

Air Force Installation & Mission Support Center

Wurtsmith Restoration Advisory Board Meeting



Steven Willis
AFCEC/CZBC
19 Feb 2025

Your Success is Our Mission!



Checklist for Virtual Participation



- ✓ If you prefer to join audio by phone, please dial the call-in number and enter the access code to enter the meeting
- ✓ Phone unmute instructions - *5 to raise your hand, *6 to unmute/mute
- ✓ RAB Members – mute when not speaking
- ✓ Use “raise hand” to ask a question or provide a comment
- ✓ RAB Coordinator will unmute your mic when it’s your turn to speak
- ✓ To enable closed captions for language support, click “more” – “language and speech” – “turn on live captions”
- ✓ Use Chat for questions
- ✓ Contact the RAB Coordinator with access questions wendi.michael@wsp.com

Your Success is Our Mission!



Agenda



- **Welcome and introductions**
- **DAF Senior Leadership Introduction**
- **RAB member updates**
- **Alert Aircraft Area PFAS IRA update**
- **Project forecasts**
- **RAB business**
- **RAB member questions**
- **Public comment period**
- **Conclusion – RAB Co-Chairs’ closing remarks**
- **Adjournment**

(Note: acronym list provided in backup slides)

Your Success is Our Mission!

Air Force Civil Engineer Center



Environmental Management Core Capabilities Brief

Mr. Kenny Johnson, P.E.
AFCEC/CZ
Feb 2025

Your Success is Our Mission!



CZ Mission, Vision, & Goals



Mission:

Enable the Air Force mission through sound stewardship and strict compliance with environmental laws

Vision:

To be the world leader in sustaining and promoting sound environmental performance for our Airmen, their families and communities to meet our mission in air, space and cyberspace

CZ Strategic Goals 2025

- 1. Proactively Manage Human Resources – RTO, Optimization, CZB Alignment**
- 2. Optimize/Enhance Delivery of Environmental Capabilities across Directorates**
- 3. Drive Continuous Process Improvement Innovation**

Enabling AF Missions by Keeping Bases and Ranges Compliant with Law

Your Success is Our Mission!



CZ Primary Lines of Effort



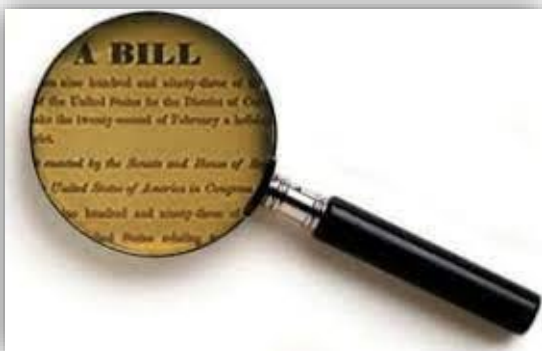
Environmental Restoration



Environmental Quality



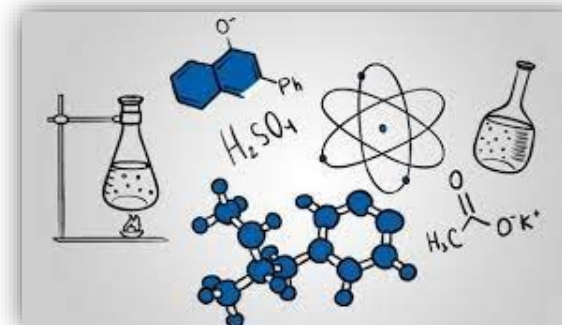
Wildland Fire Center



Legislative/Regulatory Review



Base Realignment and Closure



Technical Support

Your Success is Our Mission!



Environmental Program



EQ by the numbers

Ensuring Env Quality at Installations across 79 States/Territories/Countries and ~ 9M Acres land

ERA by the numbers

8,639 ERA Restoration Sites across Active/Space Force/Reserve/ANG installations

Compliance



**161 Installations,
60 Range Complexes**

156K NM2 SUA, 350 MTRs, 29K Acres Accident Zones, 309K Acres Noise Zones

**442¹ Wastewater and
Stormwater Permits &
Programs Worldwide**



**974 Air Operating
Permits**

161 bases and 44 Title V permits

287 Water Systems
Serving ~1M DAF Personnel

> 200 Miles of Coastline - 50 Launches/yr

Conservation



**123 Threatened/Endangered
Species on 54 installations**

**598K acres of forest, 266K
acres of wetlands managed**

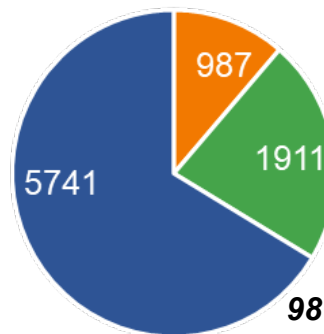
**145,278 acres prescribed
burned/1,366 acres
mechanically treated²**

**360 Affiliated Federally
Recognized Tribes & Native
Hawaiian Organizations**



**9,264 Built and Archaeological
Historic Properties**

Restoration



**5,741 Sites have
been closed
(Site Closure)**

**987 Sites in Response
Complete –
Protective state**

**1,911 Sites in
Investigation or Cleanup**
- 617 PFAS sites
- 1,294 Non-PFAS sites
(site data as of 12 Feb 24)



Cost to Complete: \$12.2B
includes PFAS post-Record of
Decision cleanup (as of 30 Sep 23)

**43 States participating in the Defense
and State Memorandum of Agreement
(DSMOA) to accelerate cleanup program**

**Military Munitions Range Program
(MMRP)**

MMRP returned cumulative
688,996 acres (91%) for
mission reuse

Community/Stakeholder Outreach



101 additional installations &
GSUs will be providing community
outreach (involvement) based on
FY23 awards.

