

Air Force Installation & Mission Support Center



Wurtsmith Restoration Advisory Board Meeting

Steven Willis

AFCEC/CIBC

21 August 2024

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Classification



The classification of the brief is unclassified



Agenda



- **Welcome and introductions**
- **Restoration Advisory Board (RAB) member updates**
- **RAB business update**
- **Updates on the per- and polyfluoroalkyl substances (PFAS) remedial investigation (RI), Alert Aircraft Area (AAA) interim remedial action (IRA)**
- **RAB member questions**
- **Public comment**
- **Conclusion – RAB Co-Chairs' closing remarks**



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

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Site Map



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RAB Updates

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- **Military Munitions Response Program RI fieldwork postponed to resolve access and vegetation cutting requirements with Michigan Department of Natural Resources**
- **Vapor intrusion RI ongoing**
 - **First and second quarter sub-slab and indoor air sampling reports being added to the administrative record**
 - **Third quarter sampling completed,**
 - Results shared with Michigan Department of Environment, Great Lakes, and Energy (EGLE), Michigan Department of Health and Human Services, Oscoda-Wurtsmith Airport Authority and tenants.
 - Report being prepared
 - **First round of soil gas vapor pin sampling completed, results pending**



Air Force Update



- **Provided tour of Wurtsmith for staffers from Senate Committee on Homeland Security and Government Affairs on 29 May 2024**
 - **Visited Central Treatment System, Three Pipes Ditch and outfall to Au Sable River, FT002, Wastewater Treatment System lagoons and seepage beds, Alert Aircraft Area, and Ken Ratliff Memorial Park**
- **Air Force shared with RAB 26 Jul 2024 the PFAS RI data collected to date**
- **Air Force conducted independent review of AAA IRA**

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- **Air Force conducted tech session on 19 Aug 2024 with the following topics**
 - **MycoNaut presentation on their fungi research for PFAS remediation**
 - **RAB member presentation on foam at Van Etten Lake**
 - **Q&A with the RAB and public**
- **Future RAB meetings**
 - **20 Nov 2024**
 - **19 Feb 2025**
 - **21 May 2025**
 - **20 Aug 2025**



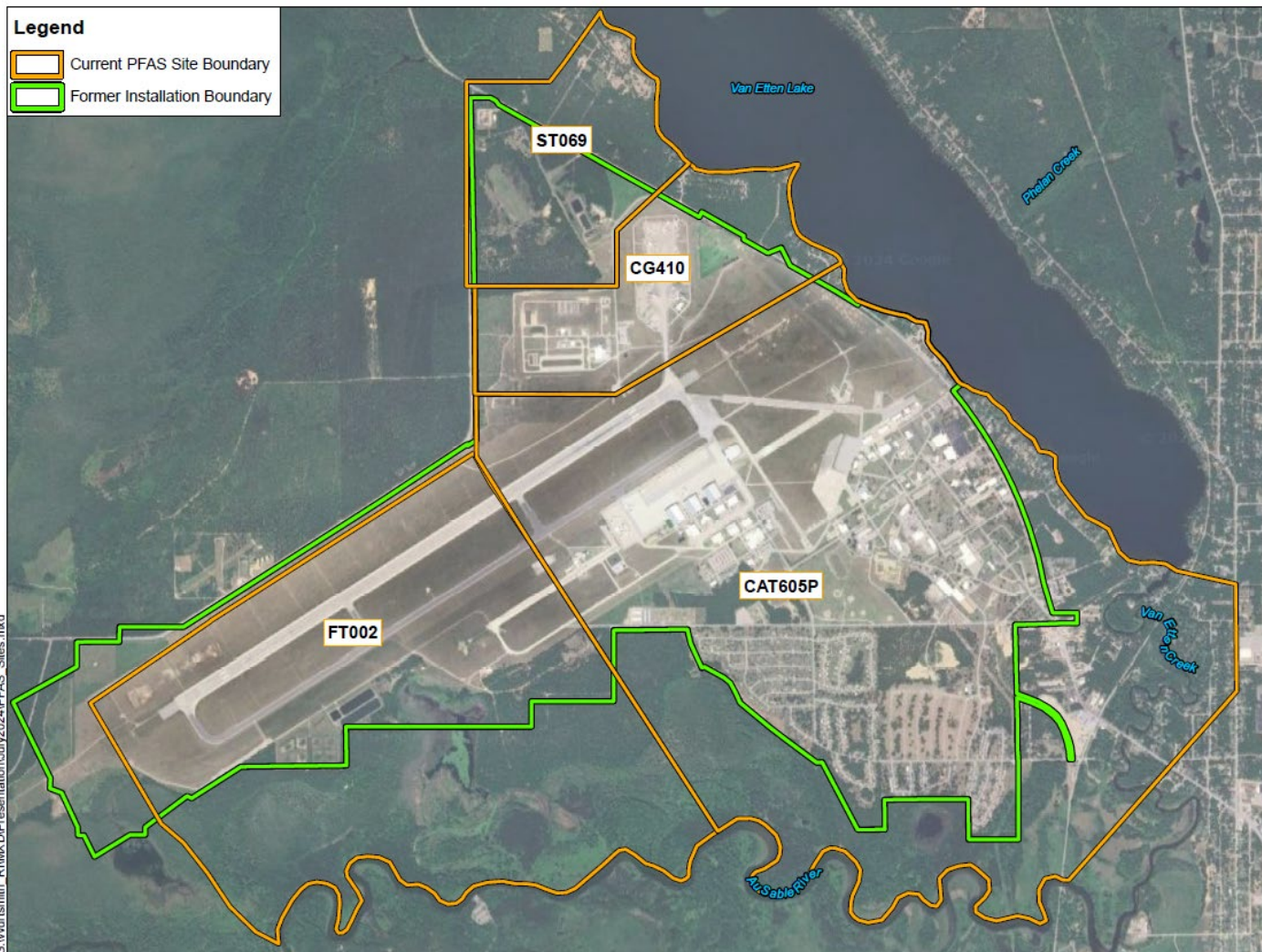
Ongoing PFAS Investigation

- **PFAS data gaps being identified in conjunction with EGLE for follow-on investigation to support the final RI**
 - **List will be shared with the RAB**
 - **Results will be incorporated in addenda to the RI report and risk assessment**
- **Comprehensive data set will be used for feasibility study to evaluate remedial action alternatives for PFAS**
- **Preferred final remedies will be identified in proposed plan(s)**
- **Selected remedies will be documented in record(s) of decision before implementation**

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Wurtsmith AFB PFAS Sites



- Site boundaries in RI report
- Subject to change as additional data is collected

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BRAC Cleanup Team (BCT) Update



- **May 2024 BCT meeting**
 - **Allonnia presented their Environmental Security Technology Certification Program (ESTCP) technology demonstration project planned for fall 2024 at Wurtsmith**
 - **Uses foam fractionation and super critical water oxidation technologies**
- **Jul 2024 BCT meeting**
 - **2002 decision document for volatile organic compounds (VOCs) and semi-VOCs at site SS057 used aesthetic instead of health-based cleanup criteria**
 - **Air Force plans to evaluate sites SS057, FT002, LF027, OT016, SS006, SS008, and SS021 for application of health-based cleanup criteria instead of aesthetic criteria in decision documents**

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MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

EGLE Updates

Amy Handley

Project Manager

RRD, Superfund Section

Handleya@michigan.gov | 517-898-3356

Recent EGLE RRD Activities

- May and August BCT Meetings
- Present for site visit with the Committee on Homeland Security & Government Affairs staff
- Received third quarter vapor pin and indoor air data
- Reviewed Draft AAA IRA IROD and provided comments to the Air Force
 - Internal discussions with AG and WRD for ARARs
- Reviewed AAA IRA Draft Work Plan, provided comments to the Air Force
- Internal discussions with technical staff on the RI data in preparation for building scope for data gap investigation.

