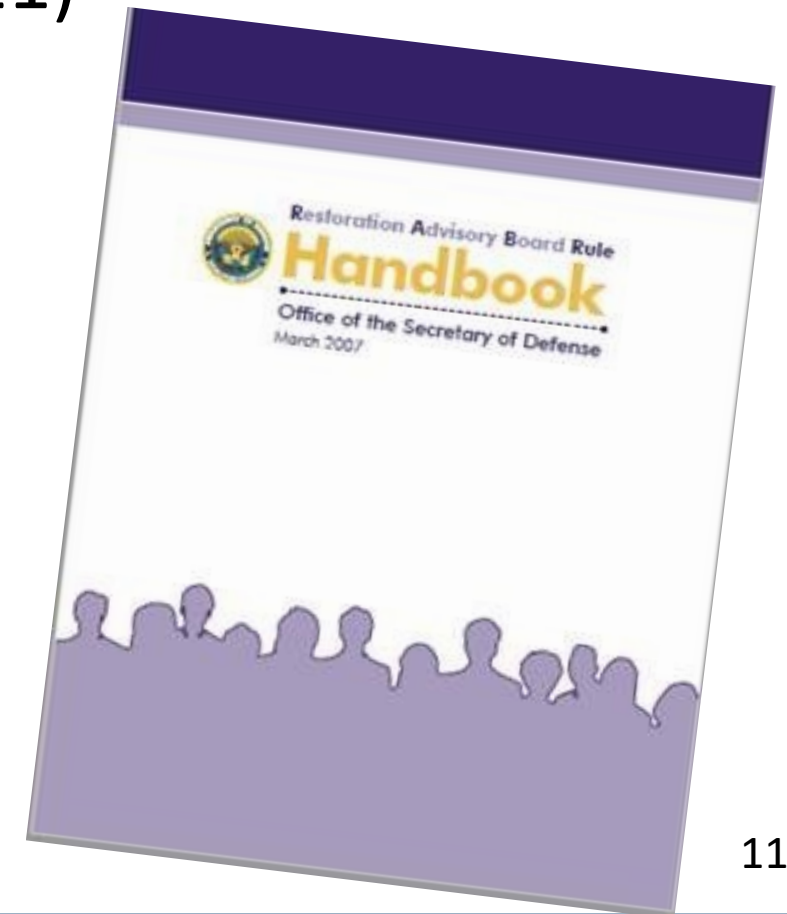
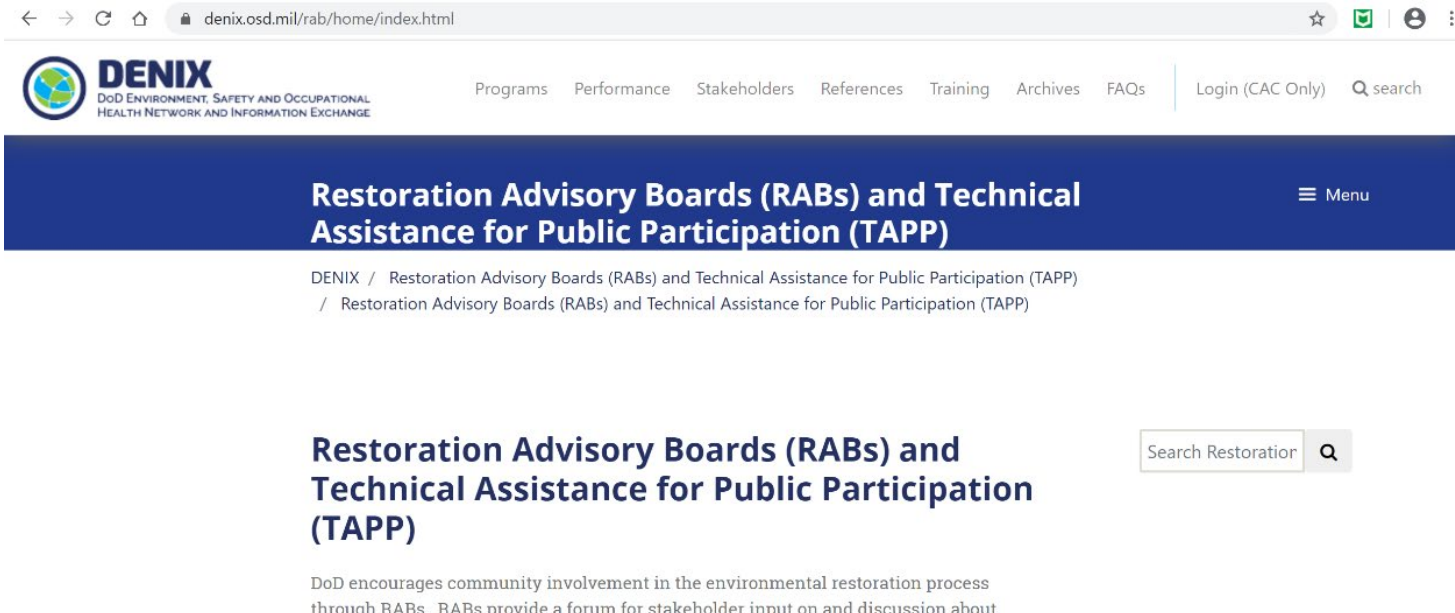
*The RAB only addresses issues associated with environmental restoration.*



# RAB Guidance



- Final Rule for Restoration Advisory Boards in Title 32 *Code Federal Regulations* Part 202 (2011)
- The RAB Rule Handbook, OSD 2007
- <https://www.denix.osd.mil/rab/>





# Purpose of the RAB



- Provide opportunities for the community to be involved throughout the environmental restoration process at DoD installations
- RAB members have the opportunity to:
  - Learn about the environmental restoration program at the Base
  - Receive updates about specific cleanup project areas
  - Share input and interests with the project managers and agencies involved in the cleanup
  - Discuss concerns and influence cleanup decisions
  - Comment on technical documents







# What Does a RAB Do?



- Discusses environmental restoration topics
  - Listens to presentations about specific projects and the status of investigation and cleanup
  - Asks questions, discusses, and provides comments and feedback
- Discusses community concerns and questions about environmental restoration topics
  - Acts as a liaison to the community; brings community interests to the meeting
  - Offers a forum for the public to hear about the environmental restoration program





# A is for “Advisory”



- A RAB is an advisory board, not a decision-making board
- Consensus is desired but is not required for RAB input
- DoD and regulatory agency representatives will listen carefully and consider RAB input in decision making

*Goal is for the cleanup and management decisions to reflect and address community issues and concerns.*



# RAB Roles and Responsibilities Membership



- Attend meetings (planning for 2 per year)
- Provide input in an open and constructive manner
- Represent and communicate community concerns to the RAB
- Act as a conduit for the exchange of information
- Review, evaluate, and comment on documents and other materials related to restoration
- Represent and communicate RAB issues to the community
- Serve without compensation on the RAB



