

Air Force Civil Engineer Center



Cannon AFB PFAS Public Update

13 May 2025



- **PFAS Investigation**
- **Groundwater Fate and Transport Modeling project**
- **South-East Engineering Evaluation/Cost Analysis – Pilot Study**
- **North Playa Engineering Evaluation/Cost Analysis – Pilot Study**
- **Going Forward**
- **Additional Information**
- **Common Acronyms**



- **Preliminary Assessment (PA) – Completed October 2015**
- **Site Inspection (SI) – Completed August 2018**
- **Off Base SI – Completed September 2018**
- **Remedial Investigation (RI) – In progress**
- **Feasibility Study**
- **Public Participation/Record of Decision**
- **Remedial Design/Remedial Action**
- **Remedial Action Completion Report/Response Complete**



PFAS Remedial Investigation

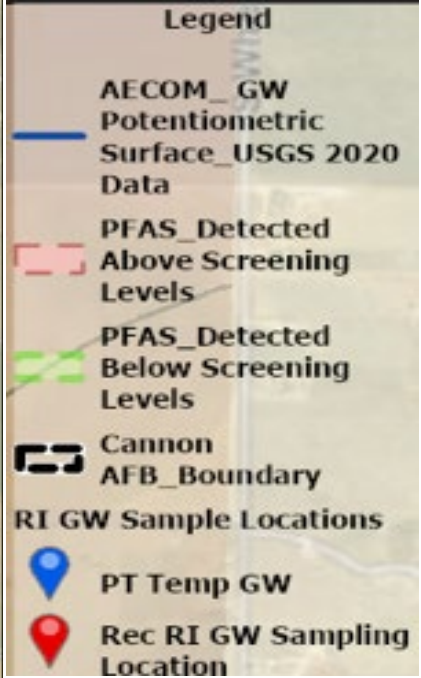
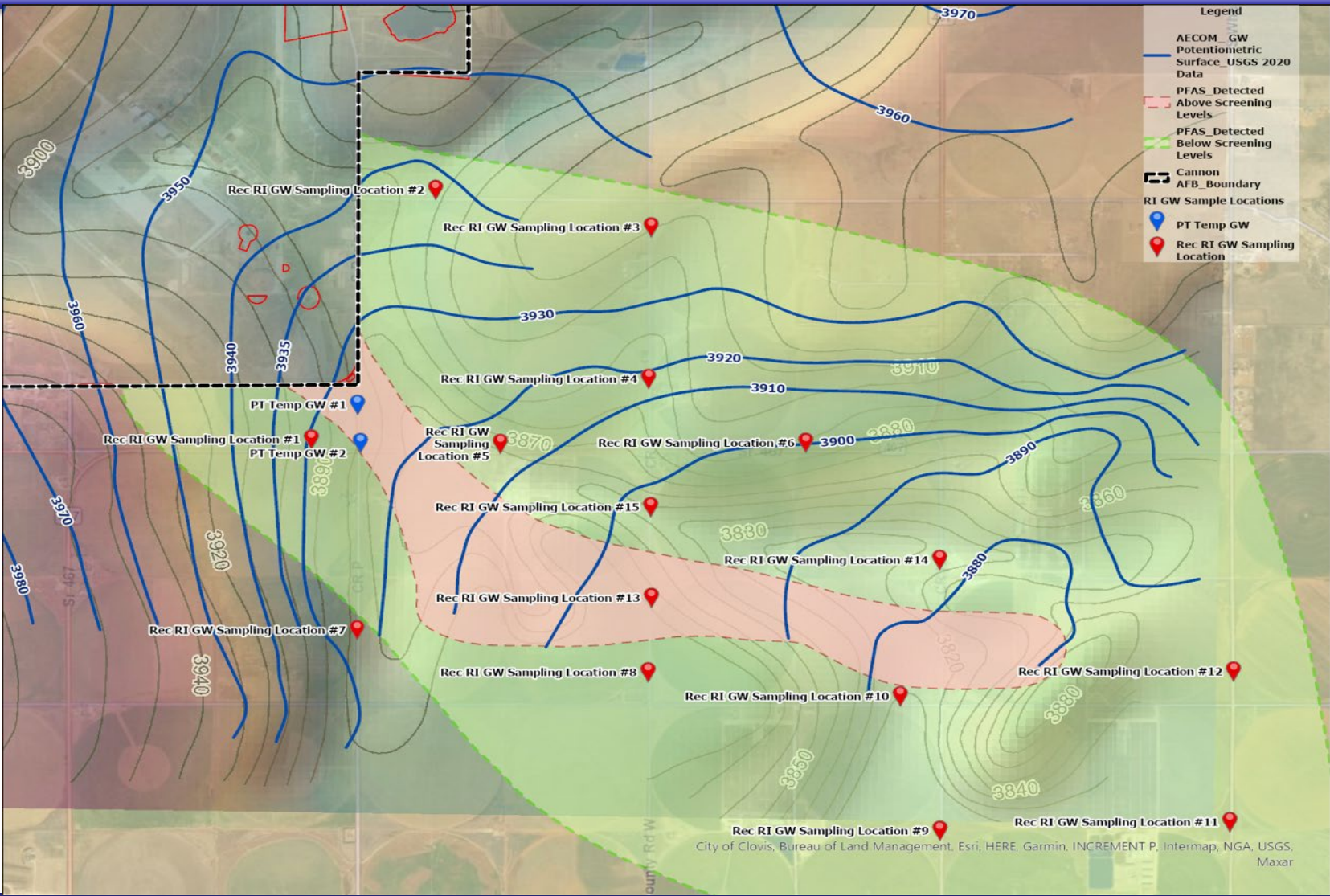