Technology Development

Technology implementation testing
ongoing at 24 locations

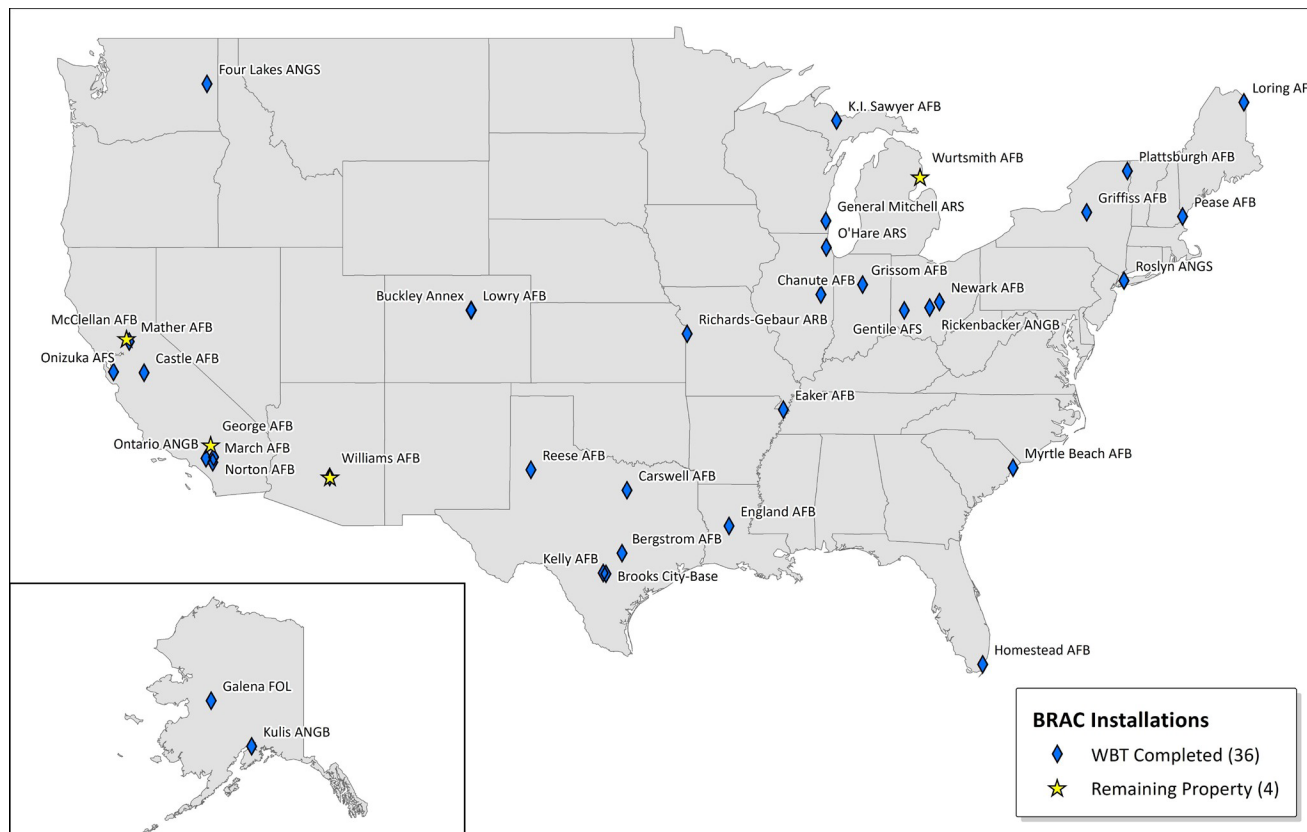
¹ FY23 EQ data call per OSD metrics definitions

² FY23 for habitat management and reduction of wildland fire risk

Your Success is Our Mission!



Base Realignment and Closure



■ Completed Property Transfers

- 36 of 40 Whole Base
- 88,396 Total Acres
- 98% Acres Transferred
- 1,649 Acres Remaining

■ Environmental Restoration Program Sites

- 5,290 Total
- 95.7% Response Complete
- 85.0% Closed
- 11.4% In-Perpetuity

■ BRAC Cost

- \$4.5B to date
- \$4.0B CTC

BRAC - Base Realignment and Closure
Current as of: 04 Feb 2025

Your Success is Our Mission!



Core Capabilities



Environmental Management (CZ)

Compliance (CZQ)

- Delivers technical support to installation through training, guidance, and support tools
- Provides financial execution and contract acquisitions
- Provides technical expertise and support to comply with regulatory drivers (CONUS and OCONUS)
- Environmental Subject Matter Experts
- Represents AF on environmental DoD Service Steering Committees
- Manages the AF Wildland Fire Program

Restoration & BRAC (CZR, CZB)

- Provides centralized management and execution of the AF Environmental Restoration Program and BRAC Program
- Manage day-to-day restoration and transfer activities (boots on the ground)
- Provides financial execution and contract acquisitions for 2,831 sites (CZR) and 5,290 sites (CZB)
- Manages Military Munitions Response Program (MMRP)
- Interfaces with State and Federal regulators on behalf of installations

Legislative & Regulatory Engagement (CZP)

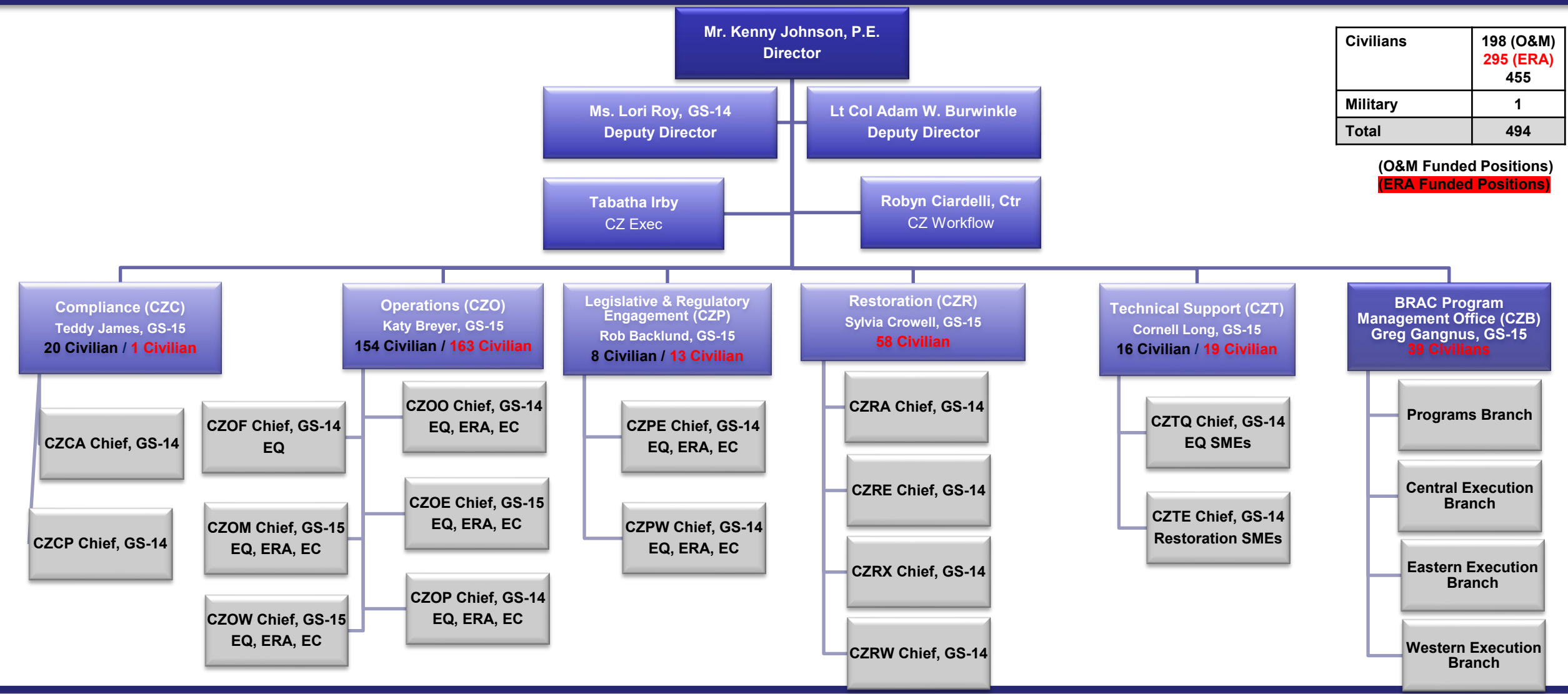
- Engages/Partners with State and Federal government agencies concerning environmental legislation and regulatory activities
- Advocates for AF/DoD policies
- Facilitates State and Regional compliance
- Serves as DoD Regional Environmental Coordinator (REC) for Regions 2, 6, & 10

Asset and Enterprise Management (CZA)

- Provides enterprise tools
- Manages Environmental Quality (EQ) and ERA PPBE process
- Planning, programming, 1st level validation, and execution
- Provides planning, programming, acquisition, and leads post-award execution for ERA and EQ Programs
- Provides and coordinates enterprise-wide EQ training
- Manages EMS/EIP support
- Reporting & Analysis of environmental data



Current CZ Organizational Chart



Your Success is Our Mission!