Upcoming Activities

- Data review for completed RI work, discussion with Air Force
- Continue to review the VI immediate work plan data and discuss with MDHHS
- Collaborate with local health, district office staff, and MDHHS on solutions for homes on municipal water and have a well (well abandonment)
- EGLE contractors coming onboard and reevaluating historic information
- Additional documents for review
 - Backchecks for MMRP QAPP, SS-72 FS, and Five-Year Review. Review for LTM and RA-O annual reports, BECOS QAPP Addendum, AAA IRA QAPP, PFAS RI Report (with Risk Assessment), VI QAPP Addendum



RAB Member Updates



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RAB Business

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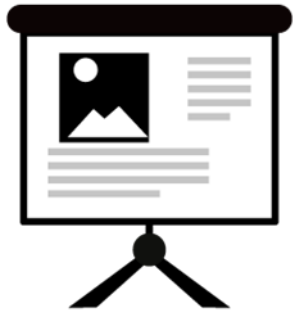


■ Action Items

- List distributed to RAB prior to meeting
- Virtual meeting conducted 12 Jun 2024 at 6:00 pm eastern time to review action items
- Next virtual meeting planned for 18 Sep 2024 at 6:00 pm eastern time to review action items
- Status since last RAB meeting
 - Opened: 148-152 (5 total)
 - Closed: 100, 122, 127, 128, 137, 139, 140 (7 total)
 - Ongoing: 87, 88, 92, 96, 99, 102, 104A-D, 105-106, 109-110, 113, 116, 117, 119-120, 123-125, 131, 133-134, 141-147 (37 total)



Presentation:



Former Wurtsmith Air Force Base

Per- and Polyfluoroalkyl Substances
Remedial Investigation and Interim
Remedial Action Update

Paula Bond
Aerostar SES LLC
Project Manager
21 August 2024

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■ **RI Report includes**

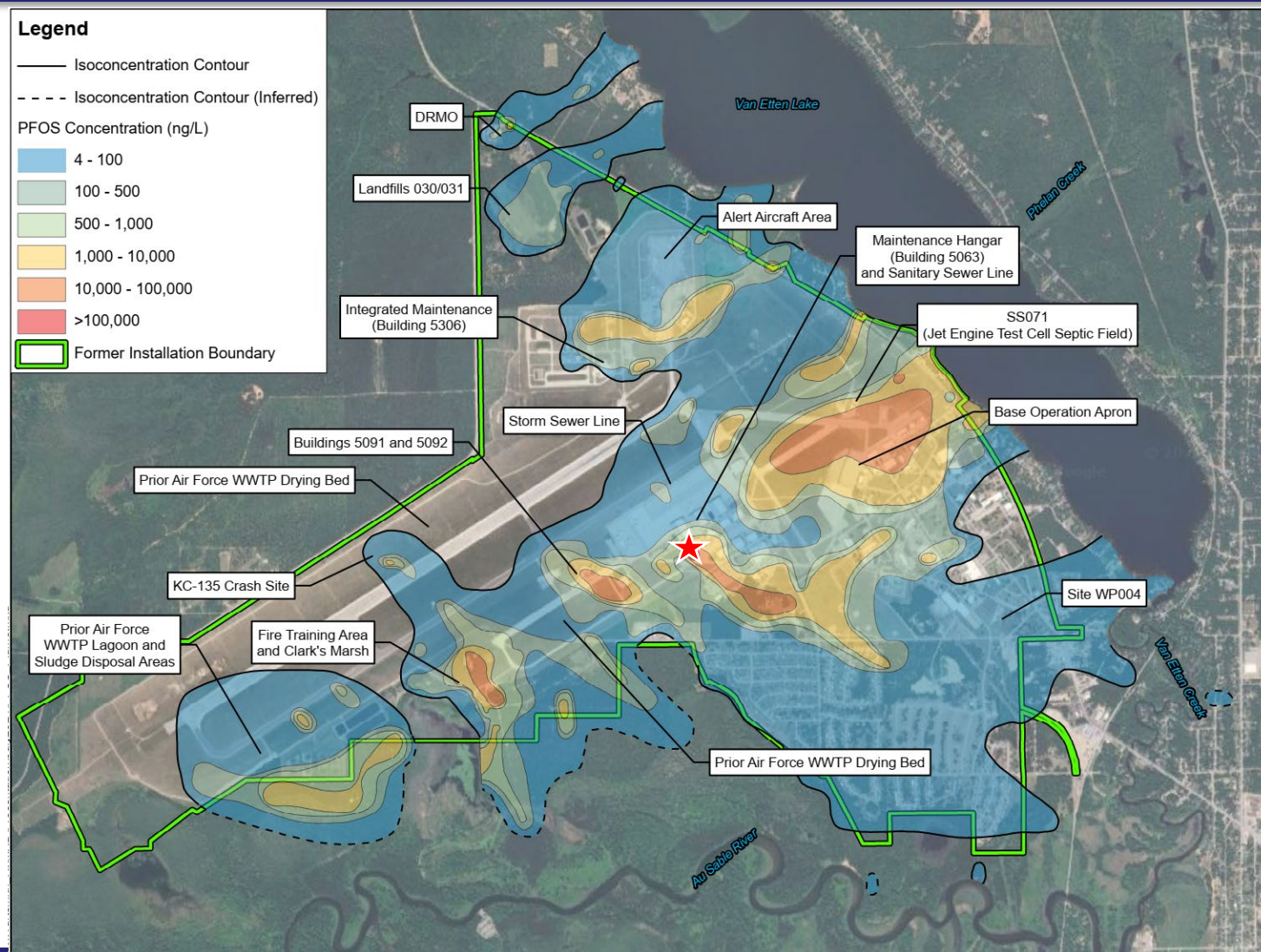
- A description of RI sampling activities
- Updates to the conceptual site model (CSM) with a stand-alone CSM report
- Human health and ecological risk assessments
- Groundwater fate and transport modeling
- Evaluation and interpretation of the data collected
- Identification of data gaps
- Conclusions and recommendations



PFAS RI Update Groundwater

■ PFOS Plume

- 4.34 square miles > 4 ng/L*
- Extends to the confining clay layer at concentrations above 4 ng/L
- Highest concentration in shallow groundwater of **121,000 ng/L** near the Maintenance Hangar



* Groundwater delineation value is the November 2023 US Environmental Protection Agency (USEPA) Regional Screening Level (RSL)