■ Remedial Investigation Status

- August 2020 RI Contract awarded**
- 2022 new EPA Regional Screening Levels (RSLs)**
- 2023 updated EPA RSLs**
- 2024 updated EPA RSLs**
- RI work completed to date:**
 - Soil samples: on Base 1380 – off Base 42**
 - Sediment samples: on Base 12**
 - Surface Water Samples: on Base 12**
 - Groundwater samples: on Base 70 (2 rounds), off Base 42**
 - Currently paused pending access to County Right of Ways for investigation wells.**



PFAS Remedial Investigation





Groundwater Fate and Transport Modeling



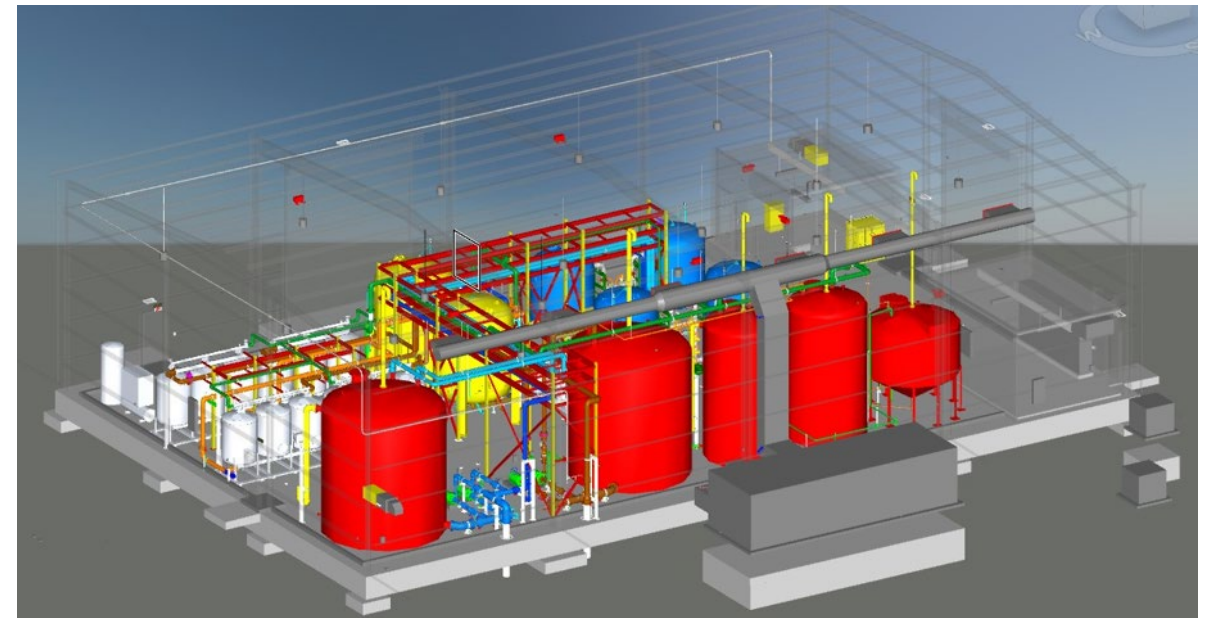
- **Groundwater Modeling**
 - **September 2024 Contract awarded**
 - **October 2024 Kick off meeting completed**
- **This work will support pump-and-treat design for PFAS impacts in groundwater at and near Cannon AFB.**
- **The activities include the following:**
 - **Update the Conceptual Site Model (CSM)**
 - **Develop groundwater flow and contaminant transport models**
 - **Perform predictive modeling to assess potential groundwater remedies**