RAB Member Updates

Your Success is Our Mission!



Community Co-Chair Update



- **Mark Henry**

Your Success is Our Mission!



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

EGLE Updates

Amy Handley
Project Manager
RRD, Superfund Section

Handleya@michigan.gov | 517-898-3356

Beth Place
Acting Unit Manager
RRD, Superfund Section

PlaceB1@michigan.gov | 517-899-7524

Your Success is Our Mission!

Recent EGLE RRD Activities

- January BCT meeting
- Meeting with NOW on JAN 29
- AAA IRA RAWP discussion, EGLE comments resolved
- Continue to work on dispute resolution
- Review community input for DGI
- Documents in review/reviewed:
 - 2022 PTS RAO Annual Report
 - 2023 LTM RAO Annual Report
 - Generic PFAS UFP-QAPP
- Documents backchecked:
 - 2022 LTM RAO Annual Report
 - VI RI addendum 2

Upcoming Activities

- Continue to collaborate with Air Force and contractors for developing the DGI work plan
- Ongoing communication with the Air Force on the dispute resolution
- Contractor review of treatment system performance ongoing
- Prepare for upcoming field season
- BCT meeting in March
- Upcoming documents for review or backcheck
 - Five-Year Review expected fall 2025
 - LTM and PTS annual reports
 - BECOS QAPP Addendum
 - Preliminary Characterization Summary (Risk Assessment to follow)
 - SS0072 updated FS
 - DGI UFP-QAPP



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Oscoda-Wurtsmith Airport Authority Violation/Enforcement Notice Update

Overview of WRD's Compliance Strategy for
Addressing PFAS and the General Administrative
Consent Order

February 19, 2025
EGLE Water Resources
Division

Your Success is Our Mission!

Outline

- **Regulations/WRD Oversight**
 - **Industrial PFAS Compliance Strategy and the General Administrative Consent Order (GACO)**
 - **Current OWAA Permit and PFOS Results**
 - **Questions**

Regulations

- **Federal: Clean Water Act**
- **State: Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, MCL 324.3101 *et seq.***
 - 324.3109 “A person shall not directly or indirectly discharge into the waters of the state a substance that is or may become injurious to any of the following:
 - (a) To the public health, safety, or welfare. ...”
- **Facility: Industrial Stormwater Permit**
 - “Discharges that may cause or contribute to a violation of a water quality standard are not authorized by this permit.”



Rule 57 Toxic Substances of the Part 4 Water Quality Standards

Natural Resource & Environmental Protection Act (NREPA) – Part 31, Water Resources Protection

Compound	HNV* DWS** (ppt)	HNV Non-DWS (ppt)	Established Date
PFOS	11	12	March 2014
PFOA	66	170	Revised July 2022
PFBS	8,300	670,000	July 2022
PFNA	19	30	October 2023
PFHxS	59	210	October 2023

*Human Noncancer Value (HNV)

**Drinking Water Source

Compliance Strategy

- Strategy for Addressing PFAS in Industrial Direct and Industrial Stormwater Discharges
- Established compliance process to reduce or eliminated PFAS discharges outside of a permit

EGLE | MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Addressing PFAS in Industrial Direct and Industrial Stormwater Discharges Compliance Strategy

BACKGROUND

Per- and polyfluoroalkyl substances (PFAS) have been classified by the United States Environmental Protection Agency (USEPA) as emerging contaminants on a national level. Many PFAS are persistent, some bioaccumulate in the environment, and several are toxic to mammals and/or birds in laboratory tests. Given that there are nearly fifteen thousand PFAS compounds, the toxicities of most PFAS have not been sufficiently evaluated. The Department of Environment, Great Lakes, and Energy's (EGLE), Water Resources Division (WRD) has established criteria for five PFAS compounds: perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), perfluorobutanesulfonic acid (PFBS), perfluorohexanesulfonic acid (PFHxS), and perfluorononanoic acid (PFNA).

All PFAS compounds are manufactured intentionally, but some can also be generated as byproducts when other fluorinated compounds break down. Many products containing PFAS are used in numerous industrial processes including metal plating, textile production and treatment, and specialty paper production. According to a November 2017 Technical Fact Sheet produced by the USEPA on PFOS and PFOA, manufacturing of PFOS and PFOA in the United States ceased by 2002 and 2015, respectively. Other PFAS chemicals are still widely used today in industrial and consumer products. Industrial and domestic waste containing these compounds can enter the environment through municipal or private waste treatment systems, industrial discharges, stormwater runoff, venting groundwater, or as atmospheric deposition via emissions. In addition, several PFAS are key ingredients in Aqueous Film-Forming Foam (AFFF). These foams have been used extensively in fire suppression training exercises and testing at airports and military bases nationwide as well as in emergency firefighting. In recent years, PFAS have been detected in surface and groundwaters at a variety of industrial sites, including military facilities, municipal airports, metal plating facilities, bulk fuel terminals, paper mills, and landfills. Many PFAS compounds have been detected in surface waters across Michigan, with PFOS being detected in most fish tissue samples from Michigan waters that have been analyzed for PFAS.

The State of Michigan's Part 4, Water Quality Standards (Part 4 Rules), promulgated under Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), includes a narrative method to develop water quality values protective of human health and aquatic life. On August 2, 2020, the USEPA approved the revision to Michigan's Part 4 Rules, including Rule 57 (R 323.1057), Toxic Substances. As of October 2023, Water Quality Values (WQV) exist for five PFAS: PFOS, PFOA, PFBS, PFHxS, and PFNA. PFOS is considered a bioaccumulative chemical of concern (BCC). For more information about WQVs, see the [Rule 57 Water Quality Values webpage](#).