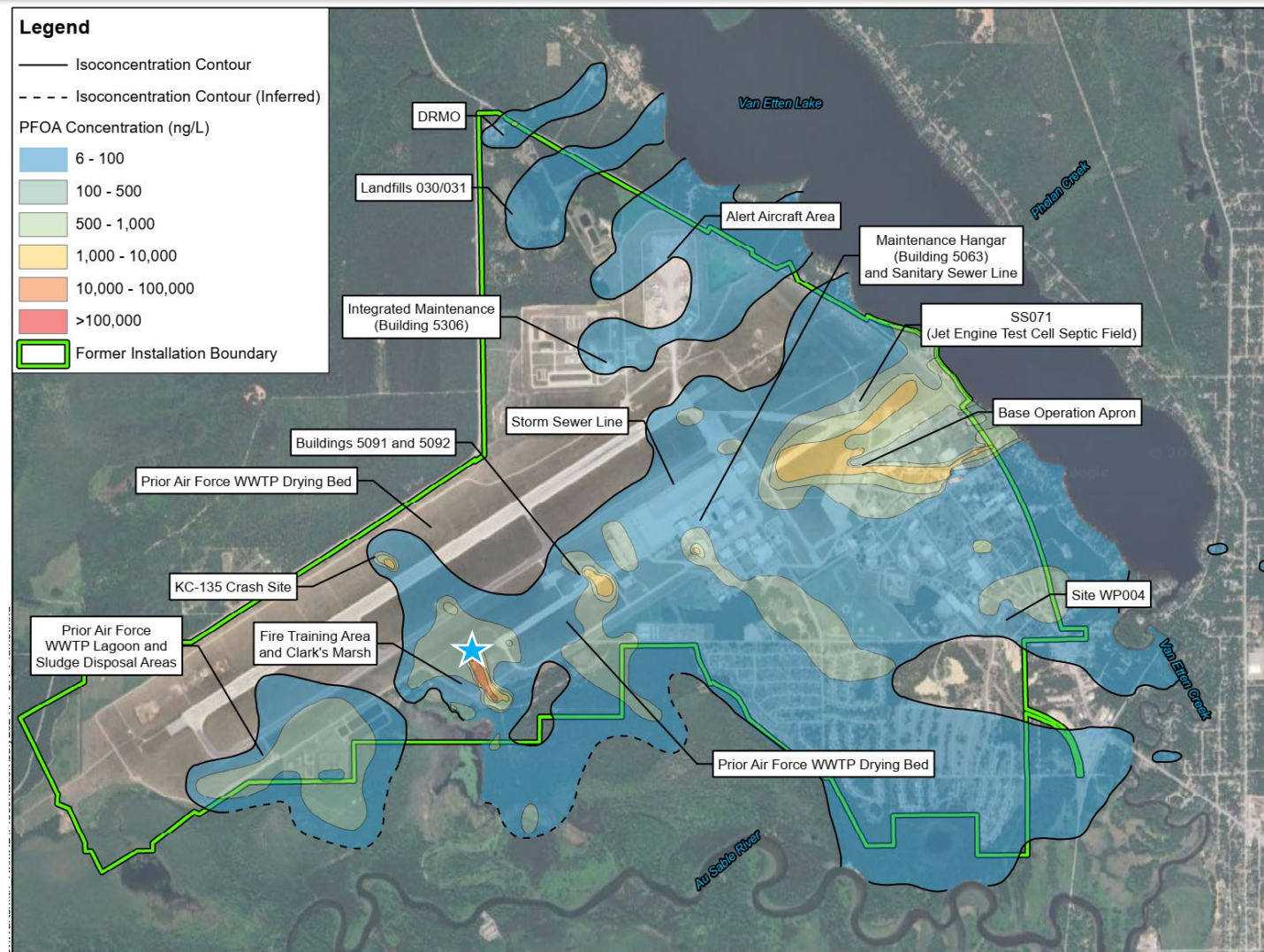
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PFAS RI Update Groundwater

■ PFOA Plume

- 4.22 square miles >6 ng/L*
- Extends to the confining clay layer at concentrations above 6 ng/L
- Highest concentration in shallow groundwater of **11,500 ng/L** at FT002



* Groundwater delineation value is the November 2023 USEPA RSL

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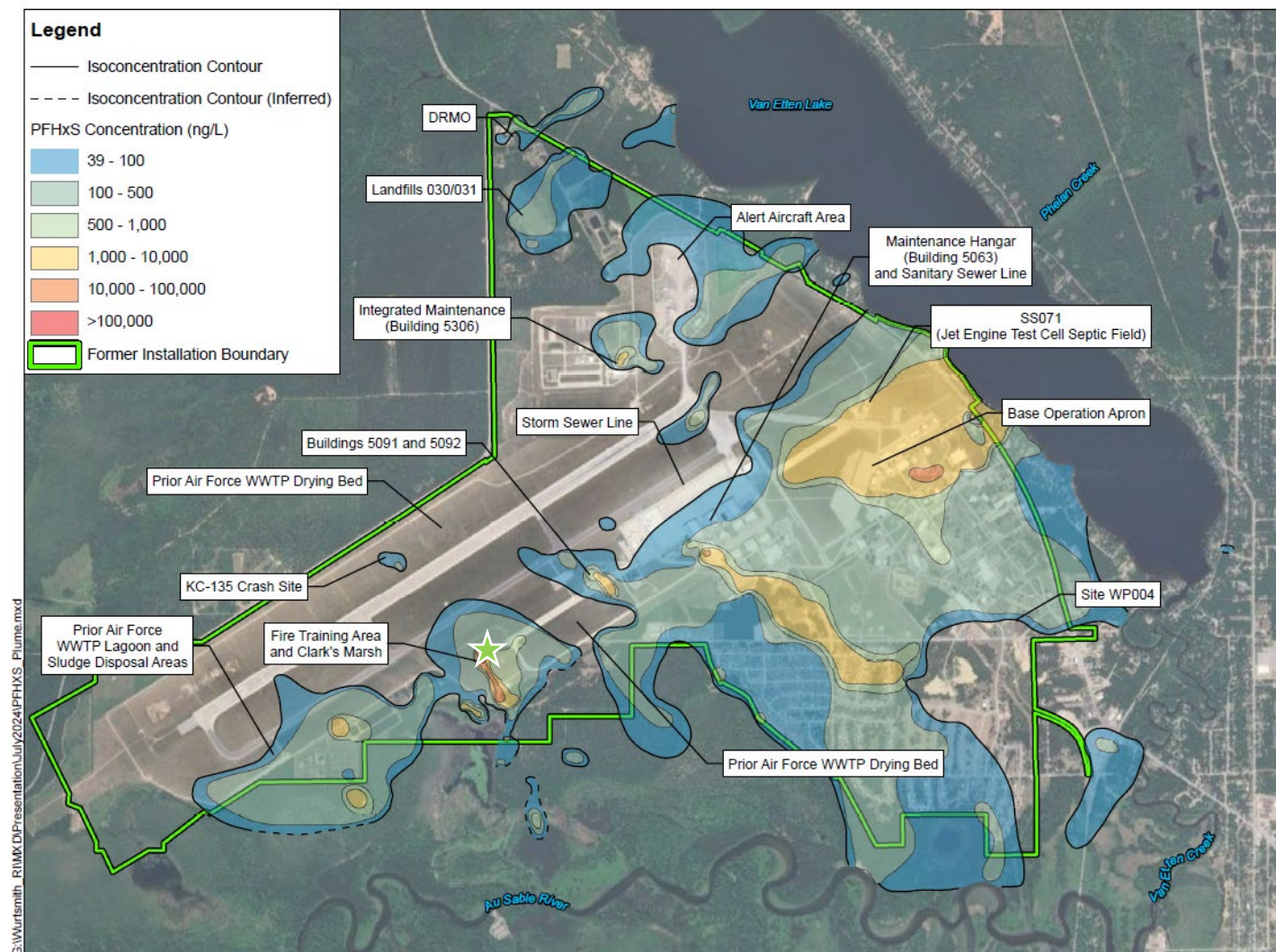