South-East Engineering Evaluation/Cost Analysis– Pilot Study

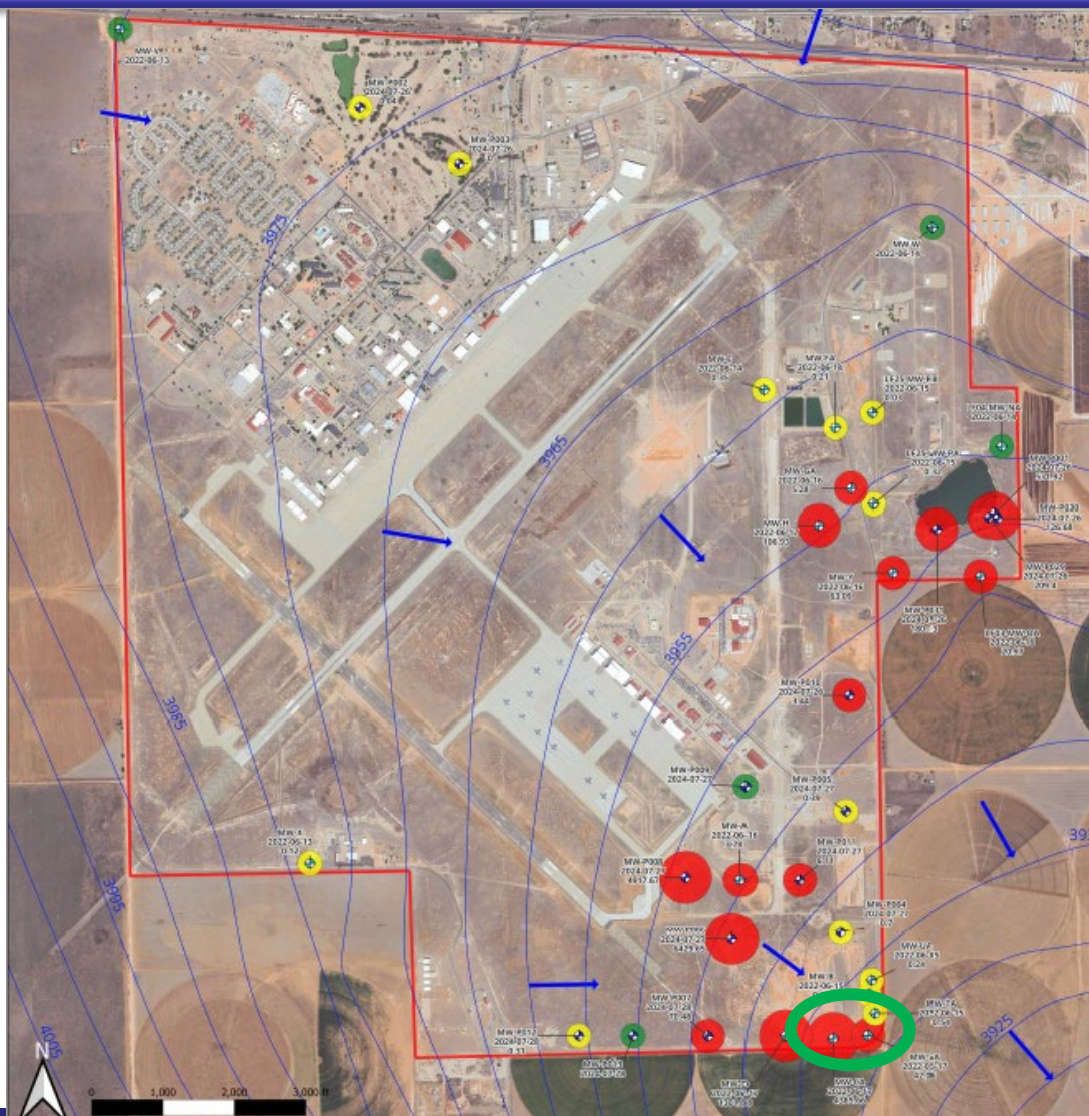


- Award COMPLETED – May 2021
- Initial Site Visit COMPLETED – June 2021
- Kick-Off Meeting COMPLETED – June 2021
- Sampling Event COMPLETED – June 2021
- Treatability Study COMPLETED – December 2021
- Aquifer Test COMPLETED – December 2021
- Design/Work Plan COMPLETED – June 2023
- Construction COMPLETED – April 2025
- Operation Start COMPLETED – May 2025
- EE/CA Final – December 2025
 - 30-day NMED/EPA/Public comment period
 - EE/CA output will determine interim action





South-East Engineering Evaluation/Cost Analysis– Pilot Study



Legend

— Groundwater Elevation (ft amsl)