# RAB Roles and Responsibilities

## Attendance



- All RAB members are expected to attend all regularly scheduled RAB meetings (or to send an alternate if unable to attend)
  - Notify the Co-Chairs in advance of absence
  - Send an alternate so he/she can represent you
- If two consecutive meetings are missed without sending an alternate, the other RAB members can require your resignation

*RABs require **sustained** interest and **active** participation.*



# RAB Roles and Responsibilities

## ANG and Regulator Roles



- Attend meetings
- Educate and train RAB members about the Environmental Restoration Program (ERP) and CERCLA decision-making process
- Facilitate productive resolutions of environmental issues
- Listen to and consider RAB input in decision-making
- Ensure that state and local environmental regulations are identified and addressed by the Installation
- Provide cleanup alternatives, including implications of choices
- Regulators review restoration investigations and documents
- ANG provides administrative support to the RAB



# RAB Roles and Responsibilities

## RAB Co-Chairs



- Installation Co-Chair
  - Representative selected by the Base's Commanding Officer
  - Col David Halasikun, Vice Commander
- Community Co-Chair
  - Elected for a 2-year term by RAB community members
  - Can serve consecutive terms
  - Can resign or be removed by community members' majority vote before 2-year term is complete
- Co-Chairs serve as equal partners





# RAB Roles and Responsibilities

## Co-Chair Duties



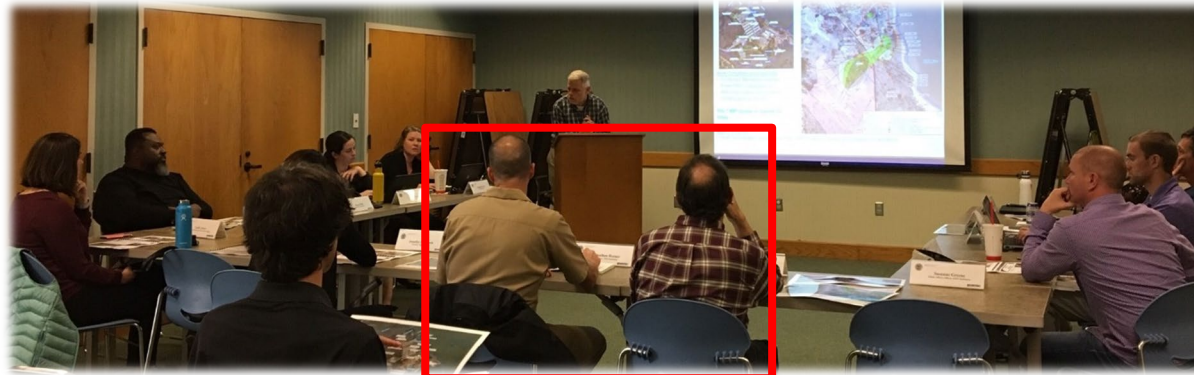
- Coordinate to prepare and distribute agendas for meetings
- Ensure that all members participate in an open and constructive manner

### Base Co-Chair

- Ensure RAB participation in environmental decision-making process
- Provide all relevant documents and information
- Ensure administrative support to the RAB

### Community Co-Chair

- Assist with sharing information to the general public
- Coordinate with other RAB members to adequately represent the community at RAB meetings





# Election of the Community Co-Chair



- Volunteers
- Voting will be held by secret ballot, or by voice vote if the board chooses; any board member may request a secret ballot be taken
- Candidates must obtain the majority of the votes cast
- Only RAB community members may vote





# Meeting Format



Format can vary depending on the RAB's needs. In general, format includes:

- Review of “old business”
- ERP presentation
- Other presentations as needed
- RAB member discussion
- Open forum – public questions and responses
- List of action items
- Discussion of next meeting's agenda and timing



# Meeting Facilitation



- Community Co-Chair facilitates, or Co-Chairs run the meeting jointly
- RAB community members may request an outside facilitator
- Facilitator helps keep the meeting on track, while providing all members with an equal opportunity to comment on agenda items and presentations



# RAB Meeting Schedule



- 104th Fighter Wing (104 FW) RAB meetings will be held 2 times a year or as needed
  - Additional meetings and/or site tours may be scheduled as needed
- Reminder and meeting agenda will be emailed approximately 2 weeks prior to the RAB meeting
- Meetings are open to the general public and will be publicized



# RAB Meeting Minutes



- Summary, not transcript of RAB meeting
- Reviewed by Co-Chairs
- Distributed to RAB members for review and approval
- Made available to the public



# RAB Dissolution



Dissolution happens if:

- All required cleanup work is complete, usually at Record of Decision (ROD), or
- Property is transferred out of ANG, or
- 75% of RAB members agree in writing, or
- Community interest is no longer sustained, sufficient, or effective



# The RAB Charter



- Mission Statement
- Members Roles and Responsibilities
- Meeting Format and Facilitation
- General Operating Procedures
- Meeting Schedule
- Meeting Minutes
- Handling and Resolving Conflict
- RAB Dissolution





# Process to Develop the RAB Charter



- Start with a template document (to be emailed)
- Revise the document to meet the needs of this RAB
  - Submit redline or comments by a date to be determined
- Have the ANG team incorporate all reasonable and non-conflicting comments
- Communicate changes to the RAB members
- Have RAB members review, sign, and acknowledge the Charter
- Revisit the Charter as needed



# Insights and Lessons Learned



RABs work best when:

- Co-Chairs keep the agenda manageable and appropriate
- Attendance is high and consistent
- Members speak up if they do not understand or if they need additional training or support
- Members participate cooperatively and constructively
- Members fulfill their 2-year commitment





# Ongoing Community Involvement



- Community Involvement Plan (CIP) was updated in 2020
- Preferred methods for communicating ERP information with the community:
  - Social Media
  - Website
  - Public Meeting
  - E-mail



# Discussion and Action Items



- Co-Chair recommendations and voting
- RAB Schedule: August 17, 3:00 p.m. for technical training
  - Elect a Community Co-Chair
  - Overview of Environmental Restoration Program
  - Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) process
  - Overview of Barnes ANG Base sites and investigation of per- and polyfluoroalkyl substances (PFAS)
  - Next steps



# Questions and Comments



- On computer, please raise hand to be called on. Unmute yourself before speaking.
- On phone, dial \*3 to raise hand to be called on to speak. When prompted, press \*6 to unmute yourself.