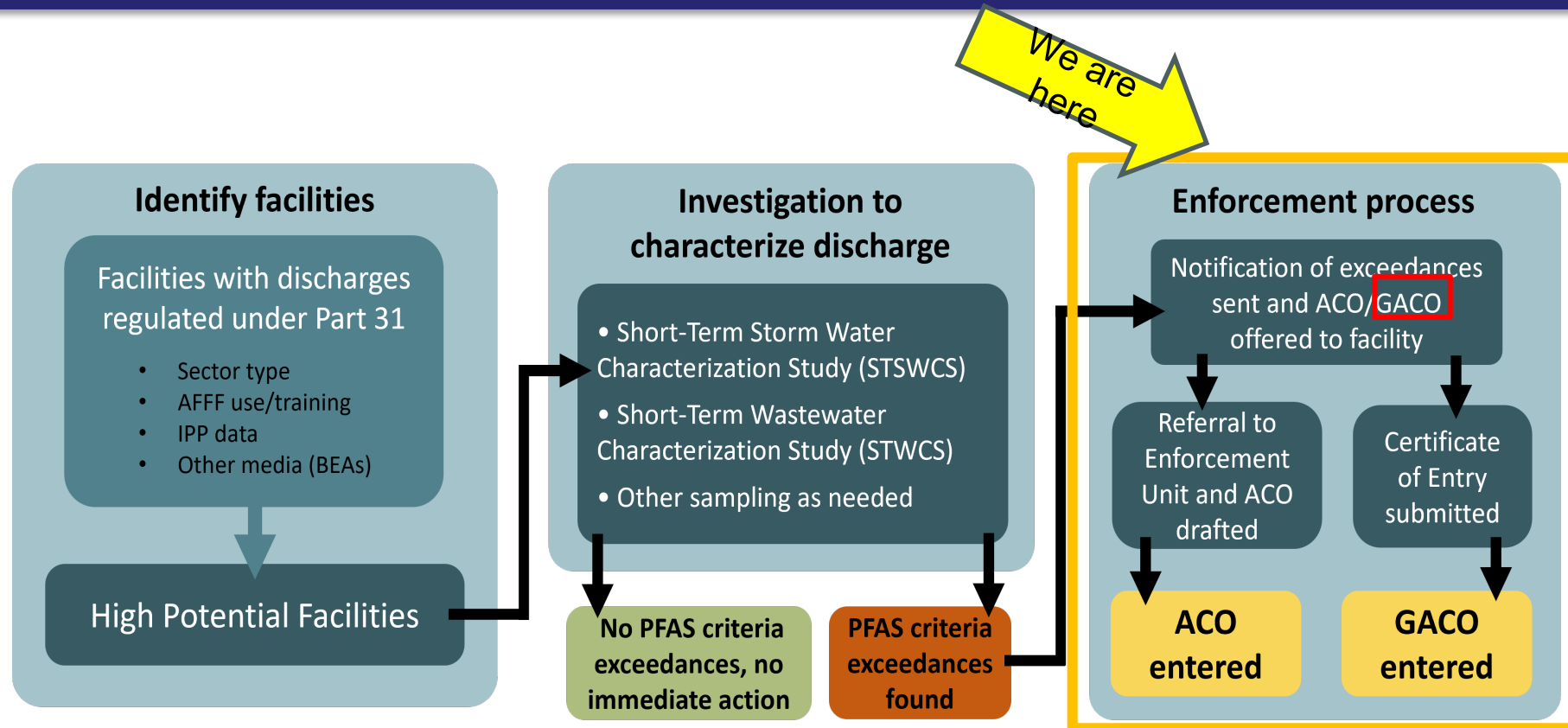
800-662-9278

Michigan.gov/EGLE

Rev. 11/2024

Your Success is Our Mission!

Industrial PFAS Compliance Strategy



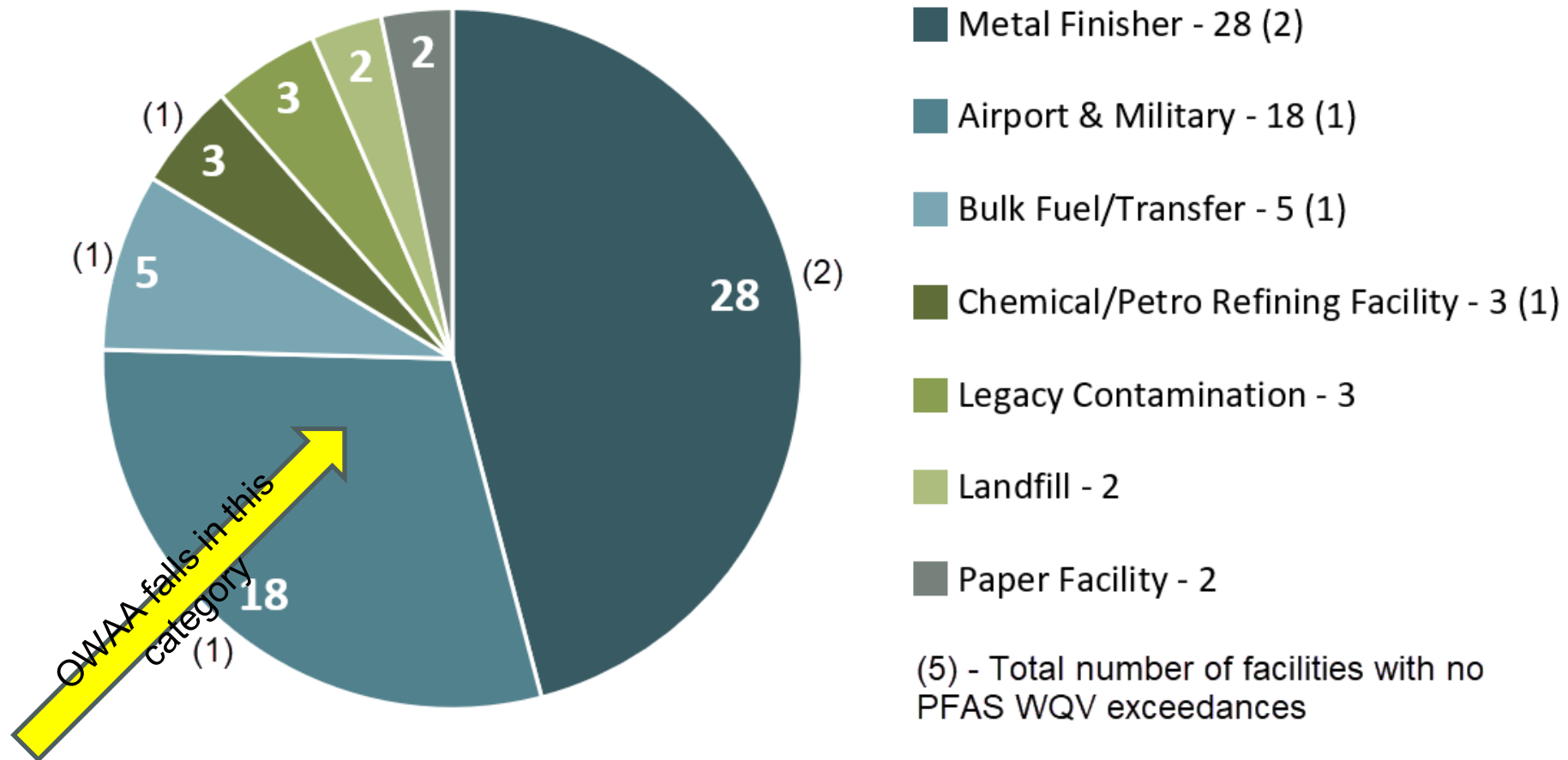
Your Success is Our Mission!

OWAA's VN/EN Timeline

-
- A vertical timeline with a light blue line and circular markers. The dates are listed on the left, and the corresponding events are listed on the right.
- December 10, 2021** WRD requested the Permittee conduct a STSWCS
 - December 16, 2022** WRD received a result of the incomplete STSWCS conducted on June 6, 2022
 - March 12, 2024** WRD became aware of additional PFAS sample results that completed the STSWCS
 - Fall 2024** GACO process was finalized and offered to facilities with PFAS exceedances in stormwater discharge
 - September 25, 2024** WRD met with OWAA and the USAF to discuss the discharge violation, to inform OWAA of an upcoming Violation Notice, and to provide information on next steps forward. The USAF stated their timeline for addressing the 3-Pipes fit with WRD's timeline for a 5-year GACO.
 - November 7, 2024** WRD issued Violation Notice No. VN-015934 and offered entry into a GACO
 - January 3, 2025** OWAA requested a 90-day extension to respond to Violation Notice No. VN-015934
 - January 7, 2025** Original due date for Violation Notice No. VN-015934
 - January 24, 2025** WRD granted OWAA the 90-day extension request with a new due date of April 7, 2025
 - February 5, 2025** WRD and OWAA met with Representative Mike Hoadley to discuss the Violation Notice

Your Success is Our Mission!