▭ CAFB Perimeter

⊕ Completed Monitoring Well

⊕ Monitoring Well by Others

⊕ Existing Monitoring Well

➔ Generalized direction of groundwater flow

Detection Status

● No compounds detected

● One or more compounds detected

● One or more compounds exceed project screening levels

Screening Hazard Index Value

● 0 - 1

● 1 - 100

● 100 - 1000

● 1000 - 5433.72

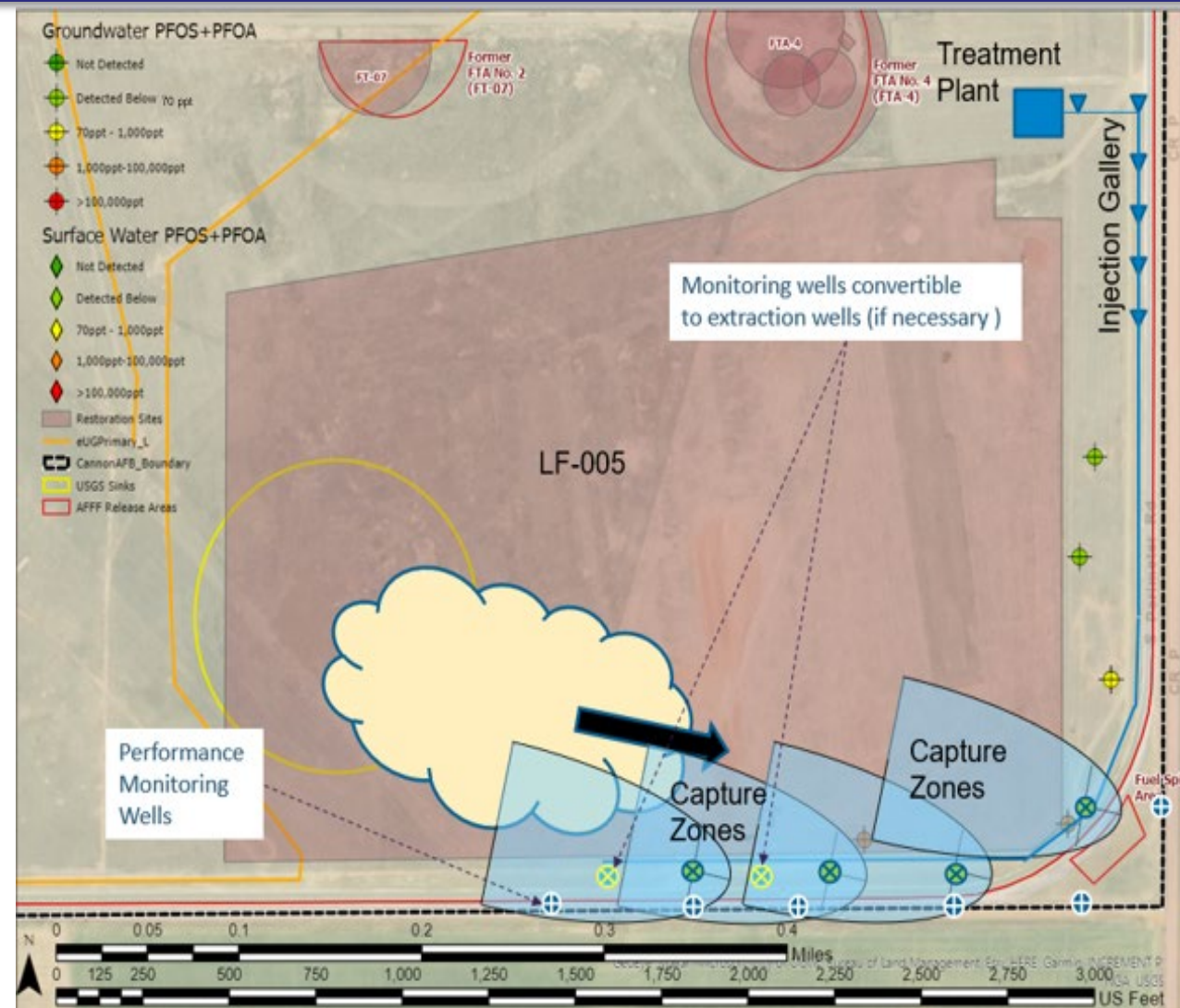
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South-East Engineering Evaluation/Cost Analysis– Pilot Study



- **6 Extraction wells**
 - 4 extraction wells with pumps
 - 2 extraction wells with out pumps for monitoring wells
- **6 Injection wells**



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South-East Engineering Evaluation/Cost Analysis– Pilot Study



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South-East Engineering Evaluation/Cost Analysis– Pilot Study