# Websites for More Information



Environmental Restoration Program at 104th Fighter Wing:

- <https://www.104fw.ang.af.mil/About/Environmental/>

104th Fighter Wing Environmental Administrative Record

- <https://ar.afcec-cloud.af.mil/Search.aspx>
- Select ANG radio button, select installation, and press search

MassDEP PFAS Information:

- <https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas>

Westfield Water Department PFAS Information:

- <https://www.cityofwestfield.org/672/PFCs-Information-Updates>

RAB Rule Handbook and Information on Technical Assistance for Public Participation

- <https://www.denix.osd.mil/rab/home/>

Air Force Response to PFOS and PFOA

- <https://www.afcec.af.mil/WhatWeDo/Environment/Perfluorinated-Compounds/>



# Contact Information



## Barnes Air National Guard Base

104th Fighter Wing, Wing Vice Commander

**Colonel David Halasikun**

(413) 568-9151 x6981797

[david.halasikun.2@us.af.mil](mailto:david.halasikun.2@us.af.mil)

## Base Environmental Manager

**Mr. John Richardson**

(413) 568-9151 x6981710

[john.richardson.2@us.af.mil](mailto:john.richardson.2@us.af.mil)

## Massachusetts Department of Environmental Protection

Risk Reduction/Site Discovery  
Bureau of Waste Site Cleanup  
Section Chief

**Saadi Motamedi**

(413) 755-2131

[Saadi.Motamedi@mass.gov](mailto:Saadi.Motamedi@mass.gov)



# **Barnes Air National Guard (ANG) Base Restoration Advisory Board Technical Training Meeting**

The meeting will begin soon.  
All participants are on mute.



# **Barnes Air National Guard (ANG) Base Restoration Advisory Board Technical Training Meeting**



# Virtual Meeting Logistics

Amy Brand

Jacobs

RAB Facilitator

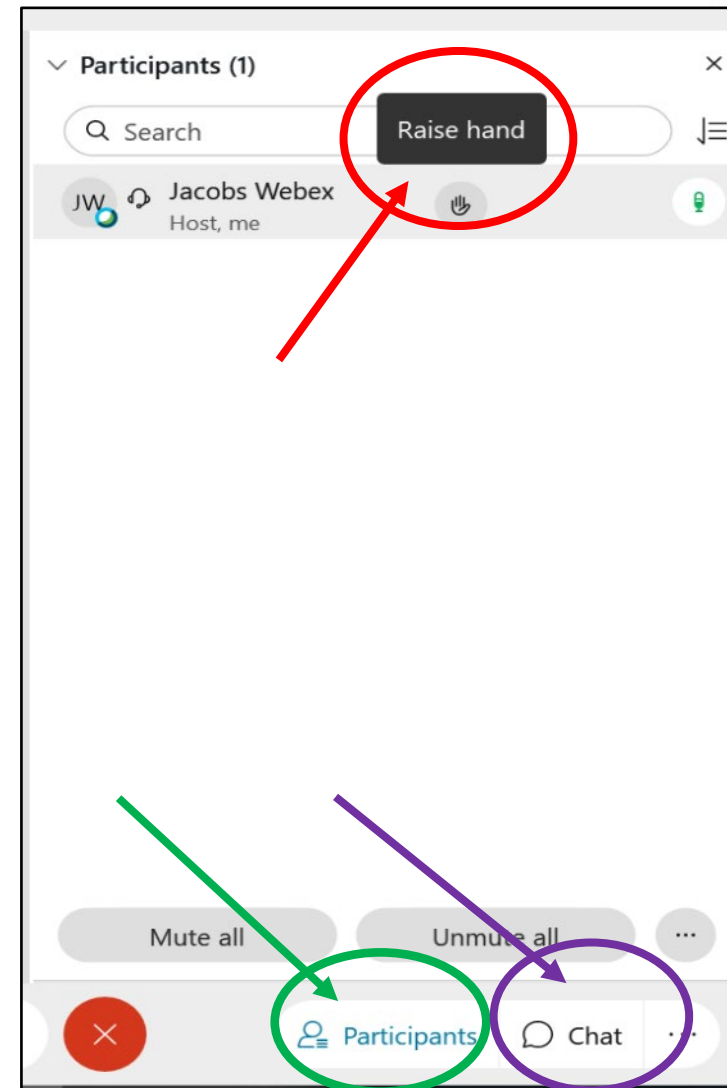




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# Agenda



- RAB Business Follow-Up
  - Community Co-Chair Election
  - RAB Charter Review Process
- Facility Overview
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Process
- Environmental Restoration Program
- Per- and Polyfluoroalkyl Substances (PFAS)
- Next Steps
- Questions and Comments



# RAB Business Follow-Up

Amy Brand  
Jacobs Engineering Group  
RAB Facilitator



# Community Co-Chair Election



- Introduction of candidate(s)
- Voting procedure (if more than one candidate)
  - Click three dots at bottom right of screen to open polling window
  - Click on the circle that corresponds to your answer
  - Click Submit
  - Meeting host will see results
  - Close polling window



# Process to Develop and Approve the Charter



- Draft charter content was discussed during RAB Training Meeting Part 1
- Draft charter will be sent to RAB members for review
- Comments should be submitted within 2 weeks of receipt of draft charter
- ANG Team will revise draft charter based on RAB member comments
- Hold a virtual RAB meeting to discuss revisions to the draft charter based on comments received
- RAB members will sign and date the charter



# Technical Training for RAB Members

John Richardson

104th Fighter Wing (104 FW)

Base Environmental Coordinator





# Facility Overview



- Approximately 185 acres
- Occupies two parcels of land
- Maintained operations at the Barnes Municipal Airport since 1947
- Mission: Maintaining highly trained, well-equipped, and motivated military forces to provide combat-ready F-15C Eagle aircraft and support elements in response to wartime and peacetime tasking under state and federal authority

Source: Barnes ANGB Final Community Involvement Plan Update, June 2020





# 104th Fighter Wing Snapshot



- Employment: 1,281 personnel employed with \$70M payroll
  - 525: Full-time (450 federal/ 75 state – FD, CE, SFS FOMA)
  - 756: Traditional Military Members – DSGs
- \$110M+ annual economic impact of military members
- Airport infrastructure brings private industry: \$20M Gulfstream facility





# What is the Environmental Restoration Program (ERP)?



- Nationwide program to identify possible environmental contamination that may have resulted from **past** practices, accidents, or incidents at Department of Defense (DoD), including ANG, bases.
- ERP is organized into the following categories:
  - **Installation Restoration Program (IRP):** The IRP was designed to identify and clean up past contamination from chemical and radiological contaminants, hazardous substances, and pollutants to protect human health and safety, and the environment
  - **Munitions Response Program (MRP):** The MRP addresses explosives safety hazards associated with munitions of explosive concern as well as the human health and environmental risks associated with munitions constituents