PFAS RI Update Groundwater



■ PFHxS Plume

- 2.96 square miles >39 ng/L*
- Extends to the confining clay layer at concentrations above 39 ng/L
- Highest concentration in shallow groundwater of **21,600 ng/L** at FT002



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* Groundwater delineation value is the November 2023 USEPA RSL

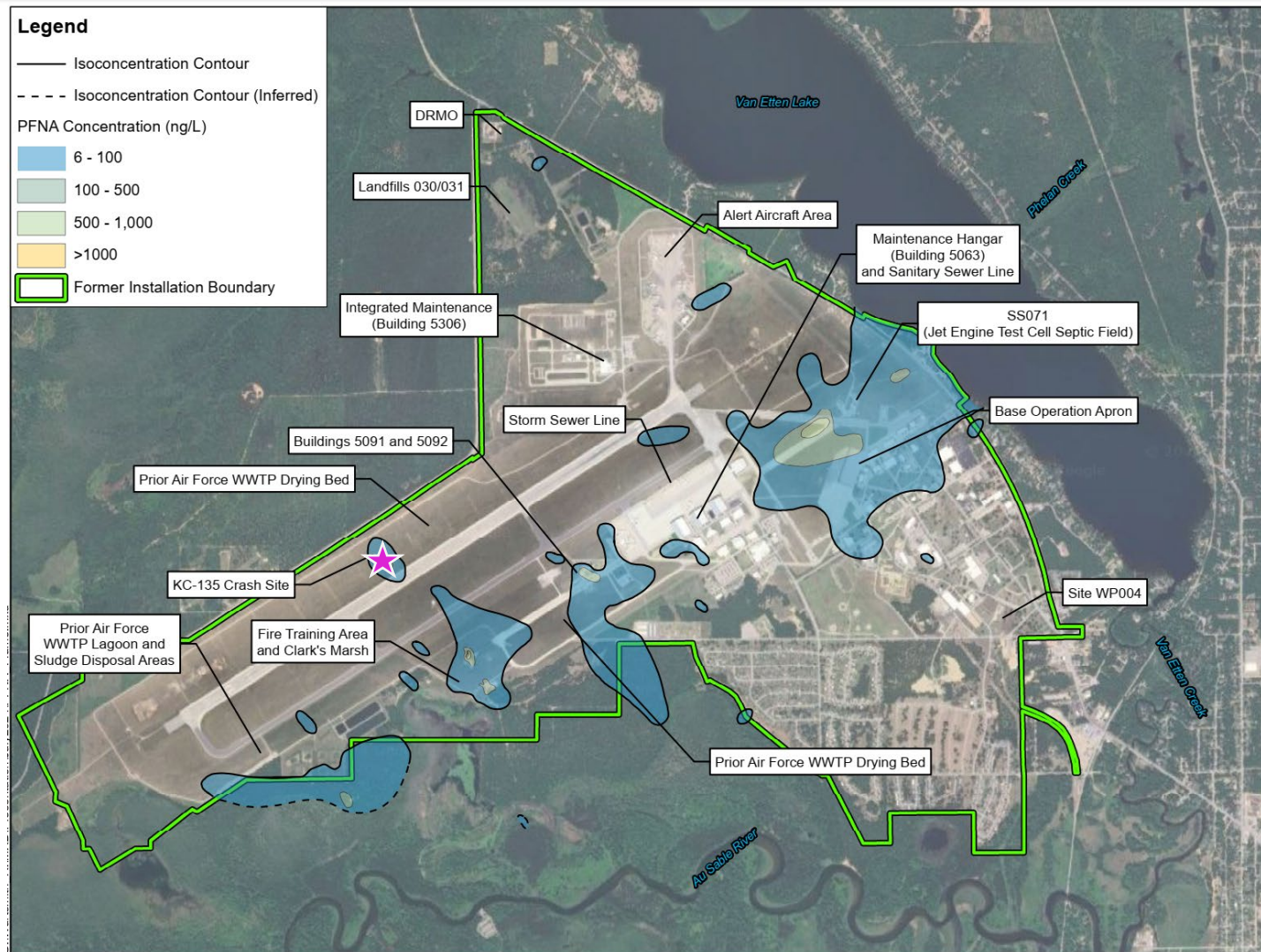
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PFAS RI Update Groundwater

■ PFNA Plume

- 0.8 square miles > 6 ng/L *
- Extends to the confining clay layer at concentrations above 6 ng/L
- Highest concentration in shallow groundwater of **287 ng/L** at KC-135 Crash Site



*Groundwater delineation value is the EGLE Rule 299.44 generic groundwater cleanup criteria

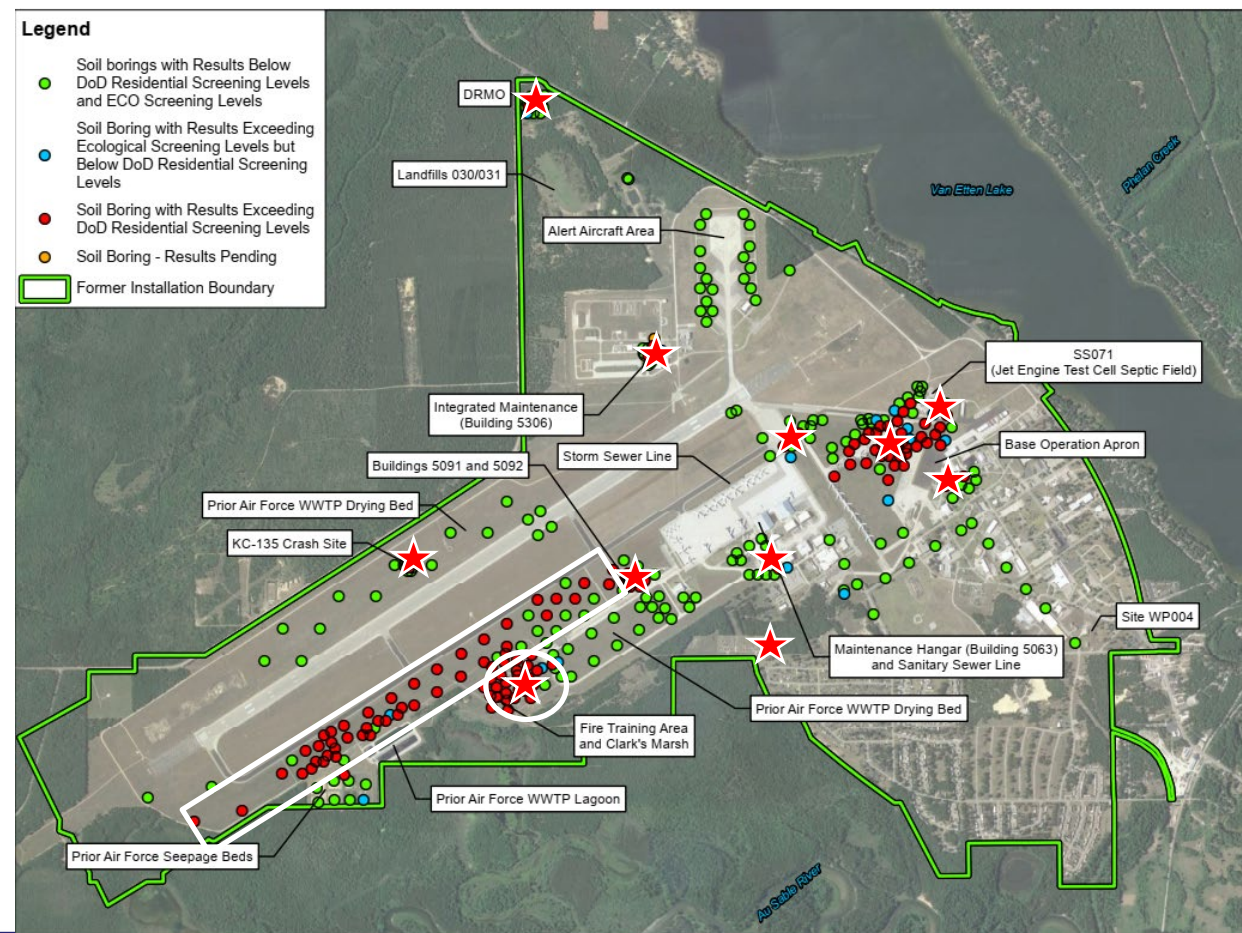
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PFAS RI Update Soil