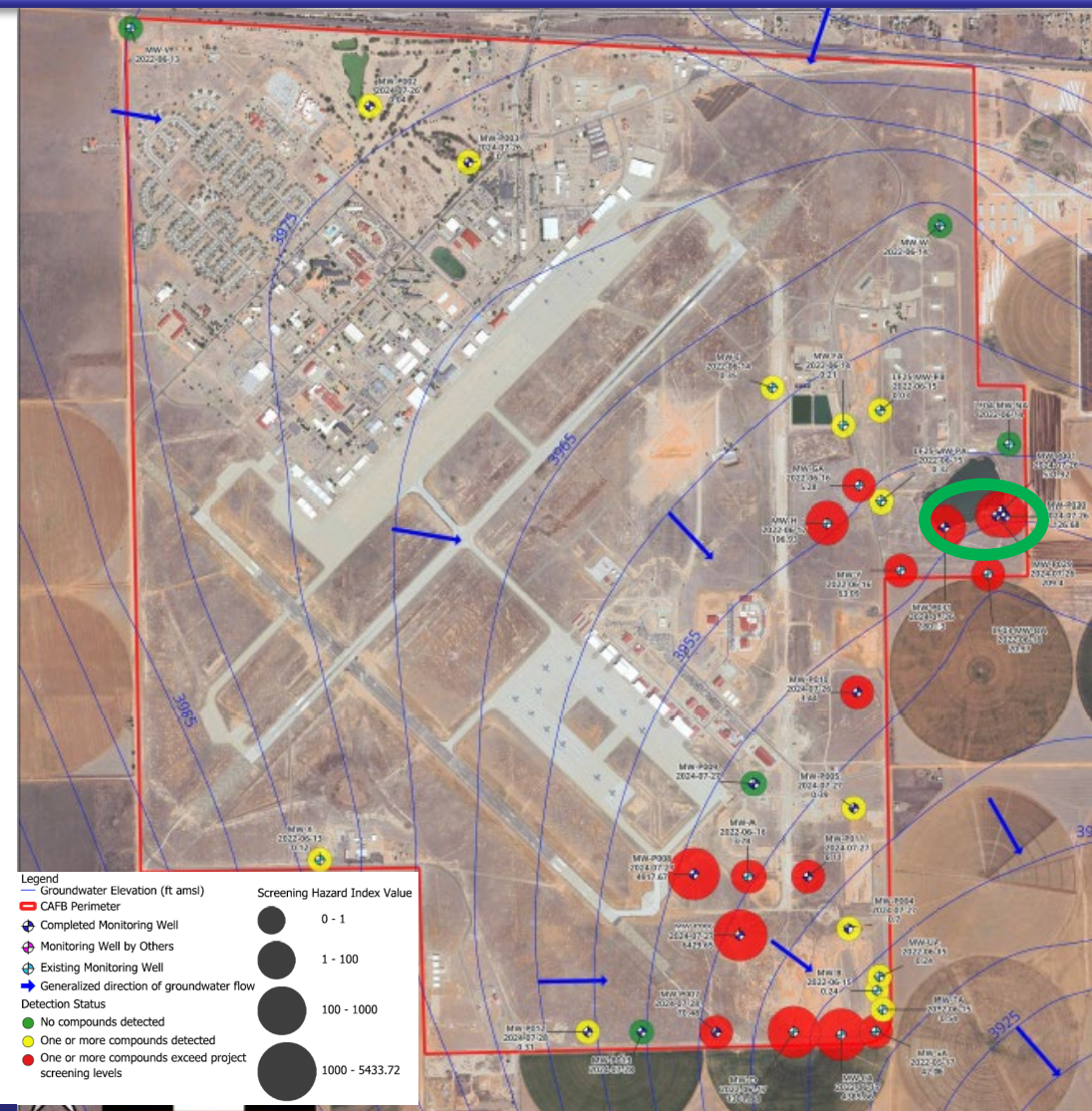
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North Playa Engineering Evaluation/Cost Analysis– Pilot Study



- Award COMPLETED – September 2023
- Kick-Off Meeting COMPLETED – October 2023
- Sampling Event COMPLETED – August 2024
- Treatability Study COMPLETED – April 2025
- Design IN PROGRESS – September 2025
 - Final Design to NMED/EPA – June 2025
 - 30-day NMED/EPA comment period
 - Design finalized – September 2025
- Construction Start – September 2025
- Operation Start – September 2026
- EE/CA Final – ~August 2028
 - 30-day NMED/EPA/Public comment period
 - EE/CA output will determine interim action