Industrial Storm Water Facilities with completed PFAS Short-Term Storm Water Characterization Studies

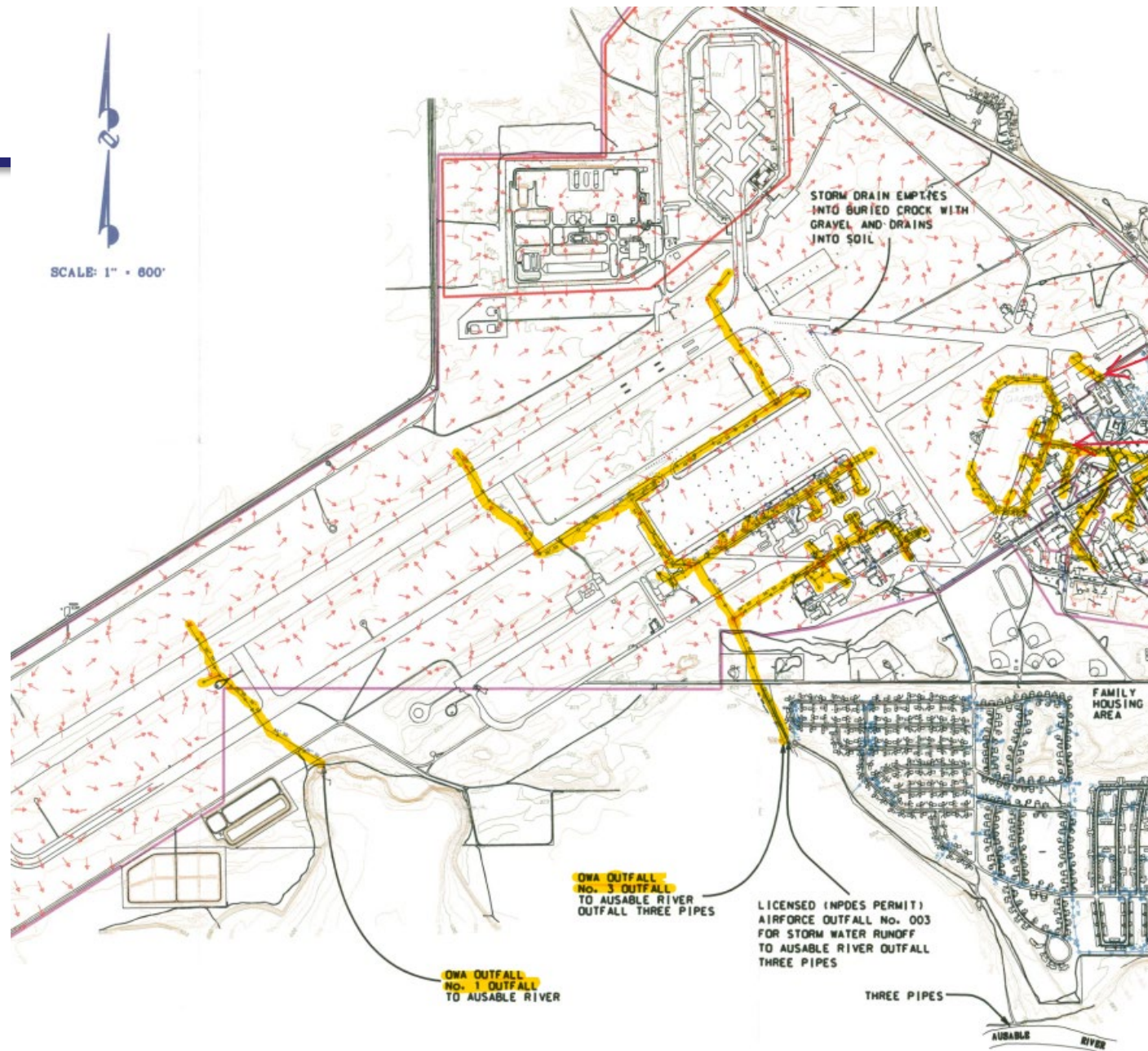


Your Success is Our Mission!

Incentives to Entering the PFAS ISW GACO

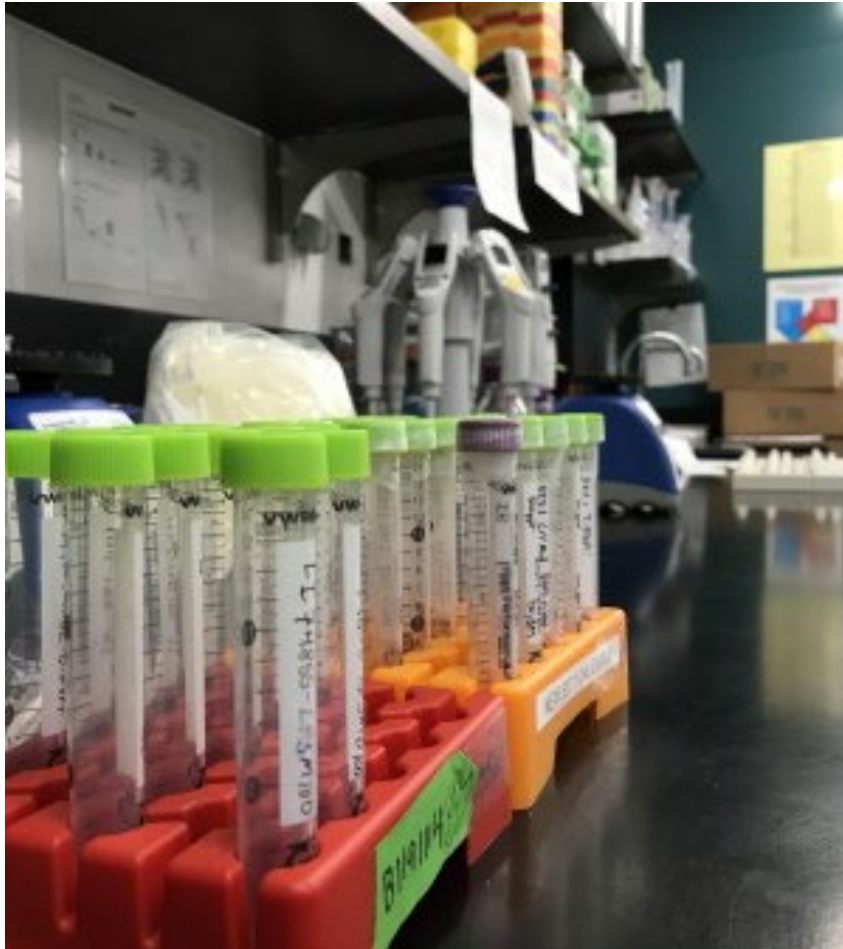
- **No up-front penalties**
- **Entry is a simple process**
- **The GACO provides a consistent state-wide framework for addressing PFAS**
- **Effluent goals instead of limits**
- **Facilities will identify and implement appropriate site-specific corrective actions**
- **Reiterative Pollutant Minimization Program process with goal to move corrective actions forward**

Your Success is Our Mission!



Your Success is Our Mission!