- **PFOS detected above the 13 $\mu\text{g}/\text{kg}$ * at**
 - Defense Reutilization Marketing Office (DRMO)
 - Integrated Maintenance
 - Base Operations Area (BOA)
 - Site SS071
 - Maintenance Hangar
 - Buildings 5091 & 5092
 - KC-135 Crash Site and the location where the KC-135 wreckage was temporarily stored
 - Prior AF Wastewater Treatment Plant (WWTP) Drying Beds and Seepage Beds
 - FT002

- Highest concentration of **1,700 $\mu\text{g}/\text{kg}$** at FT002 (removed during FT002 TCRA)



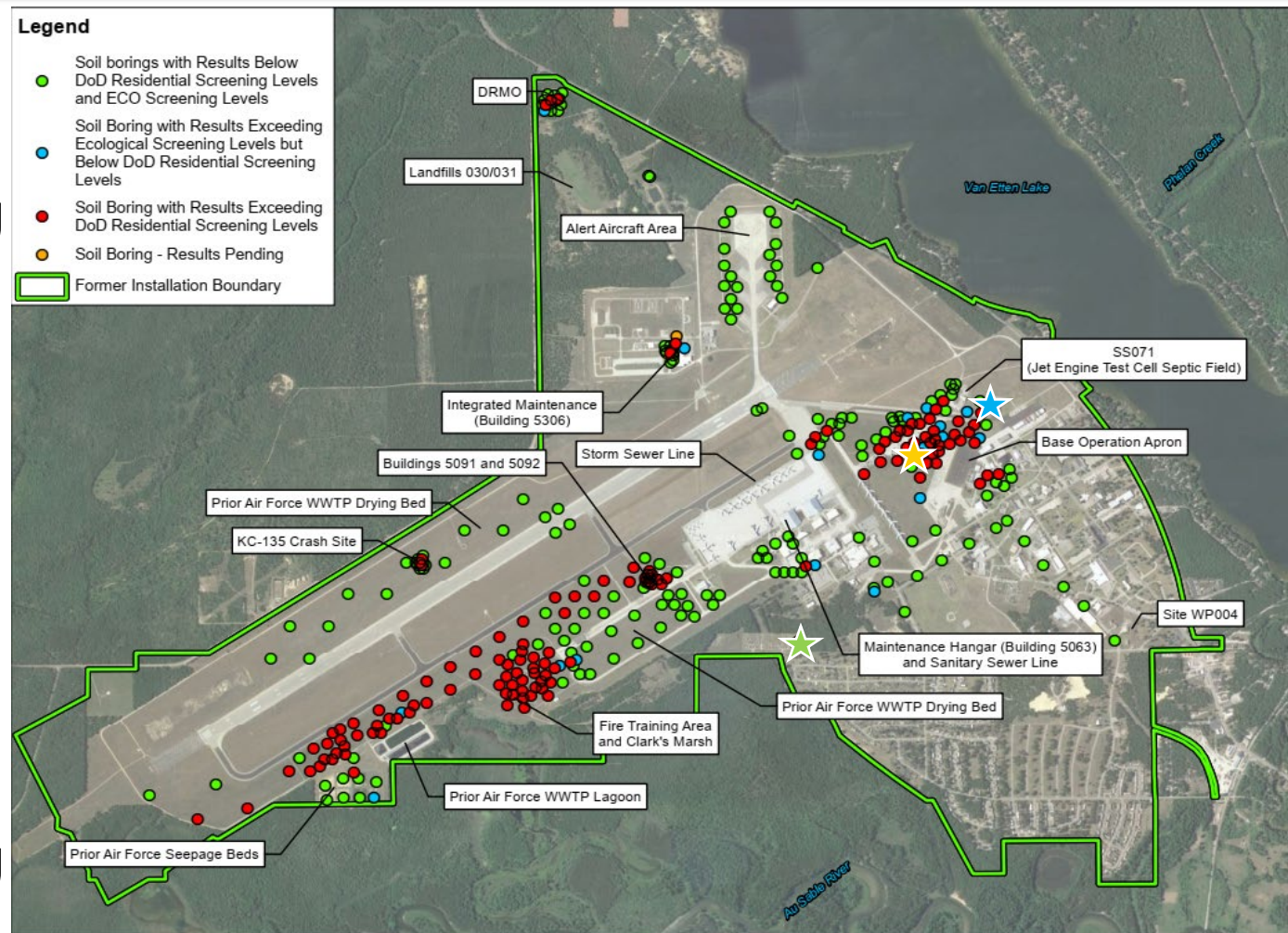
*Soil delineation value for human health is the November 2023 USEPA RSL

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PFAS RI Update Soil

- **PFOA not detected above 19 µg/kg***
 - Highest concentration of **13.2** µg/kg at BOA
- **PFHxS not detected above 130 µg/kg***
 - Highest concentration of **42** µg/kg at Site SS071
- **PFNA not detected above 19 µg/kg***
 - Highest concentration of **15.8** µg/kg at KC-135 Fuselage Storage Area