# Overview of the Investigation and Cleanup Process

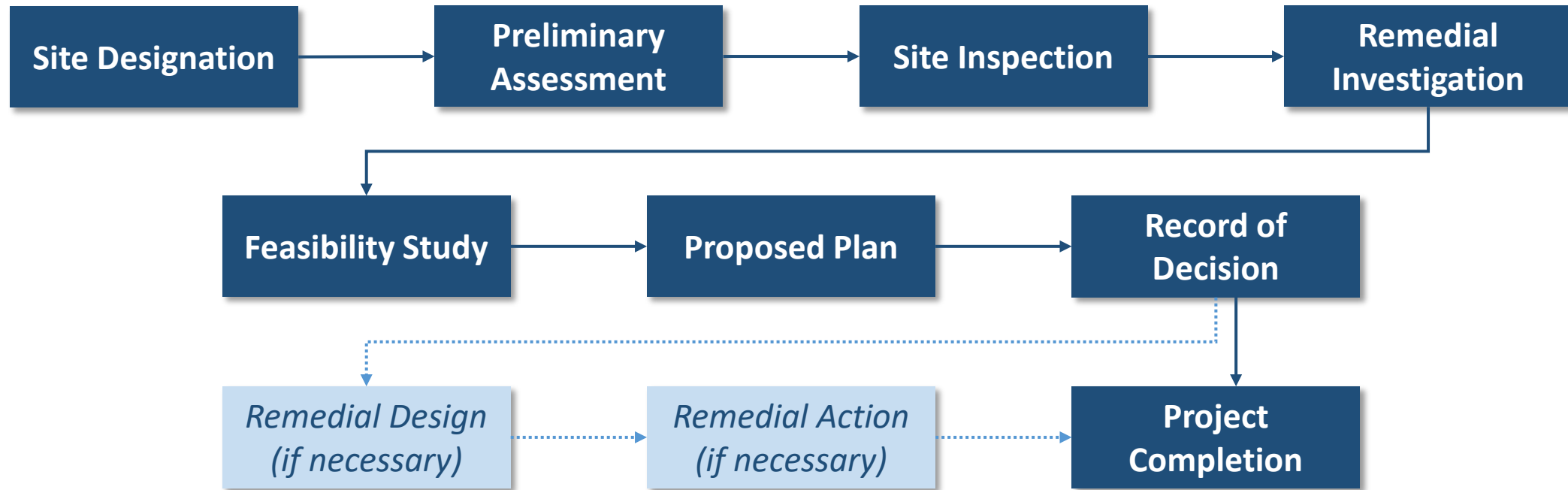


- The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) created the legal mechanism for cleaning up abandoned or uncontrolled hazardous waste sites
- DoD adopted CERCLA provisions as a model for environmental cleanups by the military
- CERCLA process includes a series of activities designed to involve the public in the decision-making process
- <https://www.epa.gov/superfund/superfund-cercla-overview>



# CERCLA Process

*Comprehensive Environmental Response, Compensation, and Liability Act*



*A removal action may be initiated at any time during the process if human health or the environment is in immediate danger.*



# Environmental Restoration Program



- At Barnes ANG Base, seven IRP sites were investigated from 1987 to present
  - Six sites were cleaned up/closed by 2015
  - IRP Site 2: undergoing long-term monitoring (LTM)
- Two MRP sites closed in 2012
- Two additional Former Underground Storage sites investigated and closed
- Investigation of PFAS began in 2016
- Coordination with regulatory agencies and stakeholders
  - Massachusetts Department of Environmental Protection (MassDEP)
  - National Guard Bureau







# Environmental Restoration Program

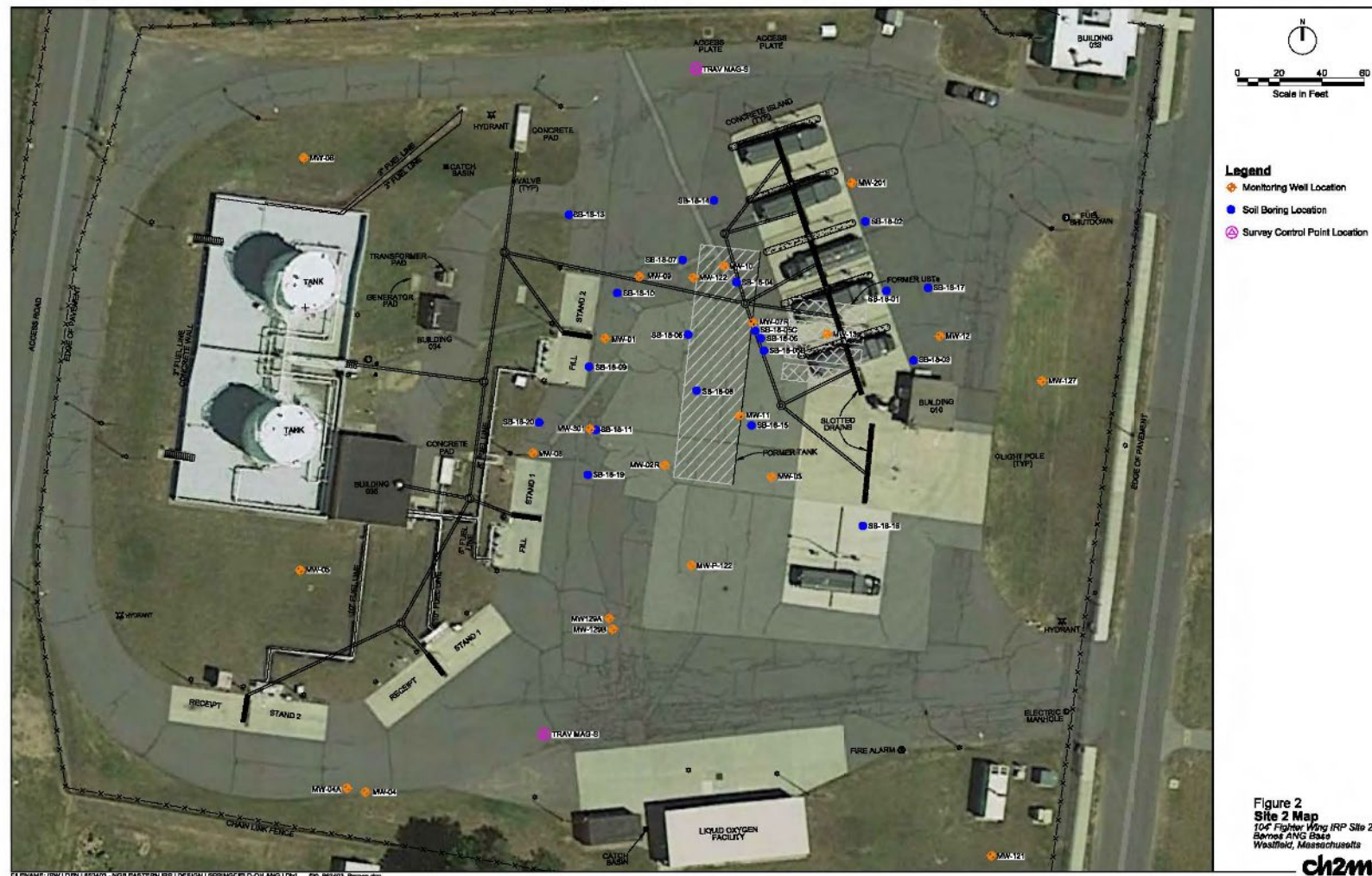


- IRP Sites 1 through 7 (six sites are closed)
- IRP Site 2 is the only one active

Source: Barnes ANGB Final Community Involvement Plan Update, June 2020



# Environmental Restoration Program-Site 2



- Identified in 1988
- Former underground storage tank/tank sludge disposal area within an active petroleum, oil, and lubricant facility
- Remedial actions – 2005 to 2016
- 2019 Release Abatement Measure Completion Report concluded LNAPL extent had been defined and remediated at IRP Site 2 to the extent possible
- In 2021, LTM proposal submitted to MassDEP and will continue until a permanent solution is achieved