Enforceable Schedules



- **End of year 4:**
 - Meet effluent goals
- **End of year 5:**
 - Certify compliance
- **Failure to certify compliance:**
 - Submit and implement updated PMP and continue on-going monitoring

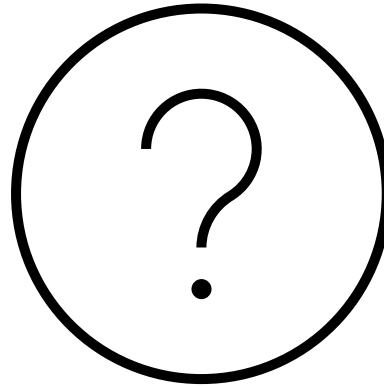
Your Success is Our Mission!

Current OWAA Permit Status

Sample Location	Sampling Conditions	Sample Date	Pollutant	Result	Applicable Criteria at Monitoring Point
Outfall 3	Dry Weather	5/17/2022	PFOS	1,330 ng/L	12 ng/L
Outfall 3	Wet Weather	6/6/2022	PFOS	1,650 ng/L	12 ng/L
Outfall 3	Dry Weather	6/9/2022	PFOS	1,660 ng/L	12 ng/L

- The discharge from the 3-Pipes Outfall (Outfall 3) is permitted under an NPDES Certificate of Coverage (MIS410878). The permit (MIS410000) was issued to the permittee "Oscoda-Wurtsmith Airport Authority."
- The permittee is responsible for the permitted discharge, by law.

Questions



[Industrial Stormwater PFAS
Information Webpage](#)

Your Success is Our Mission!



RAB Member Updates





Air Force Update



- **Tech Session on Thursday morning (20 Feb) at Holiday Inn Express, Huron Conference Room from 9:00am – 12:00pm**
- **Biennial UXO training scheduled for May RAB meeting**
- **Technical Assistance for Public Participation (TAPP) status**

Your Success is Our Mission!



Air Force Update



- **Requests for Air Force reimbursement for municipal drinking water connections paid by homeowner**
- **Homeowners should contact:**
 - 88 ABW/JA
 - Bldg 10 Rm 108
 - 5135 Pearson Road
 - Wright-Patterson AFB OH 45433-5319
 - ATTN: Claims Section
- **Claims Section will explain process and next steps**
- **Email correspondence should include both the Claims Officer and Claims Paralegal**

Capt James C. Franco, claims officer
937-713-6569
james.franco.2@us.af.mil

**Ms. Breanna A. Davis, claims
paralegal**
937-656-2592
breanna.davis.5@us.af.mil

Your Success is Our Mission!



BRAC Cleanup Team (BCT) Update



- **Nov 2024 BCT meeting cancelled**
- **Jan 2025 BCT meeting summary**
 - **Remaining EGLE comments on 2022 RA-O Report**
 - **Aesthetic-based vs health-based criteria for site SS057**
 - DAF evaluating the appropriate documentation to change the record of decision (ROD) criteria
 - EGLE supports changing criteria
 - SS057 evaluation will serve as model for similar sites
 - **Discontinuing pumping groundwater for extraction well #8 at the LF030/031 engineered wetland treatment system**
 - System designed to remove metals and volatile organic compounds (VOCs)
 - Metals and all VOC except diethyl ether below ROD criteria in this well

Your Success is Our Mission!



BCT Update



- Aesthetic criteria for diethyl ether included in ROD but never analyzed
- Propose sampling/analyzing extraction well for diethyl ether
- If results are below the ROD criteria, take the extraction well offline
- Sample well quarterly for diethyl ether
- Sample LF30-ML3D for all metals and VOCs during the next annual sampling event (Fall 2025)
- EGLE concurs with this approach



AAA IRA Construction Update



- **The Alert Aircraft Area (AAA) interim remedial action (IRA) is designed to intercept the highest concentrations of PFAS by extracting and treating groundwater using granular activated carbon**
- **Construction complete**
 - **Construction began 29 Jul 2024**
 - **System start up began 27 Jan 2025**



AAA IRA Construction Update



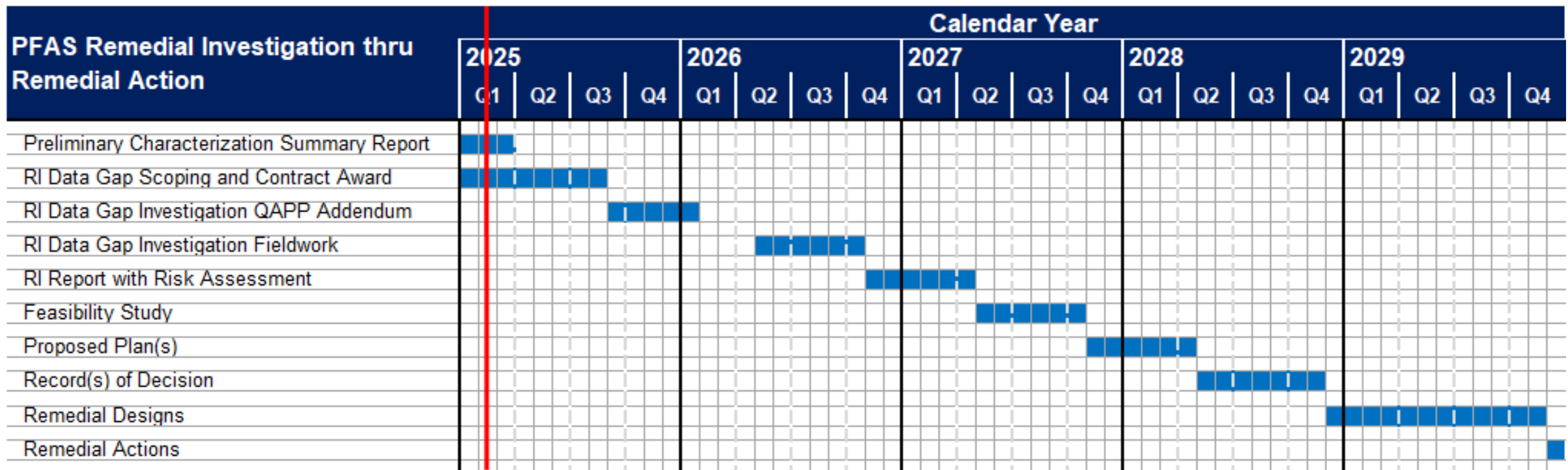
Your Success is Our Mission!



Long Range Forecast PFAS RI thru RA



- **Shifting Data Gap Investigation award from Jan 2025 to Jul 2025**
 - Shift due to contract unavailability
 - Provides opportunity to work with RAB on their input prior to contract