*Soil delineation values for human health are the November 2023 USEPA RSLs

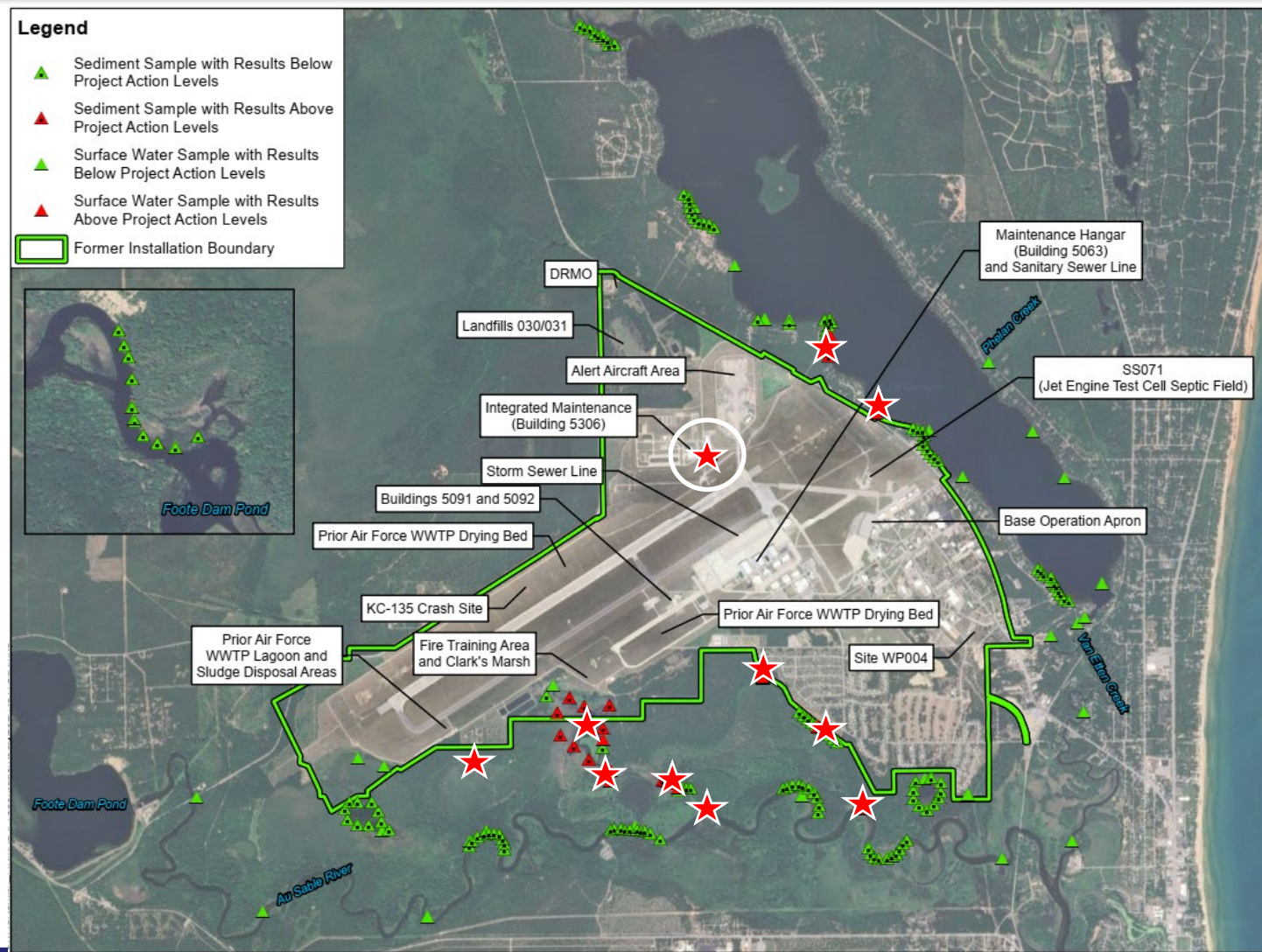
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PFAS RI Update Surface Water

- **PFOS detected above 12 ng/L* at**
 - Van Etten Lake
 - Integrated Maintenance AFFF Retention Pond
 - Au Sable River
 - Ponds 1, 2, and 3 in Clark's Marsh
 - Three Pipes Ditch
 - Clark's Marsh south of the WWTP
- **Highest concentration of 3,400 ng/L at IM AFFF Retention Pond pond**
- **Not detected above 12 ng/L* at**
 - Duell Lake, Allen Lake, or Van Etten Creek

*Surface water delineation value is EGLE Rule 323.1057 Water Quality Standards



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PFAS RI Update Surface Water

■ PFOA detected above 170 ng/L*

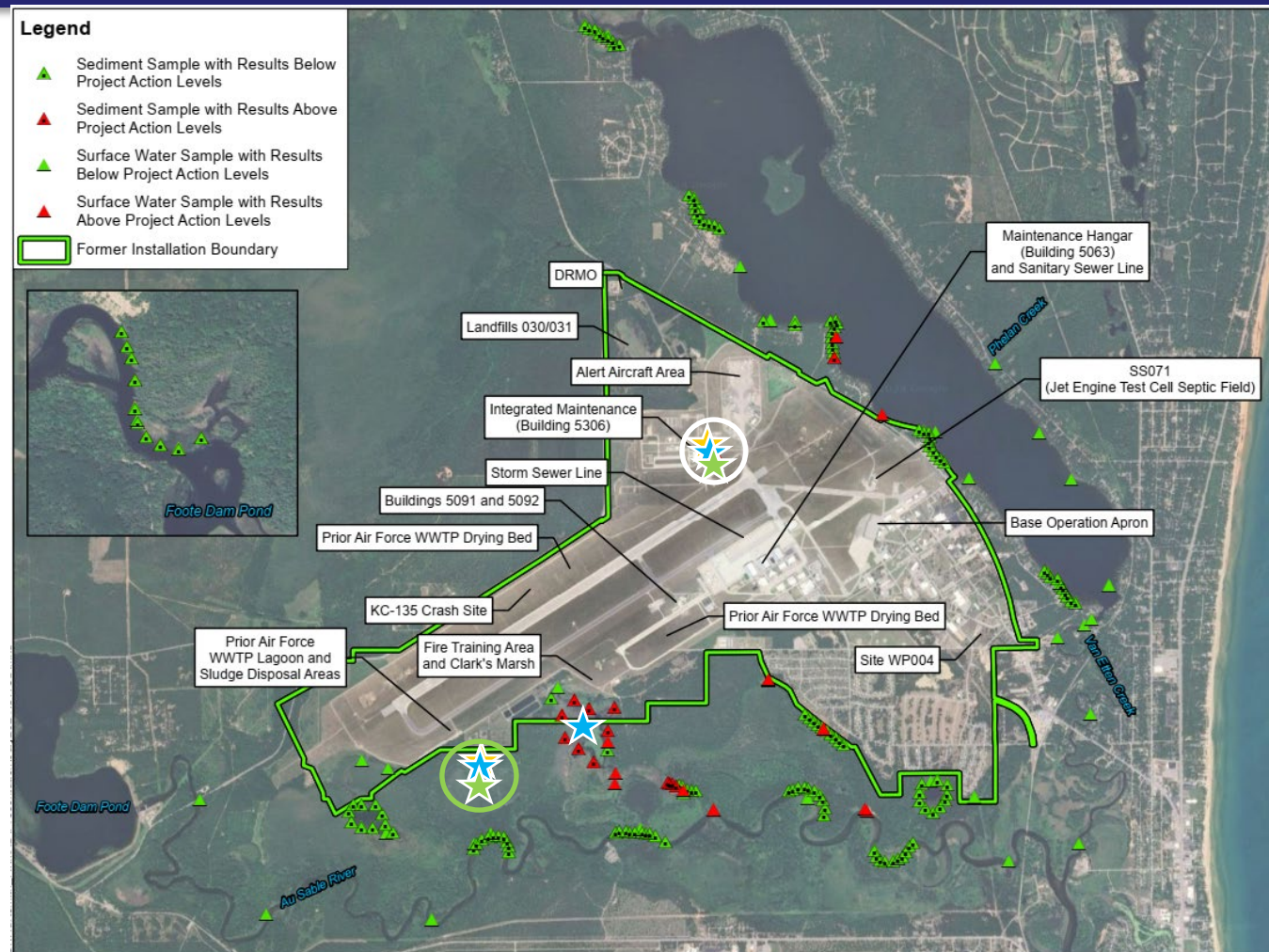
- Integrated Maintenance AFFF retention pond and Clark's Marsh south of the WWTP
- Highest concentration of **201** ng/L in Integrated Maintenance AFFF retention pond

■ PFHxS detected above 210 ng/L*

- Pond 1 in Clark's Marsh, Integrated Maintenance AFFF retention pond, and Clark's Marsh south of the WWTP
- Highest concentration of **621** ng/L in Integrated Maintenance AFFF retention pond.