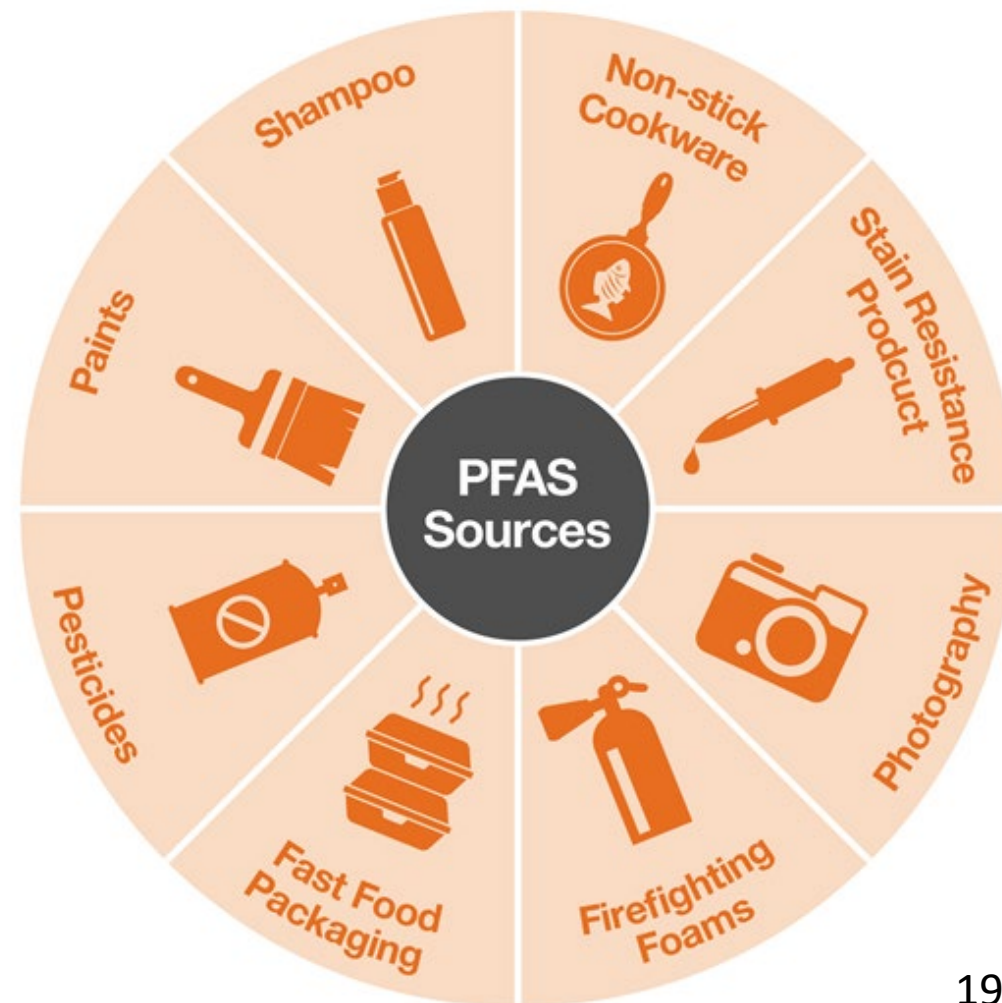




# What are Per- and Polyfluoroalkyl Substances (PFAS)?



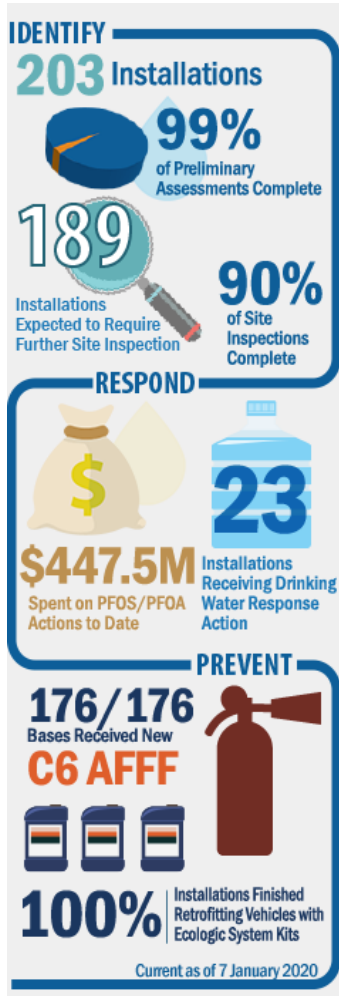
- Group of manufactured chemicals
- Used in firefighting foam; used by the military and others since 1970
- In 2016, the U.S. Environmental Protection Agency set a Lifetime Health Advisory for drinking water for two PFAS compounds: perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA)
- PFOS and PFOA are called emerging chemicals of concern due to the evolving regulatory standards







# Air Force and ANG Response

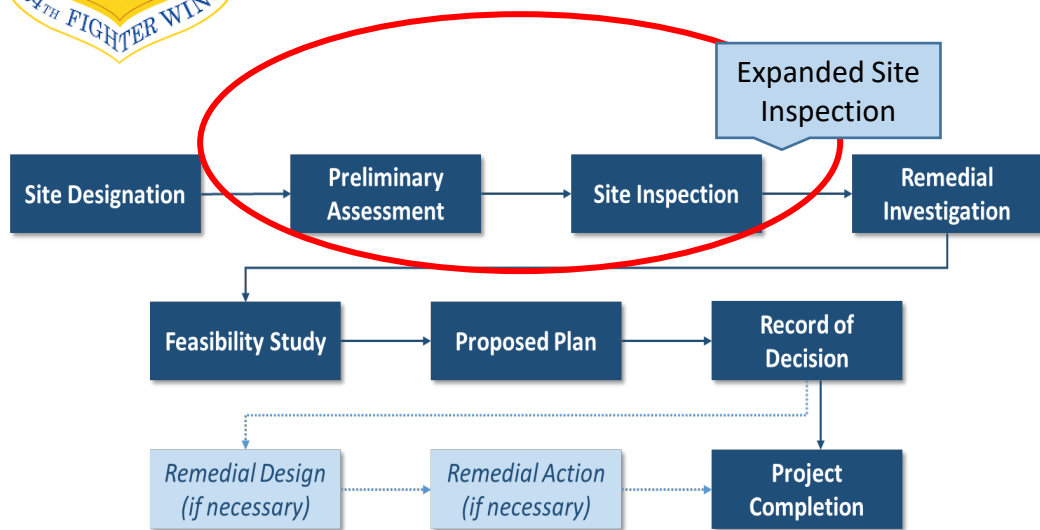


Three-step approach to assess and respond to potential PFOS or PFOA in drinking water:

- 1) IDENTIFY releases and investigate PFOS/PFOA
  - In progress at Barnes ANG Base
- 2) RESPOND to drinking water impacts
  - PFOS/PFOA drinking water impacts been identified at or near Barnes ANG Base; ANG may not be the only contributor; further investigation is required
- 3) PREVENT future releases
  - 104 FW has replaced firefighting foam with a more environmentally responsible (C6) formulation



# Completed PFOS/PFOA Investigations



*A removal action may be initiated at any time during the process if human health or the environment is in immediate danger.*

- Preliminary Assessment

- Completed in 2016
- Identified areas to investigate further

Reviewed historical data and records to identify firefighting foam release locations and potential for drinking water impacts

- Site Inspection (SI)

- Performed in 2018

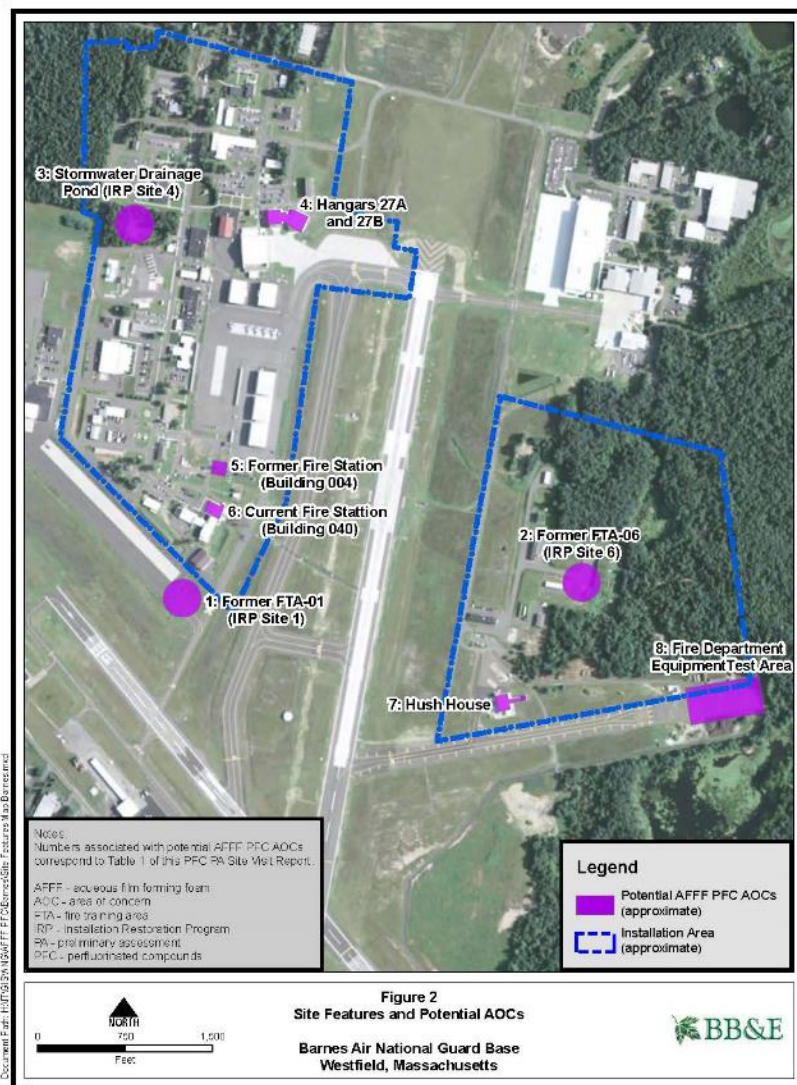
- Expanded Site Inspection (ESI)

- Performed in 2020

Sampled soil, sediment, groundwater, stormwater, and surface water to determine if PFOS or PFOA are present in the environment



# Preliminary Assessment



- Eight potential aqueous film-forming foam (AFFF) areas on the Base
  - Conducted personnel interviews
  - Reviewed onsite documentation
  - Toured each potential site
- One area (No. 2) did not require additional inspection
- Seven areas were recommended to proceed to a Site Inspection



# Site Inspection



NGB/A4OR

PRL	Screening Criteria Exceedance		Recommendation
	Soil	GW	
PRL 1: Former FTA (IRP Site 1)	Inc.	X	Soil investigation to determine if PFCs exceed screening criteria off-Base. Groundwater (GW) investigation to determine the nature and extent of the confirmed release.
PRL 3: Stormwater Drainage Basin			NFA
PRL 4: Hangars 27A & 27B		X	GW investigation to determine the nature and extent of the confirmed PFC release.
PRL 5: Former Fire Station, Bldg. 004		X	GW investigation to determine the nature and extent of the confirmed PFC release.
PRL 6: Current Fire Station, Bldg. 040		X	GW investigation to determine the nature and extent of the confirmed PFC release.
PRL 7: Hush House		X	GW investigation to determine the nature and extent of the confirmed PFC release.
PRL 8: Fire Department Equipment Test Area	Inc.	Inc.	Soil and GW investigation to determine if PFCs exceed screening criteria off-Base.

Notes:

Inc. - Inconclusive based on results of SI

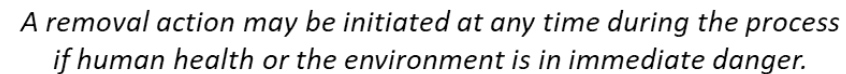
X - Screening criteria exceedance

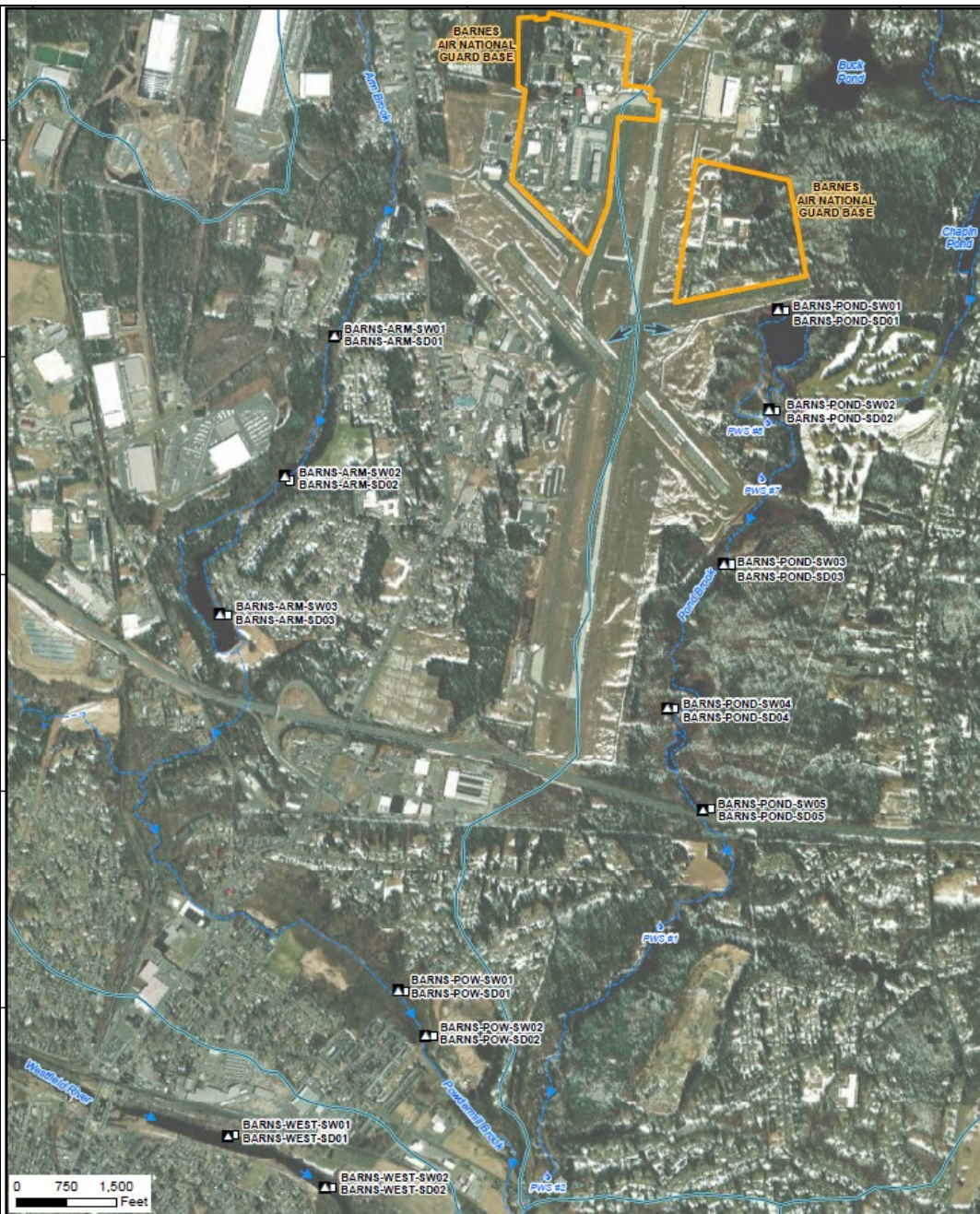
- Seven sampling areas
- PFOS/PFOA were identified in the environment, especially in groundwater, within the base boundary
- Results indicated a need for an Expanded Site Inspection outside the base boundary





# Comprehensive Environmental Response, Compensation, and Liability Act





# Expanded Site Inspection – Off-Base

- Received funding to collect additional samples to further investigate the extent of PFOS/PFOA in the environment and determine if there were upgradient and/or downgradient effects off-Base
- Fieldwork conducted from May to November 2019





# Expanded Site Inspection – Results



## Summary of Project Action Level Exceedances

Expanded Site Inspection Report for PFAS  
Barnes ANGB, Westfield, Massachusetts

AOC	AOC Name	Project Action Level Exceedance				
		Soil	Groundwater	Surface Water	Sediment	Stormwater
1	Former FTA-01 (IRP Site 1)	Yes	Yes	--	--	No
3	Stormwater Drainage Basin (IRP Site 4)	No	Yes	--	--	--
4	Hangars 27A and 27B	--	Yes	--	--	Yes
5	Former Fire Station (Building 004)	--	Yes	--	--	Yes
6	Current Fire Station (Building 040)	--	Yes	--	--	No
7	Hush House	--	Yes	--	--	Yes
8	Fire Department Equipment Test Area	Yes	Yes	--	--	Yes
Upgradient	Not applicable	--	Yes	--	--	No
Downgradient	Not applicable	--	Yes	Yes	Yes <sup>1</sup>	--

### Notes:

Conclusions based on results from Site Inspection (AMEC Foster Wheeler, 2018) and Expanded Site Inspection.

"-" indicates that samples were not collected in that area.

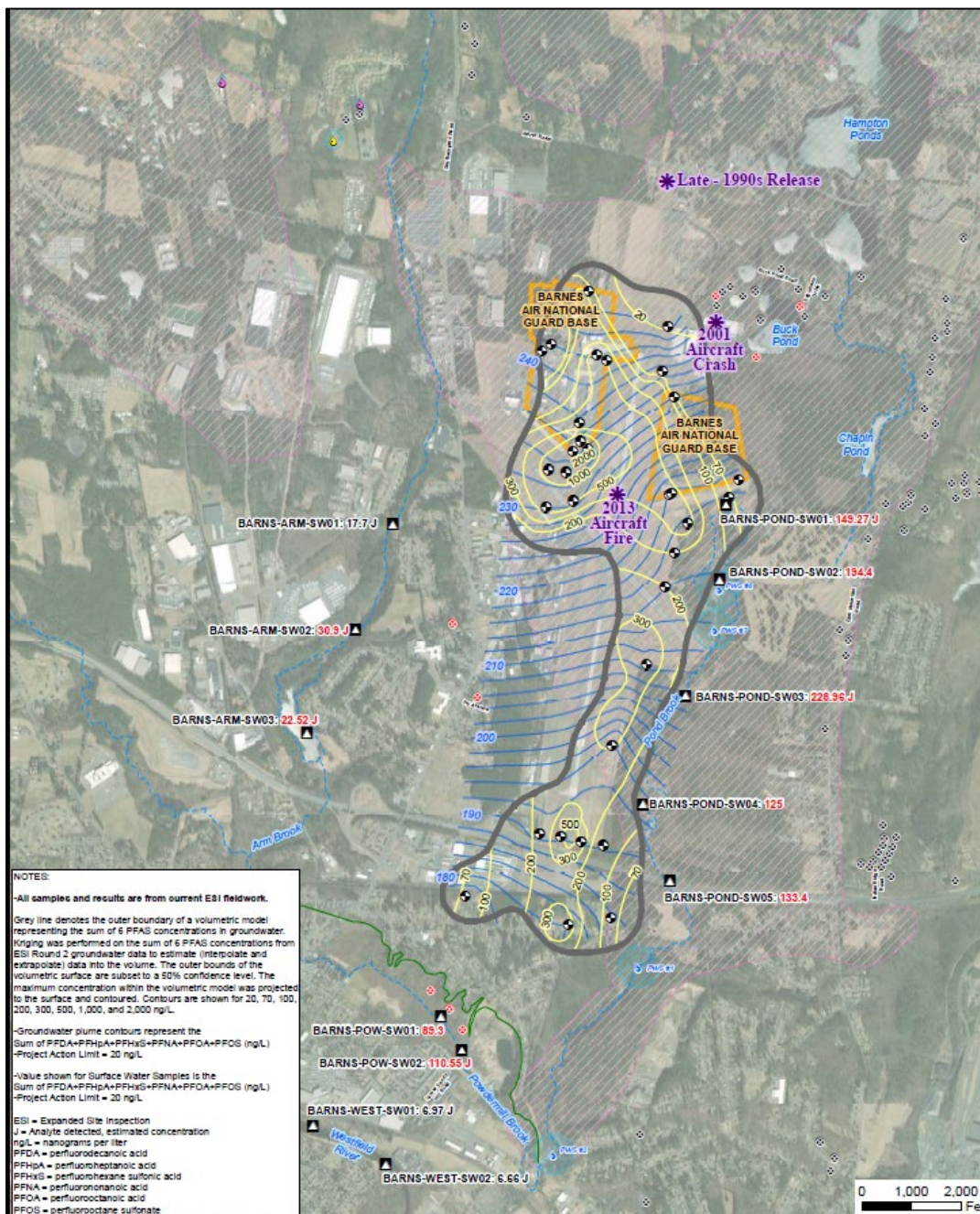
<sup>1</sup> the exceedance occurred only for PFOS in one sample out of 12.