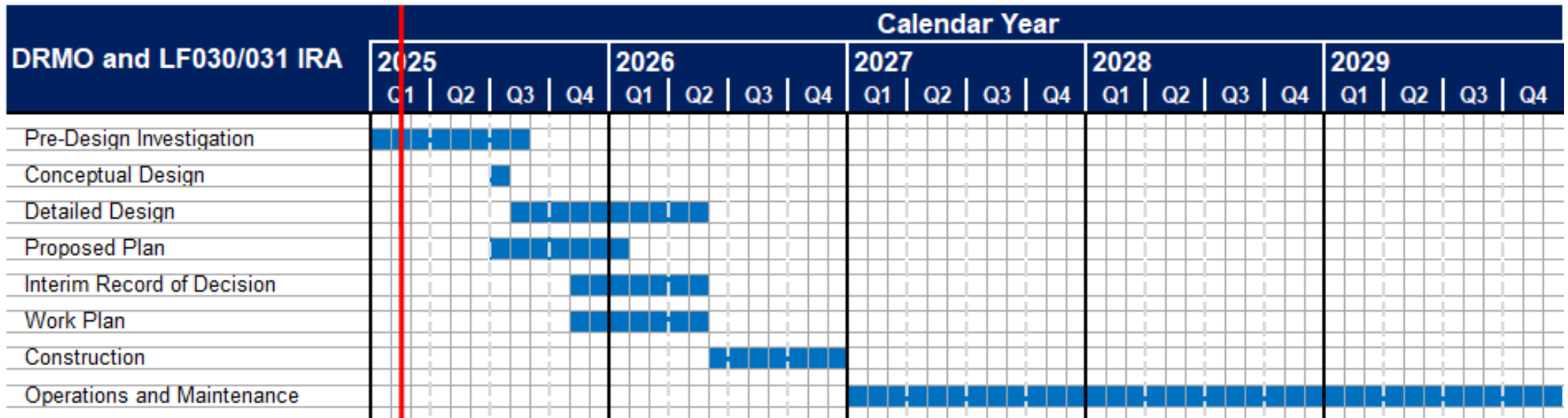
Your Success is Our Mission!



Long Range Forecast DRMO & LF030/031 IRA



- Worked with contractor to compress overall schedule by 12 months
- System startup 7-8 months after IROD signed



Your Success is Our Mission!

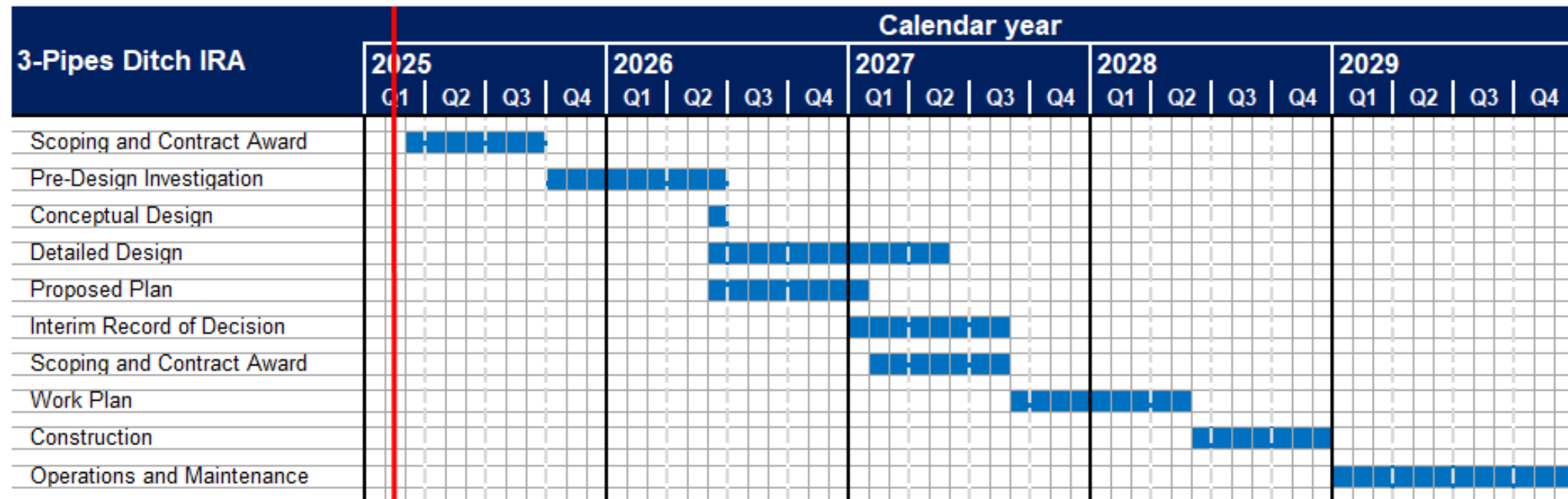


Long Range Forecast

3-Pipes Ditch IRA



- Critical process analysis (CPA) recommended IRA
- Preparing contract for design and IRA documentation
- Concurrently pursuing pipe sealing to keep contaminated groundwater out of stormwater pipe



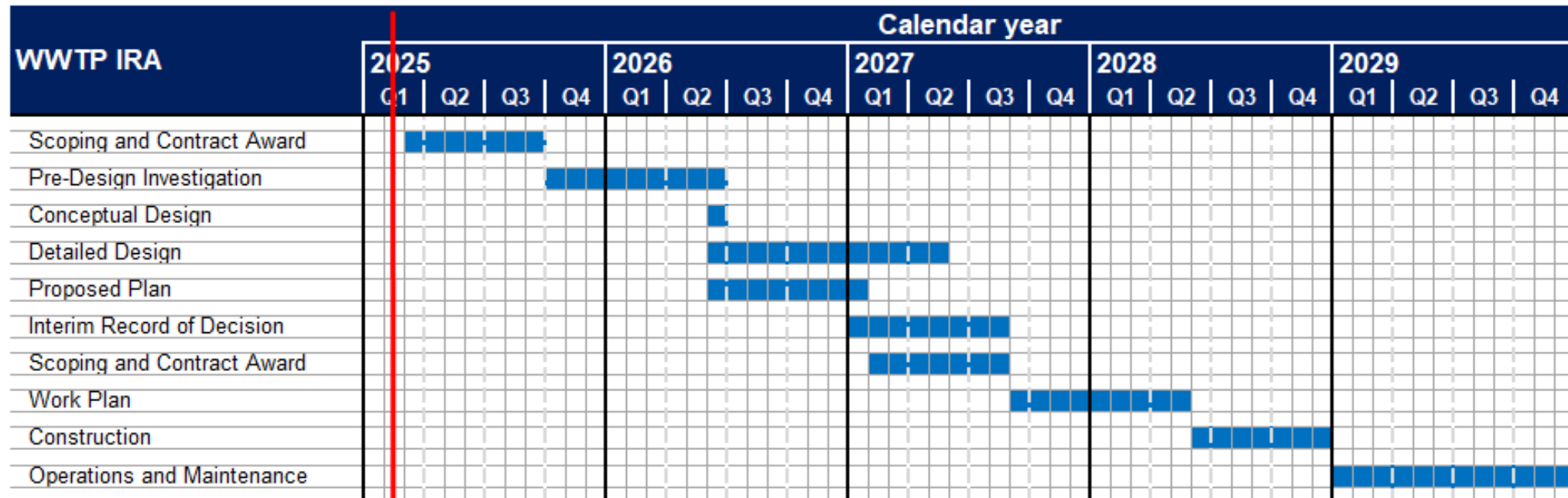
Your Success is Our Mission!



Long Range Forecast Wastewater Treatment Plant IRA



- CPA recommended IRA
- Preparing contract for design and IRA documentation



Your Success is Our Mission!



RAB Business

Your Success is Our Mission!



- **All current Community RAB member terms have expired**
- **Wurtsmith RAB Operating Procedures specifies vacancies are addressed during spring meeting**
- **Current members need to notify RAB Co-Chairs whether they wish to continue serving on RAB by 1 Mar 2025**
- **Continued service will be confirmed during roll call for 19 May 2025 meeting**
- **One Community vacancy exists, applications for new members must be submitted by 7 May 2025 to RAB Co-Chairs**



- **Meeting Standards developed to support quarterly meetings**
- **Draft standards distributed to RAB members for review**
- **Roll call vote on adoption of Meeting Standards May 2025 RAB meeting**



■ Action Items

■ Virtual meetings conducted 30 days after each RAB meeting

- Last meeting – 11 Dec 2024 at 6 p.m.
- Next meeting – 19 Mar 2025 at 6 p.m.