■ PFNA detected above 30 ng/L*

- Integrated Maintenance AFFF retention pond and in Clark's Marsh south of the WWTP
- Highest concentration of **119** ng/L in Clark's Marsh south of the WWTP



*Surface water delineation values are EGLE Rule 323.1057 Water Quality Standards

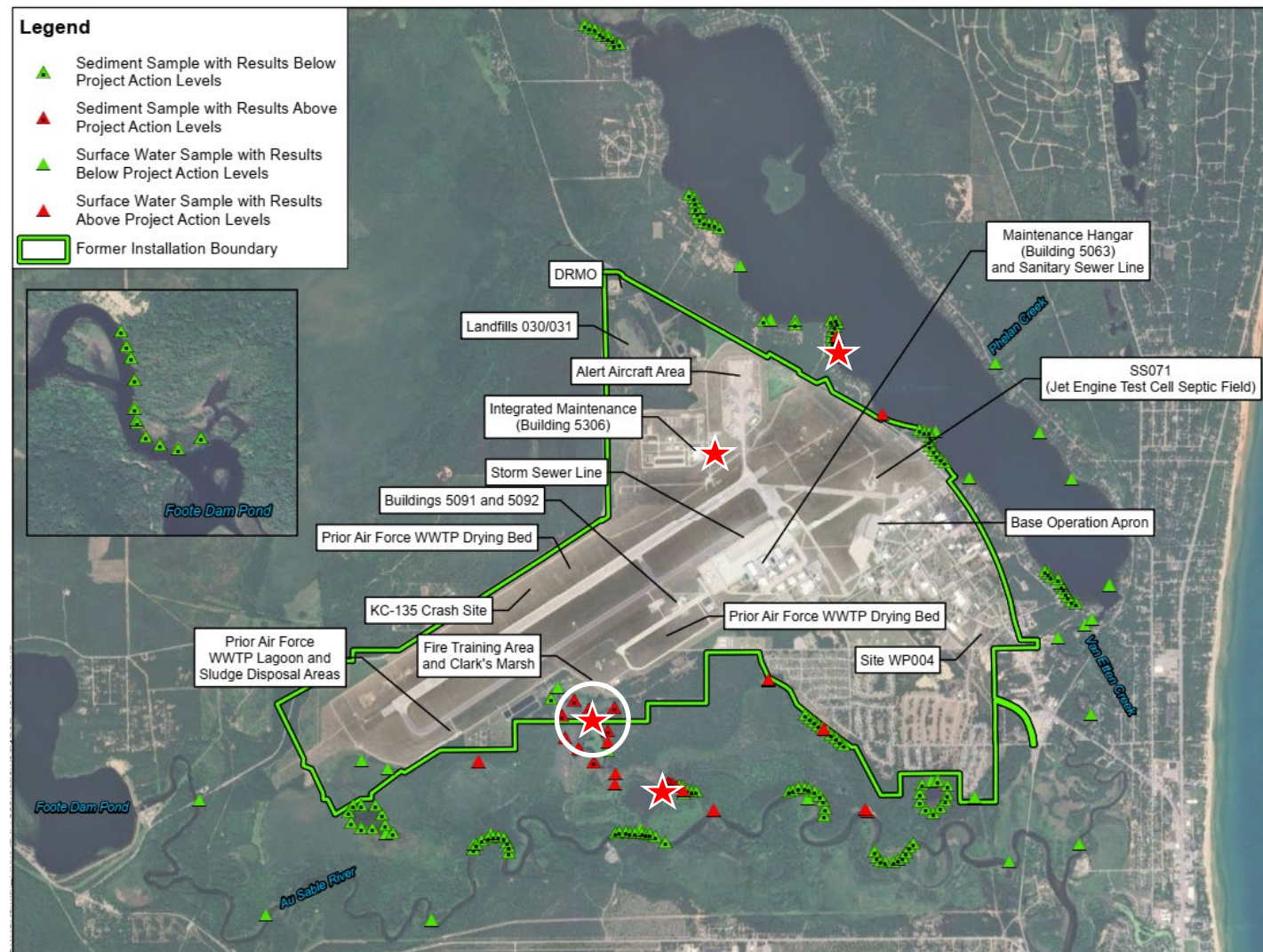
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PFAS RI Update Sediment

- **PFOS detected above 15 µg/kg***
 - Ponds 1 and 2 in Clark's Marsh (13 sediment locations)
 - Van Etten Lake (1 sediment location)
 - Integrated Maintenance AFFF retention pond (1 sediment location)
 - Highest concentration of **496 µg/kg** at Pond 1 in Clark's Marsh
- **PFOA not detected above the PAL of 23 µg/kg***
- **PFHxS not detected above the PAL of 130 µg/kg***
- **PFNA not detected in sediment**

*Sediment delineation value for human health developed using USEPA RSL calculator



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PFAS RI Update



■ **Ongoing Activities**

- **Transducers that are collecting water level data will continue through November 2024**
 - Transducers were downloaded in May and June and water level data to date have been included in the CSM update.
- **Submit Draft RI Report to Air Force late August 2024 for review**

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Alert Aircraft Area Interim Remedial Action



- Construction began on 29 July 2024



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Alert Aircraft Area Interim Remedial Action