Extent of PFOS/PFOA migration will be identified as part of the remedial investigation (RI).



# Expanded Site Inspection – Off-Base Results

- Analyzed for 24 PFAS compounds in accordance with EPA Method 537
- Two compounds (PFOS and PFOA) are associated with AAAF in fire-fighting foam
- RI will determine nature and extent of PFOS/PFOA







# MassDEP Protection Drinking Water Imminent Hazard Evaluation



- MassDEP established **Massachusetts Maximum Contaminant Level (MMCL) for PFAS** of 20 parts per trillion (ppt) for the sum of six PFAS compounds:
  - PFOS
  - PFOA
  - Perfluorodecanoic acid (PFDA)
  - Perfluorohexane sulfonic acid (PFHxS)
  - Perfluoroheptanoic acid (PFHpA)
  - Perfluorononanoic acid (PFNA)
- In an October 27, 2020 letter, MassDEP requested that DoD accept MMCL as **applicable or relevant and appropriate requirement (ARAR)**



# Off-Base Private Well Sampling



- In response to the PFAS detections, MassDEP has sampled 75 residential drinking water wells for PFAS and is currently maintaining State installed Point of Entry Treatment (POET) systems at eight (8) residences with private wells affected by PFAS concentrations greater than the MMCL of 20 ppt.



# Next Steps



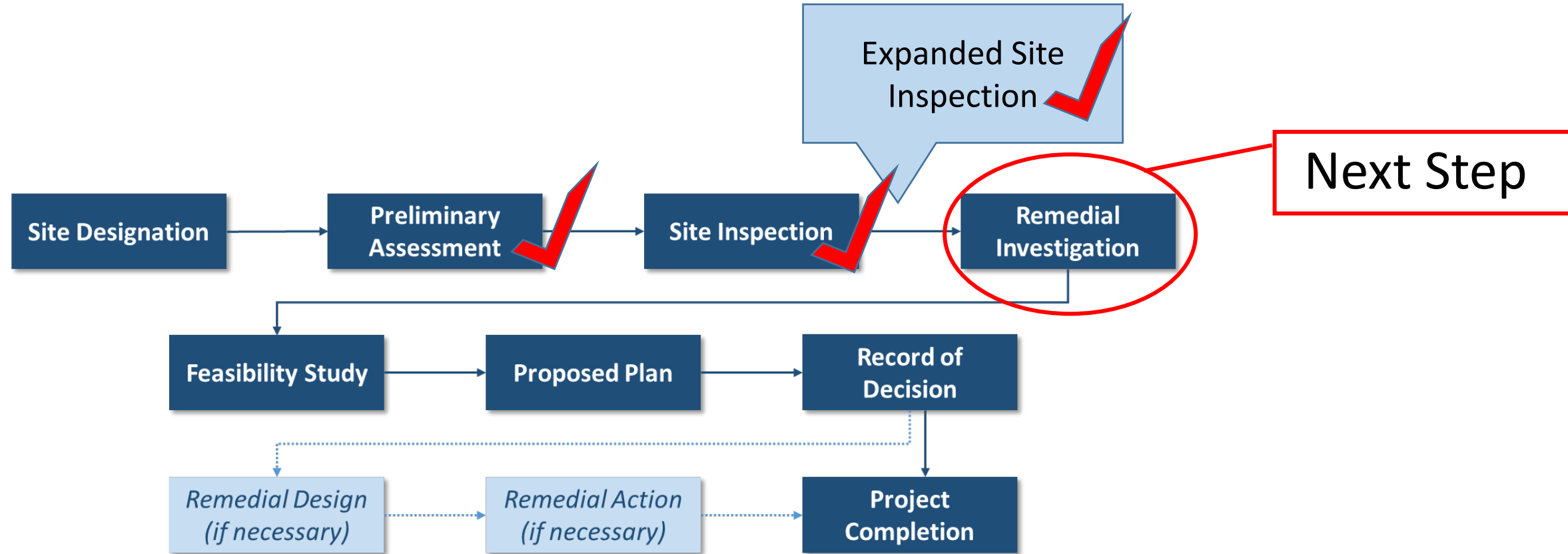
- MassDEP reviewed the draft ESI Report and submitted comments via letter dated June 22, 2020
- ESI Report completed in October 2020
- Results to date are inconclusive on direct path to Westfield public and private well impact
- Next step is the Remedial Investigation
- 104 FW will continue to collaborate with the MassDEP and the City of Westfield





# CERCLA Process

*Comprehensive Environmental Response, Compensation, and Liability Act*



*A removal action may be initiated at any time during the process if human health or the environment is in immediate danger.*



# Questions and Comments



- On computer, please raise hand to be called on. Unmute yourself before speaking.
- On phone, dial \*3 to raise hand to be called on to speak. When prompted, press \*6 to unmute yourself.



# Websites for More Information



Environmental Restoration Program at 104th Fighter Wing:

- <https://www.104fw.ang.af.mil/About/Environmental/>

104th Fighter Wing Environmental Administrative Record:

- <https://ar.afcec-cloud.af.mil/Search.aspx>
- Select ANG radio button, select installation, and press search

MassDEP PFAS Information:

- <https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas>

Westfield Water Department PFAS Information:

- <https://www.cityofwestfield.org/672/PFCs-Information-Updates>

RAB Rule Handbook and Information on Technical Assistance for Public Participation

- <https://www.denix.osd.mil/rab/home/>

Air Force Response to PFOS and PFOA

- <https://www.afcec.af.mil/WhatWeDo/Environment/Perfluorinated-Compounds/>



# Contact Information



## Barnes Air National Guard Base

104th Fighter Wing, Wing Vice Commander

**Colonel David Halasikun**

(413) 568-9151 x6981797

[david.halasikun.2@us.af.mil](mailto:david.halasikun.2@us.af.mil)

## Base Environmental Manager

**Mr. John Richardson**

(413) 568-9151 x6981710

[john.richardson.2@us.af.mil](mailto:john.richardson.2@us.af.mil)

## Massachusetts Department of Environmental Protection

Risk Reduction/Site Discovery  
Bureau of Waste Site Cleanup  
Section Chief

**Saadi Motamedi**

(413) 755-2131

[Saadi.Motamedi@mass.gov](mailto:Saadi.Motamedi@mass.gov)