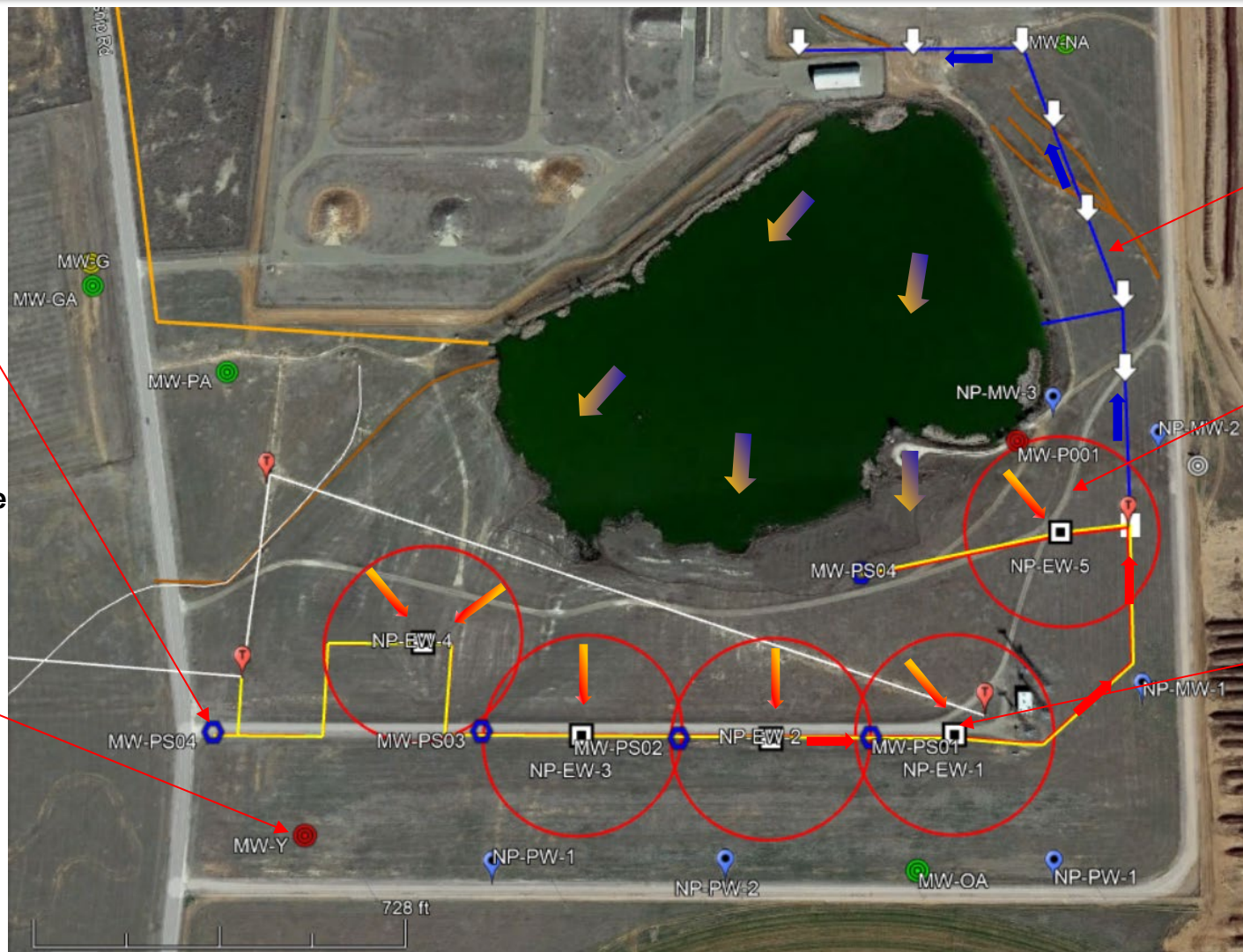


Closed Loop Groundwater Recirculation North Playa Lake Pilot Study Treatment System Design Layout



Additional extraction wells without pumps operating as monitoring wells increases system efficiency and flexibility
In case future groundwater extraction capacity is necessary

Existing monitoring well network will be augmented with performance monitoring wells to ensure compliance at base perimeter



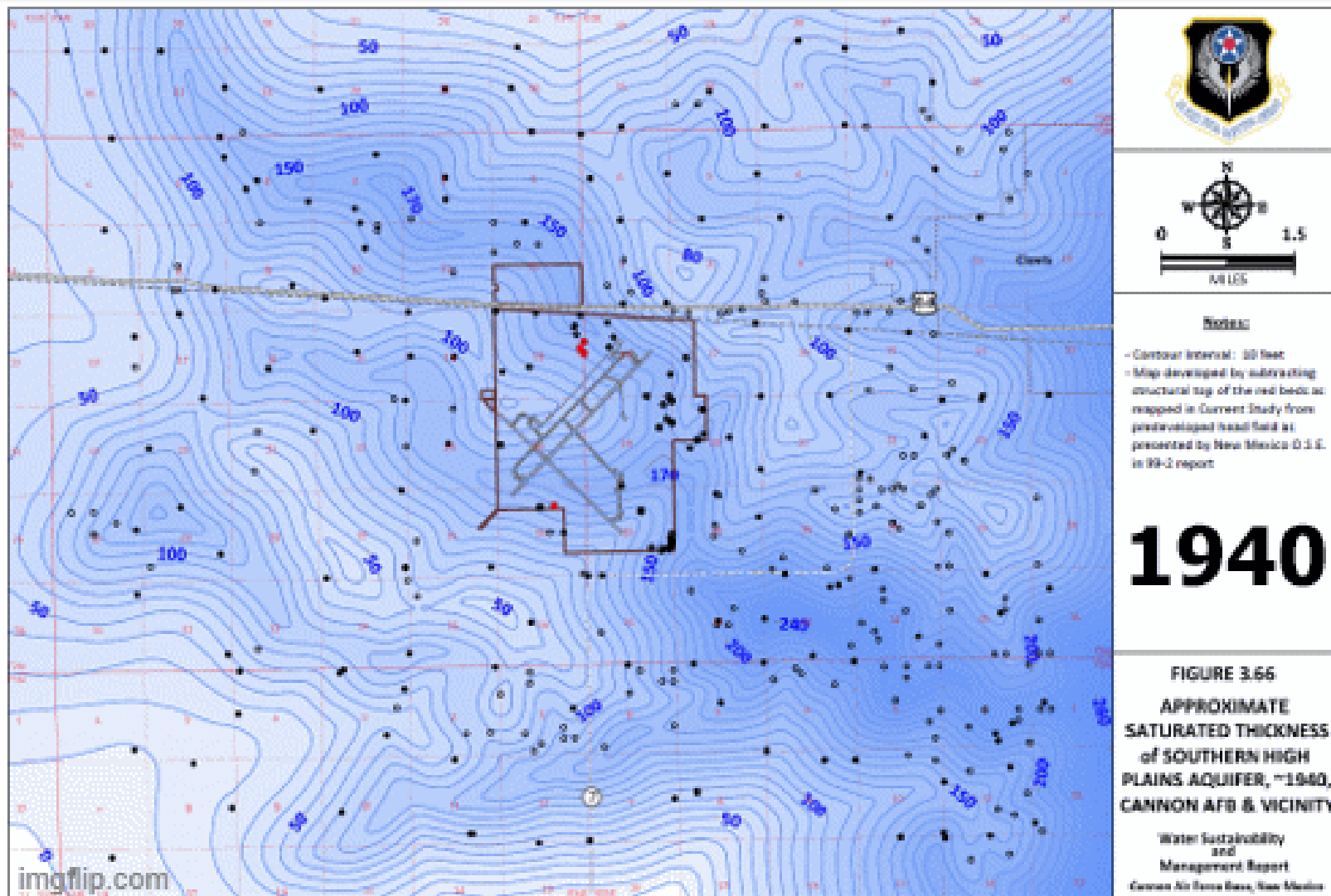
Groundwater reinjection following treatment