■ Status since 20 Nov 2024 RAB meeting

- Opened 5: 161-166
- Closed 8: 92, 141, 143, 145, 146, 149, 150, 151
- Ongoing 38: 87, 88, 96, 99, 102, 105-106, 109-110, 113, 116, 117, 119-120, 123-124, 131, 133-134, 142, 144, 147-148, 152-166

Air Force Installation & Mission Support Center

Community Involvement Plan



Leigh-Ann Fabianke
Project Manager
19 Feb 2024

Your Success is Our Mission!



Community Involvement Plan



- **Community Involvement Plan (CIP)**
 - **Community input is crucial to the cleanup process**
 - **Identifies a tailored approach to communicating and involving the public in the cleanup process**
 - **Solicits input via survey and interviews**
 - **Utilizing various outreach methods to solicit input**
 - **Other ideas for reaching out to the community?**



How to Participate



- In-person/phone interviews or online/paper surveys
- Interview/survey deadline is March 31, 2025
- Survey link:
www.surveymonkey.com/r/WurtsmithCIP
- Questions? Contact Public Affairs at
1-866-725-7617 or afimsc.pa.workflow@us.af.mil



Scan for
survey

Your Success is Our Mission!



RAB Member Questions

Your Success is Our Mission!



Public Comment Period



Guidelines

- 01** | **Indicate you want to make a comment (follow guidance)**
- 02** | **Wait until the facilitator states you can start your comment**
- 03** | **Three minute time limit**

Your Success is Our Mission!



Public Comments

Your Success is Our Mission!



Conclusion

Your Success is Our Mission!



Upcoming RAB Meeting



- **Future RAB meeting schedule**

- **21 May 2025**
- **20 Aug 2025**
- **19 Nov 2025**
- **18 Feb 2026**

Your Success is Our Mission!



Adjournment

Your Success is Our Mission!



Your Success is Our Mission!



Backup



Restoration Advisory Board Rules



01	Respect one another and maintain an atmosphere of open dialogue and exchange of ideas
02	Use our time together efficiently, wisely and respectfully
03	Speak clearly and succinctly one person at a time; avoid interrupting others
04	Listen and remain open to different points of view
05	Maintain a propensity for progress: prepare, discuss, document and move forward
06	Share information early, openly and honestly
07	Accurately and objectively relay to others the discussions that occur at board meetings

Your Success is Our Mission!



Acronyms

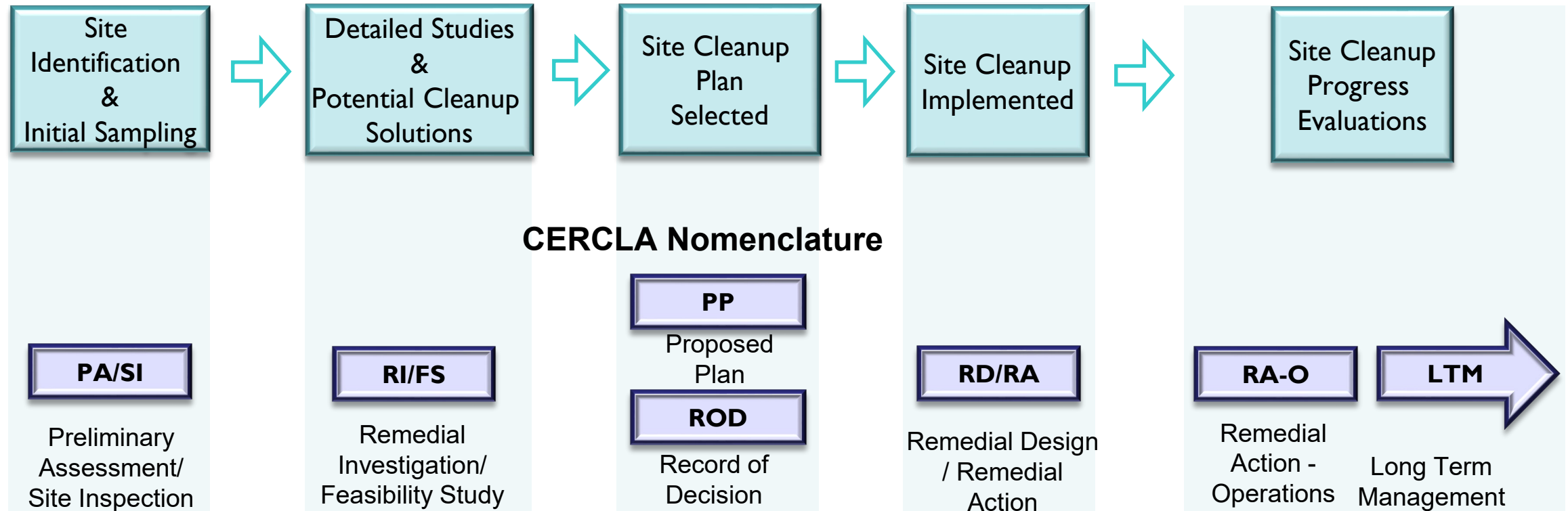


AAA	Alert Aircraft Area	PSG	passive soil gas
AFB	Air Force Base	PTS	pump and treatment system
AFCEC	Air Force Civil Engineer Center	QAPP	Quality Assurance Project Plan
AFFF	aqueous film forming foam	RA	remedial action
AG	Attorney General	RAB	restoration advisory board
ARAR	Applicable or Relevant and Appropriate Requirements	RA-O	remedial action operation
BCT	BRAC Cleanup Team	RD	remedial design
BECOS	BRAC Environmental Construction and Optimization Services	RI	remedial investigation
BOA	base operations area	ROD	record of decision
BRAC	Base Realignment and Closure	RSL	regional screening level
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	SI	site inspection
CSM	conceptual site model	TAPP	Technical Assistance for Public Participation
CTS	Central Treatment System	TCRA	time critical removal action
DAF	Department of the Air Force	USEPA	U.S. Environmental Protection Agency
DOD	Department of Defense	VEL	Van Etten Lake
DRMO	Defense Reutilization and Marketing Office	VI	vapor intrusion
EGLE	Michigan Dept of Environment, Great Lakes, and Energy	VOC	volatile organic compounds
ESTCP	Environmental Security Technology Certification Program	WRD	Water Resources Division
FS	feasibility study	WWTP	wastewater treatment plant
IRA	interim remedial action	µg/kg	micrograms per kilogram
IROD	interim record of decision		
LTM	long-term management		
MCL	Maximum Contaminant Levels		
MDHHS	Michigan Department of Health and Human Services		
MDNR	Michigan Department of Natural Resources		
MMRP	Military Munitions Response Program		
NCP	National Contingency Plan		
ng/L	nanograms per liter		
PA	preliminary assessment		
PAL	project action limit		
PFAS	per-and polyfluoroalkyl substances		
PFOA	perfluorooctanoic acid		
PFOS	perfluorooctane sulfonate		
PFHxS	perfluorohexane sulfonic acid		
PFNA	perfluorononanoic acid		
PP	proposed plan		

Your Success is Our Mission!



CERCLA Overview



Your Success is Our Mission!