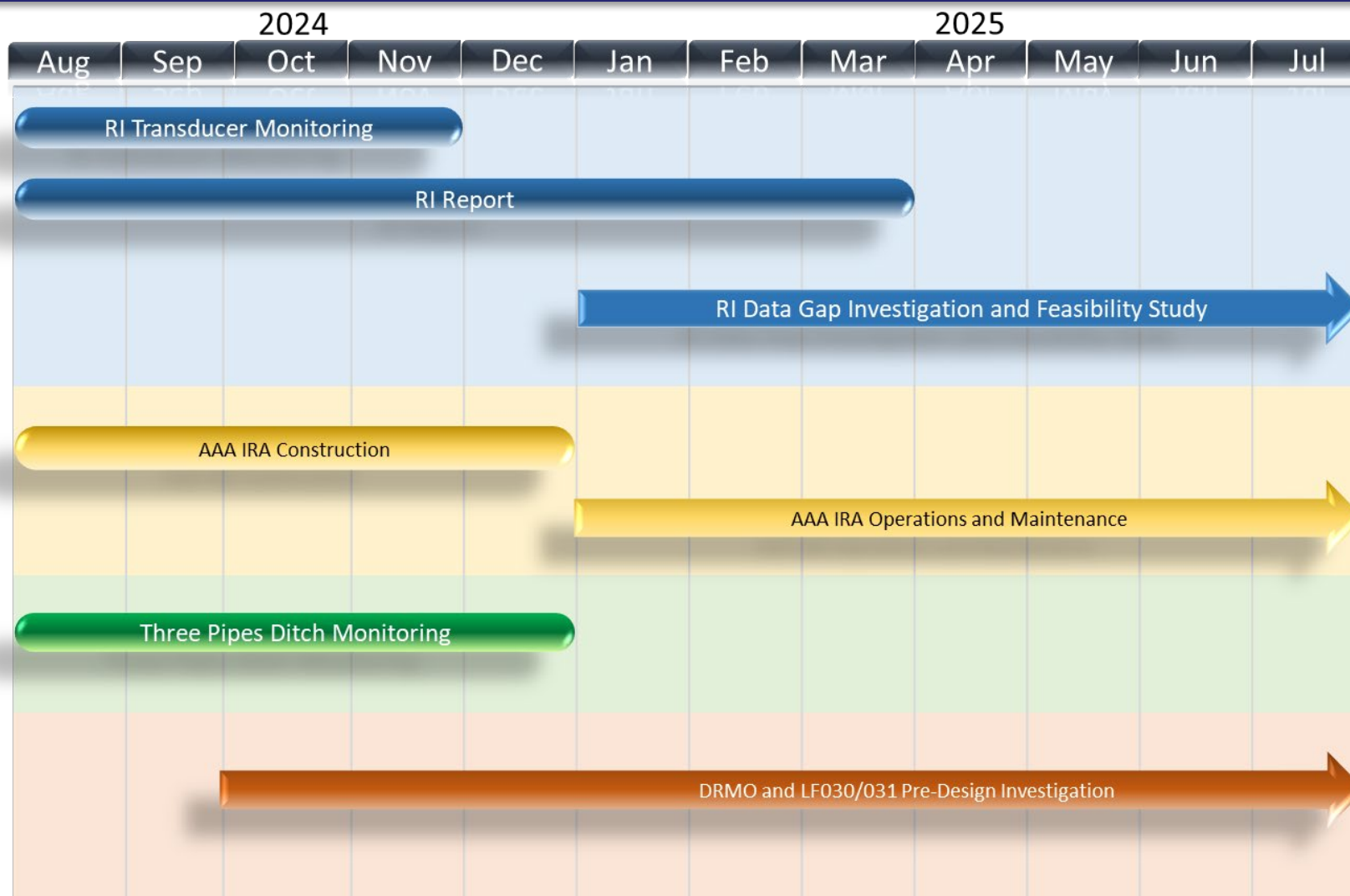


- ***The *Final Interim Record of Decision (IROD)* for the Alert Aircraft Area at Swise Road Interim Remedial Action was signed on 26 July 2024***
- **The IROD which includes the Responsiveness Summary is available electronically on-line at <https://ar.afcec-cloud.af.mil/> and available in hard copy at:**

**Robert J. Parks Public Library
6010 Skeel Avenue
Oscoda, Michigan 48750**



One Year Forecast

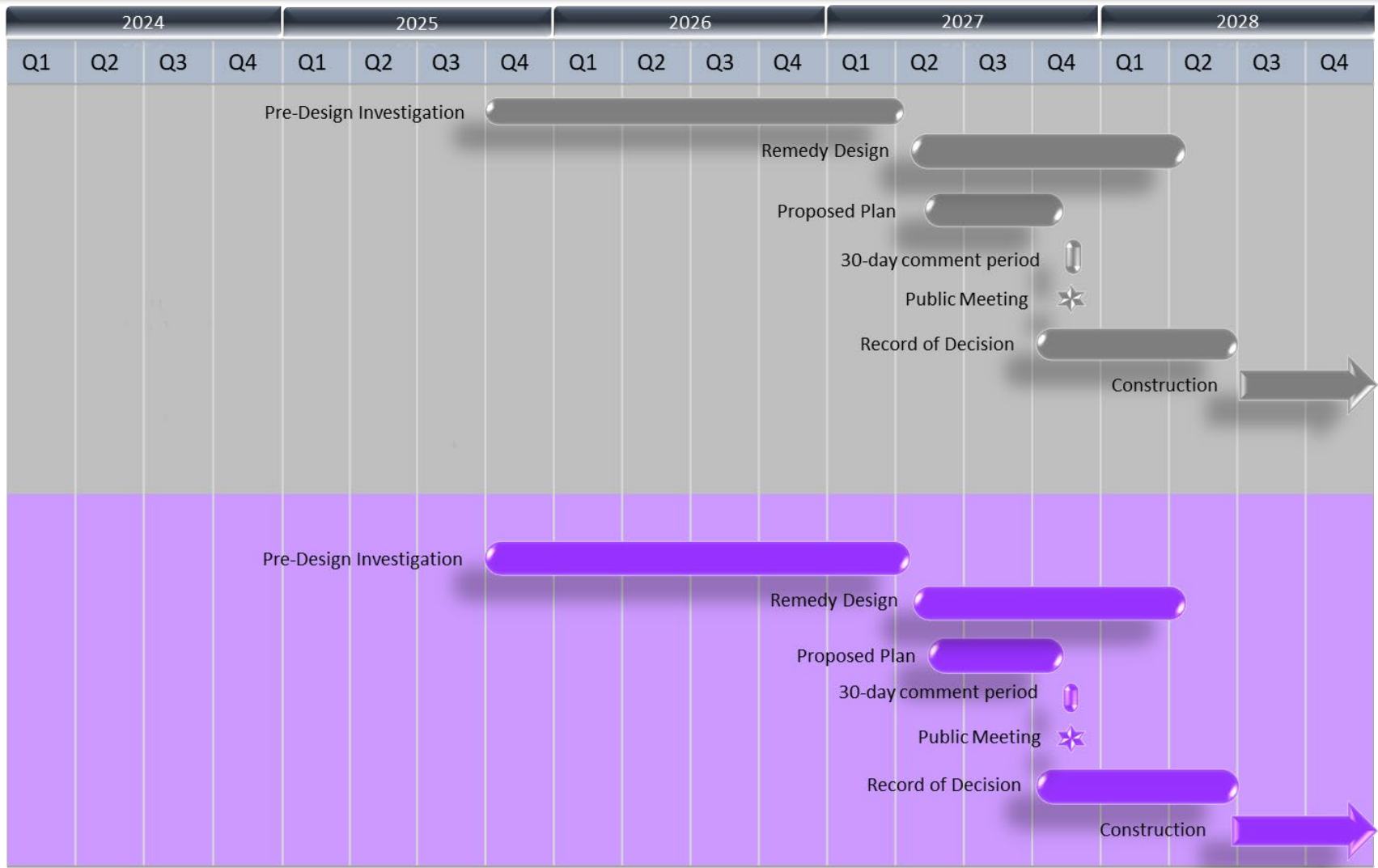


- = PFAS RI/FS Activity
- = AAA IRA Activity
- = Pilot Study Activity
- = DRMO and LF030/031 IRA Activity

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Five Year Forecast



- Three Pipes Ditch IRA Activity
- Wastewater Treatment Plant (WWTP) IRA Activity

Note: Subject to appropriations



RAB

Member

Questions

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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**
- 04** | **RAB members will confer after your comment to see if a follow-up action is needed**

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Public Comments

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Conclusion and Adjournment

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