1000 gallon per minute groundwater treatment in a lead lag configuration
Using 56,000 ion exchange resin, GAC pretreatment

5 extraction wells operating at 200 GPM per well, optimal balancing to environmental conditions



Cannon AFB Groundwater Declination



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PFAS Response Spending to Date



- **Expenditures to date \$73,237,157**
 - **Preliminary Assessment: \$38,754**
 - **Site Inspection: \$2,024,231**
 - **Off Base Site Inspection: \$505,000**
 - **Remedial Investigation: \$10,684,793**
 - **United States Geological Survey (USGS): \$3,369,000**
 - **South-East Corner Engineering Evaluation/Cost Analysis – Pilot System: \$23,576,561**
 - **North Playa Engineering Evaluation/Cost Analysis – Pilot System: \$30,292,016**
 - **Off Base Point of Use Filtration: \$843,515**
 - **Investigation for alternate PFAS Sources: \$133,810**
 - **Groundwater Fate and Transport Modeling project: \$1,769,477**



- **South-East EE/CA - Pilot Study**
 - Continue operation and collection of data; Finalize EE/CA
- **North Playa EE/CA - Pilot Study**
 - Complete design, and start construction
- **Remedial Investigation**
 - Field work; start monitoring well installation off base once access granted
- **Groundwater modeling**
 - Continue data collection
- **Next Public Update**
 - Tentatively planned 13 Nov 2025



- **PFAS are widely used, long lasting chemicals, components of which break down very slowly over time.**
- **Due to their widespread production and use, as well as their ability to move and persist in the environment, surveys conducted by the Centers for Disease Control and Prevention (CDC) show that most people in the United States have been exposed to some PFAS.**
- **There are thousands of PFAS chemicals, and they are found in many different consumer, commercial, and industrial products.**
 - **<https://www.epa.gov/pfas/pfas-explained>**
 - **<https://www.atsdr.cdc.gov/pfas/index.html>**
 - **<https://www.niehs.nih.gov/health/topics/agents/pfc/index.cfm>**
 - **<https://www.fda.gov/food/chemicals/and-polyfluoroalkyl-substances-pfas>**




Additional Information



■ Admin Record (AR) Links to Cannon Air Force Base reports:

<https://ar.cce.af.mil>

- PA: AR# 1941
- SI: AR# 1938
- Off base SI: AR# 1940
- RRSE: AR# 2063, 2790, 2806
- Treatability Work Plan: AR# 2072
- RI Work Plan: AR# 2074
- Aquifer Test Work Plan: AR# 2075
- Treatability Report: AR# 2800
- Aquifer Report: AR# 2801
- South-East Pilot Study Design: AR# 2805

 **AFCEC ADMINISTRATIVE RECORD** AR version: 4.0.0 [Search Tips](#) [Help](#)

Administrative Record Search

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☒ Active Duty ☐ Air National Guard ☐ BRAC

Installation List:

- AF Plant 3, OK
- AF Plant 36, OH
- AF Plant 4, TX
- AF Plant 42, CA
- AF Plant 44, AZ
- AF Plant 59, NY
- AF Plant 6, GA
- AF Plant 70, CA
- AF Plant 85, OH
- AF Plant PJKS, CO
- AFRL Rome Labs
- Altus AFB, OK
- Anvil Mountain RRS, AK
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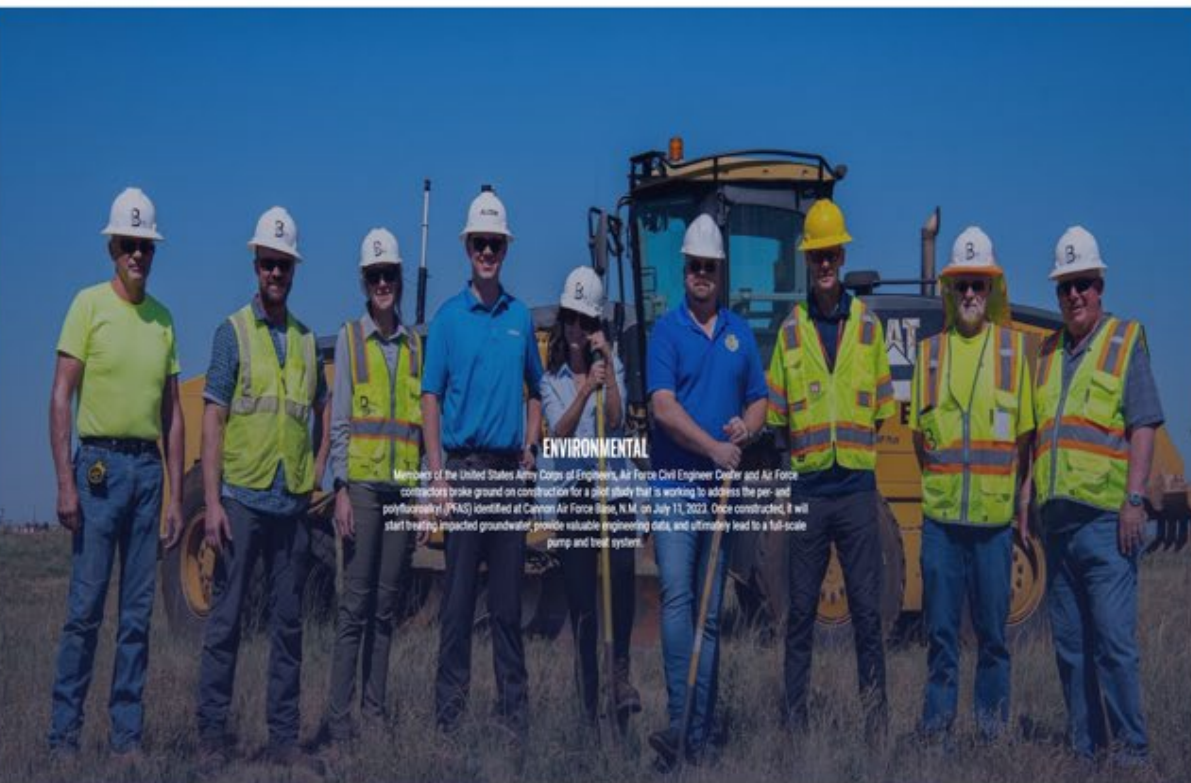


Additional Information



CANNON AIR FORCE BASE

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PFAS UPDATES

The next PFAS Update will occur in November 2023.

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Air Force Civil Engineer Center



Cannon AFB PFAS Public Update

17 May 2023

Video by 1st Lt. Hannah Canales

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May 2023 Air Force Civil Engineer Center Virtual PFAS Update for Cannon Air Base

27th Special Operations Wing Public Affairs

May 17, 2023 | 28:16

Chris Gierke, Air Force Civil Engineer Center restoration project manager at Cannon Air Force Base explains PFAS remediation efforts on Cannon Air Base.

<https://www.cannon.af.mil/Environmental/>



Common Acronyms



- **Administrative Record (AR)**
- **Aqueous Film Forming Foam (AFFF)**
- **Agency for Toxic Substances and Disease Registry (ATSDR)**
- **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**
- **Conceptual Site Model (CSM)**
- **Department of the Air Force (DAF)**
- **Department of Defense (DoD)**
- **Engineering Evaluation/Cost Analysis (EE/CA)**
- **Environmental Protection Agency (EPA)**
- **Food and Drug Administration (FDA)**



Common Acronyms



- New Mexico Environment Department (NMED)
- Parts Per Trillion (ppt)
- Per- and polyfluoroalkyl substances (PFAS)
- Perfluorooctanesulfonic acid (PFOS)
- Perfluorobutanesulfonic acid (PFBS)
- Perfluorooctanoic acid (PFOA)
- Preliminary Assessment (PA)
- Remedial Investigation (RI)
- Relative Risk Site Evaluation (RRSE)
- Site Inspection (SI)



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Any question please contact 27SOCES.cannon.rpm@us.af.mil